Appendix E

Laboratory Data Sheets, Chain of Custody Forms

ANALYTICAL SUMMARY REPORT

May 08, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15040355

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 46 samples for MT DEQ-Federal Superfund on 4/28/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15040355-001	3-124-1824D	11/21/14 9:44	04/28/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15040355-002	3-287-4248D	11/21/14 8:10	04/28/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15040355-003	3-303-2430D	11/20/14 14:23	04/28/15	Soil	Same As Above
H15040355-004	3-317-1218D	11/20/14 13:50	04/28/15	Soil	Same As Above
H15040355-005	3-346-2430D	11/20/14 13:50	04/28/15	Soil	Same As Above
H15040355-006	3-358n-0612D	11/20/14 13:07	04/28/15	Soil	Same As Above
H15040355-007	3-374-0612D	11/20/14 8:16	04/28/15	Soil	Same As Above
H15040355-008	3-001e-1218D	11/25/14 13:10	04/28/15	Soil	Same As Above
H15040355-009	3-027-3642D	11/25/14 11:31	04/28/15	Soil	Same As Above
H15040355-010	3-029-1824D	11/25/14 9:28	04/28/15	Soil	Same As Above
H15040355-011	3-037-3036D	11/25/14 10:07	04/28/15	Soil	Same As Above
H15040355-012	3-045e-0612D	11/25/14 15:02	04/28/15	Soil	Same As Above
H15040355-013	3-020-4248D	11/26/14 10:15	04/28/15	Soil	Same As Above
H15040355-014	3-031-5460D	11/26/14 11:00	04/28/15	Soil	Same As Above
H15040355-015	3-048-1218D	11/26/14 11:50	04/28/15	Soil	Same As Above
H15040355-016	3-054-4248D	11/26/14 12:40	04/28/15	Soil	Same As Above
H15040355-017	3-058s-0006D	12/03/14 8:37	04/28/15	Soil	Same As Above
H15040355-018	3-074e-1824D	12/03/14 9:33	04/28/15	Soil	Same As Above
H15040355-019	3-112-3036D	12/03/14 11:42	04/28/15	Soil	Same As Above
H15040355-020	3-329-5460D	11/18/14 14:25	04/28/15	Soil	Same As Above
H15040355-021	3-344-1218D	11/18/14 15:10	04/28/15	Soil	Same As Above
H15040355-022	3-110-1218D	12/08/14 11:15	04/28/15	Soil	Same As Above
H15040355-023	3-136S-2430D	12/08/14 13:49	04/28/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15040355-024	3-137S2-0612D	12/08/14 14:47	04/28/15	Soil	Same As Above
H15040355-025	3-165-1218D	12/08/14 9:45	04/28/15	Soil	Same As Above
H15040355-026	3-168-1824D	12/08/14 8:54	04/28/15	Soil	Same As Above
H15040355-027	3-337-4854D	12/22/14 16:51	04/28/15	Soil	Same As Above
H15040355-028	3-362-3642D	12/22/14 15:36	04/28/15	Soil	Same As Above
H15040355-029	3-380-3036D	12/22/14 11:47	04/28/15	Soil	Same As Above
H15040355-030	3-389-1824D	12/22/14 10:44	04/28/15	Soil	Same As Above
H15040355-031	3-394-1824D	12/22/14 10:04	04/28/15	Soil	Same As Above
H15040355-032	4-146w-0006D	01/09/15 8:32	04/28/15	Soil	Same As Above
H15040355-033	4-159-3642D	01/09/15 11:06	04/28/15	Soil	Same As Above
H15040355-034	4-039-2430D	01/05/15 9:03	04/28/15	Soil	Same As Above
H15040355-035	4-042-1824D	01/05/15 11:09	04/28/15	Soil	Same As Above
H15040355-036	4-051-3642D	01/05/15 13:36	04/28/15	Soil	Same As Above
H15040355-037	4-236-1824D	01/16/15 13:29	04/28/15	Soil	Same As Above
H15040355-038	4-241-3642D	01/16/15 8:36	04/28/15	Soil	Same As Above
H15040355-039	4-249-3642D	01/16/15 10:11	04/28/15	Soil	Same As Above
H15040355-040	4-126-1824D	01/29/15 16:34	04/28/15	Soil	Same As Above
H15040355-041	4-134-0612D	01/29/15 14:26	04/28/15	Soil	Same As Above
H15040355-042	4-161e2-2430D	01/29/15 8:11	04/28/15	Soil	Same As Above
H15040355-043	4-161e3-0006D	01/29/15 11:37	04/28/15	Soil	Same As Above
H15040355-044	4-001-0006D	02/10/15 16:37	04/28/15	Soil	Same As Above
H15040355-046	4-017-0006D	02/10/15 12:53	04/28/15	Soil	Same As Above
H15040355-047	4-044-0612D	02/09/15 13:46	04/28/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15040355

Report Date: 05/08/15

CASE NARRATIVE

Karin Mainhausen contacted Energy Laboratories Inc requesting duplicate analysis on samples we already have analyzed. Karin asked we select approximately 44 samples to analyze. List of samples with original work order numbers were submitted to Karin for approval. See Attached. wj 5/1/15

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15040355

Report Date: 05/08/15
Date Received: 04/28/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15040355-001	3-124-1824D	7.1	620	2	694	343	714
H15040355-002	3-287-4248D	7.0	36	1	177	28	332
H15040355-003	3-303-2430D	6.8	2520	25	20700	1150	6640
H15040355-004	3-317-1218D	7.4	36	< 1	56	21	166
H15040355-005	3-346-2430D	7.8	8	< 1	27	16	87
H15040355-006	3-358n-0612D	7.5	62	2	459	91	609
H15040355-007	3-374-0612D	8.0	69	< 1	47	19	83
H15040355-008	3-001e-1218D	7.7	368	13	2460	359	1790
H15040355-009	3-027-3642D	7.4	90	4	828	103	1130
H15040355-010	3-029-1824D	7.3	26	4	218	23	438
H15040355-011	3-037-3036D	6.5	5	4	2090	10	638
H15040355-012	3-045e-0612D	7.5	28	29	10900	49	3990
H15040355-013	3-020-4248D	7.1	301	11	2010	481	2780
H15040355-014	3-031-5460D	7.6	10	1	1370	18	197
H15040355-015	3-048-1218D	8.0	23	< 1	235	20	191
H15040355-016	3-054-4248D	7.2	339	7	1900	225	1760
H15040355-017	3-058s-0006D	8.2	285	3	1600	191	877
H15040355-018	3-074e-1824D	7.6	14	< 1	43	20	86
H15040355-019	3-112-3036D	7.1	11	1	146	15	537
H15040355-020	3-329-5460D	7.1	14	62	2690	18	803
H15040355-021	3-344-1218D	7.4	37	3	170	21	654
H15040355-022	3-110-1218D	7.3	651	17	16800	861	4090
H15040355-023	3-136S-2430D	7.7	5	< 1	36	12	50
H15040355-024	3-137S2-0612D	8.3	47	< 1	70	15	84
H15040355-025	3-165-1218D	7.6	911	17	9300	587	4490
H15040355-026	3-168-1824D	7.3	17	9	347	26	1730
H15040355-027	3-337-4854D	7.6	160	2	1050	182	696
H15040355-028	3-362-3642D	7.2	9	16	1850	13	1790
H15040355-029	3-380-3036D	7.6	5	< 1	57	9	73
H15040355-030	3-389-1824D	7.6	71	4	782	61	1520
H15040355-031	3-394-1824D	7.6	7	< 1	47	15	726
H15040355-032	4-146w-0006D	7.6	471	6	2190	378	1850
H15040355-033	4-159-3642D	7.4	12	< 1	60	18	112
H15040355-034	4-039-2430D	7.2	262	15	1550	158	2100
H15040355-035	4-042-1824D	7.1	37	8	337	30	2050
H15040355-036	4-051-3642D	6.7	278	8	2200	362	4710
H15040355-037	4-236-1824D	6.6	475	4	6570	830	1250
H15040355-038	4-241-3642D	7.3	22	3	1400	19	1030
H15040355-039	4-249-3642D	6.9	5	5	1270	13	777
H15040355-040	4-126-1824D	6.9	598	9	9180	1050	3930

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15040355

Report Date: 05/08/15
Date Received: 04/28/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15040355-041	4-134-0612D	7.8	885	5	5210	693	2030
H15040355-042	4-161e2-2430D	7.5	22	< 1	85	18	171
H15040355-043	4-161e3-0006D	7.9	87	3	788	137	757
H15040355-044	4-001-0006D	7.3	22	< 1	74	18	66
H15040355-046	4-017-0006D	7.6	25	< 1	78	23	101
H15040355-047	4-044-0612D	7.3	139	1	465	57	293

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150507A		
Lab ID: CCV_1_150504_1		Continuing Calibration Verification Standard							05/05/15 09:02	
pH, sat. paste		7.03	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150504_1		Continuing Calibration Verification Standard							05/05/15 09:03	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150504_1		Initial Calibration Verification Standard							05/05/15 09:03	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150504_1		Continuing Calibration Verification Standard							05/05/15 09:14	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150504_1		Continuing Calibration Verification Standard							05/05/15 09:27	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150504_1		Continuing Calibration Verification Standard							05/05/15 09:28	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150504_1		Initial Calibration Verification Standard							05/05/15 09:29	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150504_1		Continuing Calibration Verification Standard							05/05/15 09:38	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150504_1		Continuing Calibration Verification Standard							05/05/15 09:48	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150504_1		Initial Calibration Verification Standard							05/05/15 07:15	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150504_1		Initial Calibration Verification Standard							05/05/15 07:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 28802
Lab ID: LCS-28802		Laboratory Control Sample				Run: SOIL PH METER_150507A			05/05/15 09:04	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H15040355-010ADUP		Sample Duplicate				Run: SOIL PH METER_150507A			05/05/15 09:13	
pH, sat. paste		7.29	s.u.	0.10				0.1	30	
Lab ID: H15040355-020ADUP		Sample Duplicate				Run: SOIL PH METER_150507A			05/05/15 09:22	
pH, sat. paste		7.11	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 28803
Lab ID: LCS-28803		Laboratory Control Sample				Run: SOIL PH METER_150507A			05/05/15 09:29	
pH, sat. paste		7.61	s.u.	0.10	102	95	105			
Lab ID: H15040355-030ADUP		Sample Duplicate				Run: SOIL PH METER_150507A			05/05/15 09:38	
pH, sat. paste		7.57	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28803
Lab ID: H15040355-040ADUP	Sample Duplicate					Run: SOIL PH METER_150507A				05/05/15 09:47
pH, sat. paste		6.95	s.u.	0.10				0.3	30	
Lab ID: H15040355-047ADUP	Sample Duplicate					Run: SOIL PH METER_150507A				05/05/15 09:53
pH, sat. paste		7.31	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150504C	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								05/04/15 16:49
Arsenic			0.807	mg/L	0.011	101	90	110			
Cadmium			0.399	mg/L	0.0010	100	90	110			
Copper			0.786	mg/L	0.010	98	90	110			
Lead			0.788	mg/L	0.019	99	90	110			
Zinc			0.813	mg/L	0.010	102	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								05/04/15 17:04
Arsenic			0.00779	mg/L	0.011		0	0			
Cadmium			0.00487	mg/L	0.0010		0	0			
Copper			-0.00720	mg/L	0.010		0	0			
Lead			-0.0260	mg/L	0.019		0	0			
Zinc			0.00407	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								05/04/15 17:08
Arsenic			1.02	mg/L	0.011	102	80	120			
Cadmium			0.951	mg/L	0.0010	95	80	120			
Copper			0.493	mg/L	0.010	99	80	120			
Lead			0.938	mg/L	0.019	94	80	120			
Zinc			1.03	mg/L	0.010	103	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								05/05/15 04:28
Arsenic			2.52	mg/L	0.011	101	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.44	mg/L	0.019	98	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								05/05/15 04:31
Arsenic			0.000100	mg/L	0.011						
Cadmium			0.000400	mg/L	0.0010						
Copper			-0.00106	mg/L	0.010						
Lead			-0.0325	mg/L	0.019						
Zinc			0.000220	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								05/05/15 05:12
Arsenic			2.44	mg/L	0.011	98	90	110			
Cadmium			2.35	mg/L	0.0010	94	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.38	mg/L	0.019	95	90	110			
Zinc			2.40	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								05/05/15 05:16
Arsenic			-0.00164	mg/L	0.011						
Cadmium			0.000560	mg/L	0.0010						
Copper			-0.00106	mg/L	0.010						
Lead			-0.0286	mg/L	0.019						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150504C	
Lab ID:	**CCB**	5	Continuing Calibration Blank								05/05/15 05:16
Zinc			0.000770	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								05/05/15 05:38
Arsenic			2.47	mg/L	0.011	99	90	110			
Cadmium			2.44	mg/L	0.0010	98	90	110			
Copper			2.55	mg/L	0.010	102	90	110			
Lead			2.45	mg/L	0.019	98	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								05/05/15 05:42
Arsenic			0.0112	mg/L	0.011						
Cadmium			0.000630	mg/L	0.0010						
Copper			-0.00615	mg/L	0.010						
Lead			0.0128	mg/L	0.019						
Zinc			0.00140	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								05/05/15 06:23
Arsenic			2.44	mg/L	0.011	98	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.44	mg/L	0.019	98	90	110			
Zinc			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								05/05/15 06:26
Arsenic			0.00736	mg/L	0.011						
Cadmium			0.000780	mg/L	0.0010						
Copper			-0.00419	mg/L	0.010						
Lead			0.0183	mg/L	0.019						
Zinc			0.00203	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								05/05/15 07:07
Arsenic			2.50	mg/L	0.011	100	90	110			
Cadmium			2.50	mg/L	0.0010	100	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.54	mg/L	0.019	102	90	110			
Zinc			2.51	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								05/05/15 07:11
Arsenic			-0.000350	mg/L	0.011						
Cadmium			0.00127	mg/L	0.0010						
Copper			-0.00163	mg/L	0.010						
Lead			-0.00240	mg/L	0.019						
Zinc			0.00216	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								05/05/15 07:52
Arsenic			2.44	mg/L	0.011	98	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150504C		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							05/05/15 07:52	
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.43	mg/L	0.019	97	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							05/05/15 07:55	
Arsenic			0.000550	mg/L	0.011						
Cadmium			0.000790	mg/L	0.0010						
Copper			-0.00333	mg/L	0.010						
Lead			0.0136	mg/L	0.019						
Zinc			0.00170	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150504B		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							05/04/15 22:59	
Arsenic			0.0512	mg/L	0.0050	102	90	110			
Cadmium			0.0510	mg/L	0.0010	102	90	110			
Copper			0.0518	mg/L	0.010	104	90	110			
Lead			0.0507	mg/L	0.010	101	90	110			
Zinc			0.0512	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							05/04/15 23:05	
Arsenic			-1.60E-05	mg/L	0.0050						
Cadmium			2.00E-07	mg/L	0.0010						
Copper			-3.71E-05	mg/L	0.010						
Lead			3.30E-06	mg/L	0.010						
Zinc			-0.000120	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							05/04/15 23:33	
Arsenic			0.0518	mg/L	0.0050	104	90	110			
Cadmium			0.0509	mg/L	0.0010	102	90	110			
Copper			0.0520	mg/L	0.010	104	90	110			
Lead			0.0510	mg/L	0.010	102	90	110			
Zinc			0.0516	mg/L	0.010	103	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							05/04/15 23:39	
Arsenic			-2.06E-05	mg/L	0.0050						
Cadmium			1.20E-06	mg/L	0.0010						
Copper			-3.86E-05	mg/L	0.010						
Lead			5.40E-06	mg/L	0.010						
Zinc			-9.44E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							05/05/15 00:10	
Arsenic			0.0522	mg/L	0.0050	104	90	110			
Cadmium			0.0510	mg/L	0.0010	102	90	110			
Copper			0.0522	mg/L	0.010	104	90	110			
Lead			0.0506	mg/L	0.010	101	90	110			
Zinc			0.0522	mg/L	0.010	104	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							05/05/15 00:16	
Arsenic			-3.26E-05	mg/L	0.0050						
Cadmium			3.30E-06	mg/L	0.0010						
Copper			0.00897	mg/L	0.010						
Lead			3.40E-06	mg/L	0.010						
Zinc			-0.000101	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							05/05/15 00:57	
Arsenic			0.0522	mg/L	0.0050	104	90	110			
Cadmium			0.0510	mg/L	0.0010	102	90	110			
Copper			0.0521	mg/L	0.010	104	90	110			
Lead			0.0507	mg/L	0.010	101	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150504B		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							05/05/15 00:57	
Zinc			0.0512	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							05/05/15 01:03	
Arsenic			-6.40E-06	mg/L	0.0050						
Cadmium			3.40E-06	mg/L	0.0010						
Copper			-3.89E-05	mg/L	0.010						
Lead			2.00E-06	mg/L	0.010						
Zinc			-0.000114	mg/L	0.010						
Method:	**E200.8**								Analytical Run: ICPMS204-B_150505B		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							05/05/15 11:51	
Arsenic			0.0492	mg/L	0.0050	98	90	110			
Lead			0.0490	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							05/05/15 11:57	
Arsenic			-9.00E-06	mg/L	0.0050						
Lead			7.60E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							05/05/15 12:50	
Arsenic			0.0491	mg/L	0.0050	98	90	110			
Lead			0.0496	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							05/05/15 12:56	
Arsenic			-1.10E-05	mg/L	0.0050						
Lead			4.30E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28786	
Lab ID:	**MB-28786**	5	Method Blank				Run: ICP2-HE_150504C			05/05/15 04:20	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-28786**	5	Laboratory Fortified Blank				Run: ICP2-HE_150504C			05/05/15 04:24	
Arsenic			47.4	mg/kg	1.0	101	80	120			
Cadmium			22.0	mg/kg	1.0	94	80	120			
Copper			47.5	mg/kg	1.0	101	80	120			
Lead			44.2	mg/kg	1.0	94	80	120			
Zinc			47.0	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-28786**	5	Laboratory Control Sample				Run: ICP2-HE_150504C			05/05/15 04:35	
Arsenic			286	mg/kg	3.6	83	72.3	106.4			
Cadmium			114	mg/kg	1.0	83	73	105.1			
Copper			254	mg/kg	2.2	91	77.5	109.6			
Lead			165	mg/kg	6.3	88	75.9	108.6			
Zinc			186	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H15040355-019APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150504C			05/05/15 06:34	
Arsenic			236	mg/kg	1.7	94	75	125			
Cadmium			110	mg/kg	1.0	90	75	125			
Copper			381	mg/kg	1.1	98	75	125			
Lead			235	mg/kg	3.1	92	75	125			
Zinc			786	mg/kg	1.0	103	75	125			
Lab ID:	**H15040355-019AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150504C			05/05/15 06:38	
Arsenic			52.8	mg/kg	1.7	93	75	125			
Cadmium			22.4	mg/kg	1.0	92	75	125			
Copper			187	mg/kg	1.0	90	75	125			
Lead			62.9	mg/kg	2.9	108	75	125			
Zinc			582	mg/kg	1.0		75	125			A
Lab ID:	**H15040355-019AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150504C			05/05/15 06:41	
Arsenic			51.1	mg/kg	1.7	89	75	125	3.2	20	
Cadmium			22.9	mg/kg	1.0	93	75	125	2.0	20	
Copper			192	mg/kg	1.0	100	75	125	2.6	20	
Lead			57.0	mg/kg	3.0	95	75	125	9.8	20	
Zinc			609	mg/kg	1.0		75	125	4.4	20	A
Method:	**SW6010B**									Batch: 28788	
Lab ID:	**MB-28788**	5	Method Blank				Run: ICP2-HE_150504C			05/05/15 06:45	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28788
Lab ID:	**MB-28788**	5	Method Blank				Run: ICP2-HE_150504C				05/05/15 06:45
Lead			ND	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-28788**	5	Laboratory Fortified Blank				Run: ICP2-HE_150504C				05/05/15 06:49
Arsenic			46.8	mg/kg	1.0	98	80	120			
Cadmium			22.9	mg/kg	1.0	96	80	120			
Copper			48.0	mg/kg	1.0	100	80	120			
Lead			46.7	mg/kg	1.0	97	80	120			
Zinc			47.2	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-28788**	5	Laboratory Control Sample				Run: ICP2-HE_150504C				05/05/15 06:52
Arsenic			277	mg/kg	3.9	81	72.3	106.4			
Cadmium			122	mg/kg	1.0	89	73	105.1			
Copper			249	mg/kg	2.4	89	77.5	109.6			
Lead			183	mg/kg	6.9	98	75.9	108.6			
Zinc			191	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H15040355-038APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150504C				05/05/15 08:25
Arsenic			249	mg/kg	1.9	86	75	125			
Cadmium			116	mg/kg	1.0	86	75	125			
Copper			1510	mg/kg	1.2		75	125			A
Lead			246	mg/kg	3.4	85	75	125			
Zinc			1150	mg/kg	1.0	93	75	125			
Lab ID:	**H15040355-038AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150504C				05/05/15 08:29
Arsenic			66.2	mg/kg	1.9	89	75	125			
Cadmium			25.8	mg/kg	1.0	91	75	125			
Copper			1330	mg/kg	1.1		75	125			A
Lead			62.7	mg/kg	3.3	79	75	125			
Zinc			965	mg/kg	1.0		75	125			A
Lab ID:	**H15040355-038AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150504C				05/05/15 08:32
Arsenic			65.2	mg/kg	1.9	87	75	125	1.5	20	
Cadmium			26.0	mg/kg	1.0	92	75	125	0.6	20	
Copper			1310	mg/kg	1.1		75	125	1.4	20	A
Lead			70.1	mg/kg	3.3	94	75	125	11	20	
Zinc			975	mg/kg	1.0		75	125	1.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**							Analytical Run: ICPMS204-B_150504B			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							05/04/15 19:27	
Arsenic			0.0617	mg/L	0.0010	103	90	110			
Cadmium			0.0317	mg/L	0.0010	106	90	110			
Copper			0.0632	mg/L	0.0010	105	90	110			
Lead			0.0619	mg/L	0.0010	103	90	110			
Zinc			0.0630	mg/L	0.0010	105	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							05/04/15 19:30	
Arsenic			0.000132	mg/L	0.0010						
Cadmium			0.000369	mg/L	0.0010						
Copper			0.000545	mg/L	0.0010						
Lead			0.000277	mg/L	0.0010						
Zinc			0.00117	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							05/04/15 19:33	
Arsenic			0.0117	mg/L	0.0010	117	70	130			
Cadmium			0.0113	mg/L	0.0010	113	70	130			
Copper			0.0229	mg/L	0.0010	114	70	130			
Lead			0.000264	mg/L	0.0010		0	0			
Zinc			0.0118	mg/L	0.0010	118	70	130			
Method:	**SW6020**									Batch: 28786	
Lab ID:	**MB-28786**	2	Method Blank				Run: ICPMS204-B_150504B			05/04/15 20:24	
Arsenic			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.5						
Lab ID:	**LCS-28786**	2	Laboratory Control Sample				Run: ICPMS204-B_150504B			05/04/15 20:27	
Arsenic			328	mg/kg	1.0	96	72.3	106.4			
Lead			202	mg/kg	1.0	108	75.9	108.6			
Lab ID:	**LFB-28786**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150504B			05/04/15 20:30	
Arsenic			51.6	mg/kg	1.0	110	80	120			
Lead			51.4	mg/kg	1.0	110	80	120			
Lab ID:	**H15040355-019APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150504B			05/04/15 21:57	
Arsenic			2400	mg/kg	1.0	102	75	125			
Lead			2300	mg/kg	1.0	98	75	125			
Lab ID:	**H15040355-019AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150504B			05/04/15 21:59	
Arsenic			61.0	mg/kg	1.0	109	75	125			
Lead			65.1	mg/kg	1.0	108	75	125			
Lab ID:	**H15040355-019AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150504B			05/04/15 22:03	
Arsenic			60.3	mg/kg	1.0	106	75	125	1.2	20	
Lead			64.9	mg/kg	1.0	107	75	125	0.4	20	
Method:	**SW6020**									Batch: 28788	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28788
Lab ID:	**MB-28788**	5	Method Blank				Run: ICPMS204-B_150504B			05/04/15 22:09	
Arsenic			ND	mg/kg	0.2						
Cadmium			ND	mg/kg	0.8						
Copper			2	mg/kg	0.7						
Lead			ND	mg/kg	0.5						
Zinc			6	mg/kg	4						
Lab ID:	**LCS-28788**	5	Laboratory Control Sample				Run: ICPMS204-B_150504B			05/04/15 22:12	
Arsenic			317	mg/kg	1.0	92	72.3	106.4			
Cadmium			137	mg/kg	1.7	100	73	105.1			
Copper			287	mg/kg	1.5	102	77.5	109.6			
Lead			194	mg/kg	1.0	104	75.9	108.6			
Zinc			225	mg/kg	7.6	103	74.2	109.9			
Lab ID:	**LFB-28788**	5	Laboratory Fortified Blank				Run: ICPMS204-B_150504B			05/04/15 22:15	
Arsenic			51.0	mg/kg	1.0	106	80	120			
Cadmium			26.1	mg/kg	1.0	109	80	120			
Copper			54.8	mg/kg	1.0	111	80	120			
Lead			50.9	mg/kg	1.0	106	80	120			
Zinc			56.6	mg/kg	3.4	105	80	120			
Lab ID:	**H15040355-038APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150504B			05/04/15 23:49	
Arsenic			2680	mg/kg	1.0	104	75	125			
Cadmium			1240	mg/kg	1.0	97	75	125			
Copper			3650	mg/kg	1.0	88	75	125			
Lead			2520	mg/kg	1.0	98	75	125			
Zinc			3450	mg/kg	3.6	94	75	125			
Lab ID:	**H15040355-038AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_150504B			05/04/15 23:51	
Arsenic			75.9	mg/kg	1.0	104	75	125			
Cadmium			29.3	mg/kg	1.0	104	75	125			
Copper			1440	mg/kg	1.0		75	125			A
Lead			71.3	mg/kg	1.0	101	75	125			
Zinc			1080	mg/kg	3.6		75	125			A
Lab ID:	**H15040355-038AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150504B			05/04/15 23:54	
Arsenic			76.8	mg/kg	1.0	106	75	125	1.2	20	
Cadmium			29.5	mg/kg	1.0	105	75	125	0.9	20	
Copper			1460	mg/kg	1.0		75	125	1.3	20	A
Lead			71.9	mg/kg	1.0	102	75	125	0.8	20	
Zinc			1090	mg/kg	3.6		75	125	0.8	20	A
Method:	**SW6020**										Batch: 28789
Lab ID:	**MB-28789**	5	Method Blank				Run: ICPMS204-B_150504B			05/05/15 00:01	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.8						
Copper			0.9	mg/kg	0.7						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28789
Lab ID:	**MB-28789**	5	Method Blank				Run: ICPMS204-B_150504B			05/05/15 00:01	
Lead			ND	mg/kg	0.5						
Zinc			4	mg/kg	4						
Lab ID:	**LCS-28789**	5	Laboratory Control Sample				Run: ICPMS204-B_150504B			05/05/15 00:04	
Arsenic			328	mg/kg	1.0	96	72.3	106.4			
Cadmium			136	mg/kg	1.5	99	73	105.1			
Copper			293	mg/kg	1.4	104	77.5	109.6			
Lead			197	mg/kg	1.0	106	75.9	108.6			
Zinc			233	mg/kg	7.1	107	74.2	109.9			
Lab ID:	**LFB-28789**	5	Laboratory Fortified Blank				Run: ICPMS204-B_150504B			05/05/15 00:07	
Arsenic			49.7	mg/kg	1.0	108	80	120			
Cadmium			25.0	mg/kg	1.0	109	80	120			
Copper			51.1	mg/kg	1.0	109	80	120			
Lead			48.5	mg/kg	1.0	106	80	120			
Zinc			54.8	mg/kg	3.2	110	80	120			
Lab ID:	**H15040355-047APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150504B			05/05/15 00:48	
Arsenic			2920	mg/kg	1.0	103	75	125			
Cadmium			1310	mg/kg	1.0	96	75	125			
Copper			2950	mg/kg	1.0	92	75	125			
Lead			2690	mg/kg	1.0	97	75	125			
Zinc			2880	mg/kg	3.8	96	75	125			
Lab ID:	**H15040355-047AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_150504B			05/05/15 00:50	
Arsenic			196	mg/kg	1.0	107	75	125			
Cadmium			28.6	mg/kg	1.0	102	75	125			
Copper			533	mg/kg	1.0		75	125			A
Lead			112	mg/kg	1.0	103	75	125			
Zinc			354	mg/kg	3.8		75	125			A
Lab ID:	**H15040355-047AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150504B			05/05/15 00:53	
Arsenic			196	mg/kg	1.0	104	75	125	0.3	20	
Cadmium			29.0	mg/kg	1.0	102	75	125	1.2	20	
Copper			531	mg/kg	1.0		75	125	0.4	20	A
Lead			112	mg/kg	1.0	101	75	125	0.2	20	
Zinc			350	mg/kg	3.8		75	125	1.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 05/08/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040355

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150505B		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							05/05/15 10:48	
Arsenic			0.0607	mg/L	0.0010	101	90	110			
Lead			0.0601	mg/L	0.0010	100	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							05/05/15 10:51	
Arsenic			0.000127	mg/L	0.0010						
Lead			0.000273	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							05/05/15 10:54	
Arsenic			0.0116	mg/L	0.0010	116	70	130			
Lead			0.000273	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 28786	
Lab ID:	**MB-28786**	2	Method Blank				Run: ICPMS204-B_150505B			05/05/15 12:37	
Arsenic			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.5						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund

H15040355

Login completed by: Wanda Johnson

Date Received: 4/28/2015

Reviewed by: BL2000\ablackburn

Received by: wjj

Reviewed Date: 5/8/2015

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	°C See Comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Original checklist is with original work orders. See Case Narrative regarding samples. wj 4/28/15

Energy Laboratories Inc
3161 East Lyndale Avenue
Helena, MT 59601
(406) 442-0711

CHAIN-OF-CUSTODY RECORD

WorkOrder: H15040355

Client:
MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

TEL:
FAX:
ProjectNo: 130500 DEQ Cla
PO: SPB12-2177V

01-May-15

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					ASAM10-3_2	D2974	E6010_20	Visual			
H15040355-001	3-124-1824D	Soil	11/21/2014 9:44:00 AM		A		A	A			
H15040355-002	3-287-4248D	Soil	11/21/2014 8:10:00 AM		A		A				
H15040355-003	3-303-2430D	Soil	11/20/2014 2:23:00 PM		A		A				
H15040355-004	3-317-1218D	Soil	11/20/2014 1:50:00 PM		A		A				
H15040355-005	3-317-1218D	Soil	11/20/2014 1:50:00 PM		A		A				
H15040355-006	3-358n-0612D	Soil	11/20/2014 1:07:00 PM		A		A				
H15040355-007	3-374-0612D	Soil	11/20/2014 8:16:00 AM		A		A				
H15040355-008	3-001e-1218D	Soil	11/25/2014 1:10:00 PM		A		A				
H15040355-009	3-027-3642D	Soil	11/25/2014 11:31:00		A		A				
H15040355-010	3-029-1824D	Soil	11/25/2014 9:28:00 AM		A		A				
H15040355-011	3-037-3036D	Soil	11/25/2014 10:07:00		A		A				
H15040355-012	3-045e-0612D	Soil	11/25/2014 3:02:00 PM		A		A				
H15040355-013	3-020-4248D	Soil	11/26/2014 10:15:00		A		A				
H15040355-014	3-031-5460D	Soil	11/26/2014 11:00:00		A		A				
H15040355-015	3-048-1218D	Soil	11/26/2014 11:50:00		A		A				
H15040355-016	3-054-4248D	Soil	11/26/2014 12:40:00		A		A				

Comments: CDM requested on 4/28/15. MS/MSD on every 20 samples

		Date/Time			Date/Time
Relinquished by:			**Received by:**		4-28-15
Relinquished by:			**Received by:**		
Relinquished by:			**Received by:**		

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Energy Laboratories Inc
3161 East Lyndale Avenue
Helena, MT 59601
(406) 442-0711

CHAIN-OF-CUSTODY RECORD

WorkOrder: H15040355

Client:
MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

TEL:
FAX:
ProjectNo: 130500 DEQ Cla
PO: SPB12-2177V

01-May-15

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests						
					ASAM10-3_2	D2974	E6010_20	Visual			
H15040355-017	3-058s-0006D	Soil	12/3/2014 8:37:00 AM		A		A				
H15040355-018	3-074e-1824D	Soil	12/3/2014 9:33:00 AM		A		A				
H15040355-019	3-112-3036D	Soil	12/3/2014 11:42:00 AM		A		A				
H15040355-020	3-329-5460D	Soil	11/18/2014 2:25:00 PM		A		A				
H15040355-021	3-344-1218D	Soil	11/18/2014 3:10:00 PM		A		A				
H15040355-022	3-110-1218D	Soil	12/8/2014 11:15:00 AM		A		A				
H15040355-023	3-136S-2430D	Soil	12/8/2014 1:49:00 PM		A		A				
H15040355-024	3-137S2-0612D	Soil	12/8/2014 2:47:00 PM		A		A				
H15040355-025	3-165-1218D	Soil	12/8/2014 9:45:00 AM		A		A				
H15040355-026	3-168-1824D	Soil	12/8/2014 8:54:00 AM		A		A				
H15040355-027	3-337-4854D	Soil	12/22/2014 4:51:00 PM		A		A				
H15040355-028	3-362-3642D	Soil	12/22/2014 3:36:00 PM		A		A				
H15040355-029	3-380-3036D	Soil	12/22/2014 11:47:00		A		A				
H15040355-030	3-389-1824D	Soil	12/22/2014 10:44:00		A		A				
H15040355-031	3-394-1824D	Soil	12/22/2014 10:04:00		A		A				
H15040355-032	4-146w-0006D	Soil	1/9/2015 8:32:00 AM		A		A				

Comments: CDM requested on 4/28/15. MS/MSD on every 20 samples

		Date/Time			Date/Time
Relinquished by:			**Received by:**		4-28-15
Relinquished by:			**Received by:**		
Relinquished by:			**Received by:**		

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Energy Laboratories Inc
3161 East Lyndale Avenue
Helena, MT 59601
(406) 442-0711

CHAIN-OF-CUSTODY RECORD

WorkOrder: H15040355

Client:
MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

TEL:
FAX:
ProjectNo: 130500 DEQ Cla
PO: SPB12-2177V

01-May-15

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests: ASAM10-3_2	D2974	E6010_20	Visual			
H15040355-033	4-159-3642D	Soil	1/9/2015 11:06:00 AM		A		A				
H15040355-034	4-039-2430D	Soil	1/5/2015 9:03:00 AM		A		A				
H15040355-035	4-042-1824D	Soil	1/5/2015 11:09:00 AM		A		A				
H15040355-036	4-051-3642D	Soil	1/5/2015 1:36:00 PM		A		A				
H15040355-037	4-236-1824D	Soil	1/16/2015 1:29:00 PM		A		A				
H15040355-038	4-241-3642D	Soil	1/16/2015 8:36:00 AM		A		A				
H15040355-039	4-249-3642D	Soil	1/16/2015 10:11:00 AM		A		A				
H15040355-040	4-126-1824D	Soil	1/29/2015 4:34:00 PM		A		A				
H15040355-041	4-134-0612D	Soil	1/29/2015 2:26:00 PM		A		A				
H15040355-042	4-161e2-2430D	Soil	1/29/2015 8:11:00 AM		A		A				
H15040355-043	4-161e3-0006D	Soil	1/29/2015 11:37:00 AM		A		A				
H15040355-044	4-001-0006D	Soil	2/10/2015 4:37:00 PM		A		A				
H15040355-045	4-008-0612D	Soil	2/10/2015 4:51:00 PM		A	A	A				
H15040355-046	4-017-0006D	Soil	2/10/2015 12:53:00 PM		A		A				
H15040355-047	4-044-0612	Soil	2/9/2015 1:46:00 PM		A		A				

Comments: CDM requested on 4/28/15. MS/MSD on every 20 samples

	Date/Time		Date/Time
Relinquished by:		**Received by:**	4-28-15
Relinquished by:		**Received by:**	
Relinquished by:		**Received by:**	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Work Order	ID	Date
H14120033-001	3-124-1824D	11/21/2014 9:44
-11	3-287-4248D	11/21/2014 8:10
H14120034-001	3-303-2430D	11/20/2014 14:23
-11	3-317-1218D	11/20/2014 13:50
-33	3-346-2430D	11/20/2014 10:23
-44	3-358n-0612D	11/20/2014 13:07
-55	3-374-0612D	11/20/2014 8:16
H14120071-001	3-001e-1218D	11/25/2014 13:10
-11	3-027-3642D	11/25/2014 11:31
-22	3-029-1824D	11/25/2014 9:28
-33	3-037-3036D	11/25/2014 10:07
-44	3-045e-0612D	11/25/2014 15:02
H14120076-001	3-020-4248D	11/26/2014 10:15
-11	3-031-5460D	11/26/2014 11:00
-22	3-048-1218D	11/26/2014 11:50
-33	3-054-4248D	11/26/2014 12:40
H14120165-001	3-058s-0006D	12/3/2014 8:37
-11	3-074e-1824D	12/3/2014 9:33
-22	3-112-3036D	12/3/2014 11:42
-33	3-329-5460D	11/18/2014 14:25
-44	3-344-1218D	11/18/2014 15:10
H14120241-001	3-110-1218D	12/8/2014 11:15
-11	3-136S-2430D	12/8/2014 13:49
-22	3-137S2-0612D	12/8/2014 14:47
-33	3-165-1218D	12/8/2014 9:45
-44	3-168-1824D	12/8/2014 8:54
H14120495-001	3-337-4854D	12/22/2014 16:51
-11	3-362-3642D	12/22/2014 15:36
-22	3-380-3036D	12/22/2014 11:47
-33	3-389-1824D	12/22/2014 10:44
-44	3-394-1824D	12/22/2014 10:04
H15010103-001	4-146w-0006D	1/9/2015 8:32
-11	4-159-3642D	1/9/2015 11:06
H15010111-001	4-039-2430D	1/5/2015 9:03
-11	4-042-1824D	1/5/2015 11:09
-22	4-051-3642D	1/5/2015 13:36
H15010289-001	4-236-1824D	1/16/2015 13:29

	-11	4-241-3642D	1/16/2015 8:36
	-22	4-249-3642D	1/16/2015 10:11
H15020112-001		4-126-1824D	1/29/2015 16:34
	-11	4-134-0612D	1/29/2015 14:26
	-33	4-161e2-2430D	1/29/2015 8:11
		4-161e3-0006D	1/29/2015 11:37
H15020263-001		4-001-0006D	2/10/2015 16:37
	-11	4-008-0612	2/10/2015 16:51
	-22	4-017-0006	2/10/2015 12:53
H15020271-023		4-044-0612	2/9/2015 13:46

ANALYTICAL SUMMARY REPORT

April 21, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15040057

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 8 samples for MT DEQ-Federal Superfund on 4/6/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15040057-001	4-155-2430	02/04/15 10:36	04/06/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15040057-002	4-155-3036	02/04/15 10:35	04/06/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15040057-003	4-329-4248	01/20/15 12:50	04/06/15	Soil	Same As Above
H15040057-004	3-414-3036	12/22/14 8:17	04/06/15	Soil	Same As Above
H15040057-005	3-414-3642	12/22/14 8:16	04/06/15	Soil	Same As Above
H15040057-006	4-027-3642	02/09/15 16:41	04/06/15	Soil	Same As Above
H15040057-007	4-027-4248	02/09/15 16:40	04/06/15	Soil	Same As Above
H15040057-008	4-233-4248	01/26/15 15:15	04/06/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15040057

Report Date: 04/21/15
Date Received: 04/06/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15040057-001	4-155-2430	7.6	90	5	736	82	811
H15040057-002	4-155-3036	7.5	85	6	707	94	1200
H15040057-003	4-329-4248	7.6	90	7	757	104	1010
H15040057-004	3-414-3036	7.5	114	3	661	88	698
H15040057-005	3-414-3642	7.1	130	3	658	83	761
H15040057-006	4-027-3642	7.1	33	2	624	17	322
H15040057-007	4-027-4248	7.0	54	3	637	23	474
H15040057-008	4-233-4248	7.1	36	< 1	516	28	237

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/21/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040057

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2							Analytical Run: SOIL PH METER_150409A			
Lab ID: ICV_1_150406_1		Initial Calibration Verification Standard							04/07/15 07:10	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150407_1		Initial Calibration Verification Standard							04/08/15 06:42	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150408_1		Continuing Calibration Verification Standard							04/09/15 07:10	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150408_1		Continuing Calibration Verification Standard							04/09/15 07:11	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150408_1		Initial Calibration Verification Standard							04/09/15 07:11	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 28613
Lab ID: LCS-28613		Laboratory Control Sample				Run: SOIL PH METER_150409A			04/09/15 07:12	
pH, sat. paste		7.55	s.u.	0.10	101	95	105			
Lab ID: H15040057-008ADUP		Sample Duplicate				Run: SOIL PH METER_150409A			04/09/15 07:21	
pH, sat. paste		7.16	s.u.	0.10				0.7	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/21/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040057

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150410B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							04/10/15 09:22	
Arsenic			0.795	mg/L	0.011	99	90	110			
Cadmium			0.382	mg/L	0.0010	96	90	110			
Copper			0.776	mg/L	0.010	97	90	110			
Lead			0.763	mg/L	0.019	95	90	110			
Zinc			0.780	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							04/10/15 09:37	
Arsenic			0.0110	mg/L	0.011		0	0			
Cadmium			0.00485	mg/L	0.0010		0	0			
Copper			-0.00165	mg/L	0.010		0	0			
Lead			0.00292	mg/L	0.019		0	0			
Zinc			0.00105	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							04/10/15 09:41	
Arsenic			0.984	mg/L	0.011	98	80	120			
Cadmium			0.899	mg/L	0.0010	90	80	120			
Copper			0.486	mg/L	0.010	97	80	120			
Lead			0.902	mg/L	0.019	90	80	120			
Zinc			0.970	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							04/10/15 12:28	
Arsenic			2.38	mg/L	0.011	95	90	110			
Cadmium			2.38	mg/L	0.0010	95	90	110			
Copper			2.46	mg/L	0.010	98	90	110			
Lead			2.37	mg/L	0.019	95	90	110			
Zinc			2.42	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							04/10/15 12:32	
Arsenic			0.000380	mg/L	0.011						
Cadmium			-3.00E-05	mg/L	0.0010						
Copper			-0.000760	mg/L	0.010						
Lead			0.0116	mg/L	0.019						
Zinc			-0.000160	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							04/10/15 13:13	
Arsenic			2.34	mg/L	0.011	94	90	110			
Cadmium			2.37	mg/L	0.0010	95	90	110			
Copper			2.42	mg/L	0.010	97	90	110			
Lead			2.31	mg/L	0.019	92	90	110			
Zinc			2.40	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							04/10/15 13:16	
Arsenic			0.00504	mg/L	0.011						
Cadmium			-0.000250	mg/L	0.0010						
Copper			-0.000650	mg/L	0.010						
Lead			0.00491	mg/L	0.019						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/21/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040057

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150410B		
Lab ID:	**CCB**	5	Continuing Calibration Blank							04/10/15 13:16	
Zinc			-0.000450	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							04/10/15 13:39	
Arsenic			2.47	mg/L	0.011	99	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.46	mg/L	0.019	98	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							04/10/15 13:43	
Arsenic			0.00650	mg/L	0.011						
Cadmium			0.000400	mg/L	0.0010						
Copper			-0.00291	mg/L	0.010						
Lead			-0.00272	mg/L	0.019						
Zinc			1.00E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							04/10/15 14:23	
Arsenic			2.50	mg/L	0.011	100	90	110			
Cadmium			2.51	mg/L	0.0010	100	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.51	mg/L	0.019	100	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							04/10/15 14:27	
Arsenic			0.00895	mg/L	0.011						
Cadmium			0.000500	mg/L	0.0010						
Copper			0.00173	mg/L	0.010						
Lead			0.0188	mg/L	0.019						
Zinc			3.00E-05	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/21/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040057

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150414B		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							04/14/15 13:16	
Cadmium			0.0484	mg/L	0.0010	97	90	110			
Lead			0.0478	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							04/14/15 13:21	
Cadmium			1.00E-06	mg/L	0.0010						
Lead			1.49E-05	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							04/14/15 13:49	
Cadmium			0.0491	mg/L	0.0010	98	90	110			
Lead			0.0481	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							04/14/15 13:54	
Cadmium			-1.00E-06	mg/L	0.0010						
Lead			1.23E-05	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							04/14/15 14:24	
Cadmium			0.0493	mg/L	0.0010	99	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							04/14/15 14:29	
Cadmium			2.60E-06	mg/L	0.0010						
Lead			2.71E-05	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/21/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040057

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28620	
Lab ID:	**MB-28620**	5	Method Blank				Run: ICP2-HE_150410B			04/10/15 12:43	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28620**	5	Laboratory Fortified Blank				Run: ICP2-HE_150410B			04/10/15 12:47	
Arsenic			48.0	mg/kg	1.0	96	80	120			
Cadmium			23.5	mg/kg	1.0	94	80	120			
Copper			49.1	mg/kg	1.0	98	80	120			
Lead			46.9	mg/kg	1.0	94	80	120			
Zinc			48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28620**	5	Laboratory Control Sample				Run: ICP2-HE_150410B			04/10/15 12:51	
Arsenic			267	mg/kg	1.9	78	72.3	106.4			
Cadmium			112	mg/kg	1.0	82	73	105.1			
Copper			236	mg/kg	1.2	84	77.5	109.6			
Lead			172	mg/kg	3.4	92	75.9	108.6			
Zinc			182	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H15040057-008APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150410B			04/10/15 14:01	
Arsenic			264	mg/kg	1.8	92	75	125			
Cadmium			112	mg/kg	1.0	89	75	125			
Copper			756	mg/kg	1.1	97	75	125			
Lead			245	mg/kg	3.2	90	75	125			
Zinc			459	mg/kg	1.0	90	75	125			
Lab ID:	**H15040057-008AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150410B			04/10/15 14:05	
Arsenic			83.5	mg/kg	1.7	98	75	125			
Cadmium			24.5	mg/kg	1.0	95	75	125			
Copper			557	mg/kg	1.1		75	125			A
Lead			79.4	mg/kg	3.1	118	75	125			
Zinc			276	mg/kg	1.0		75	125			A
Lab ID:	**H15040057-008AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150410B			04/10/15 14:08	
Arsenic			85.2	mg/kg	1.7	100	75	125	2.1	20	
Cadmium			25.1	mg/kg	1.0	97	75	125	2.5	20	
Copper			565	mg/kg	1.1		75	125	1.4	20	A
Lead			75.7	mg/kg	3.1	109	75	125	4.8	20	
Zinc			302	mg/kg	1.0		75	125	9.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/21/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15040057

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150414B	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							04/14/15 10:01	
Cadmium			0.0306	mg/L	0.0010	102	90	110			
Lead			0.0591	mg/L	0.0010	98	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							04/14/15 10:03	
Cadmium			0.000534	mg/L	0.0010						
Lead			0.000296	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							04/14/15 10:06	
Cadmium			0.0115	mg/L	0.0010	115	70	130			
Lead			0.000264	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 28620	
Lab ID:	**MB-28620**	2	Method Blank				Run: ICPMS204-B_150414B			04/14/15 13:32	
Cadmium			ND	mg/kg	0.2						
Lead			0.2	mg/kg	0.10						
Lab ID:	**LCS-28620**	2	Laboratory Control Sample				Run: ICPMS204-B_150414B			04/14/15 13:37	
Cadmium			118	mg/kg	1.0	86	73	105.1			
Lead			178	mg/kg	1.0	95	75.9	108.6			
Lab ID:	**LFB-28620**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150414B			04/14/15 13:39	
Cadmium			27.0	mg/kg	1.0	108	80	120			
Lead			53.1	mg/kg	1.0	106	80	120			
Lab ID:	**H15040057-008APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150414B			04/14/15 14:02	
Cadmium			240	mg/kg	1.0	100	75	125			
Lead			500	mg/kg	1.0	98	75	125			
Lab ID:	**H15040057-008AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150414B			04/14/15 14:04	
Cadmium			26.7	mg/kg	1.0	109	75	125			
Lead			80.6	mg/kg	1.0	110	75	125			
Lab ID:	**H15040057-008AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150414B			04/14/15 14:07	
Cadmium			27.0	mg/kg	1.0	109	75	125	1.0	20	
Lead			79.7	mg/kg	1.0	107	75	125	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund

H15040057

Login completed by: Austin H. Nearpass

Reviewed by: BL2000\rwilliams

Reviewed Date: 4/7/2015

Date Received: 4/6/2015

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	2.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-155-2430	1036	2/4/15	Soil	A	B		1
4-155-3036	1035	2/4/15	Soil	A	B		1
4-329-4248	1250	1/20/15	Soil	A	B		1
3-414-3036	817	12/22/14	Soil	A	B		1
3-414-3642	816	12/22/14	Soil	A	B		1
4-027-3642	1641	2/09/15	Soil	A	B		1
4-027-4248	1640	2/09/15	Soil	A	B		1
4-233-4248	1515	1/26/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15040057

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 4/6/15 1528

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 2.0 on ice ~~OTB~~ hand del.

Date/Time: 4/6/15 15:28

COC040615 pg 1additional samples.xls

ANALYTICAL SUMMARY REPORT

April 03, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15030388

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 19 samples for MT DEQ-Federal Superfund on 3/27/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15030388-001	4-174-0006	01/13/15 16:27	03/27/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15030388-002	4-174-0612	01/13/15 16:26	03/27/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15030388-003	4-214W-0006	01/14/15 16:18	03/27/15	Soil	Same As Above
H15030388-004	4-192-1824	01/27/15 8:54	03/27/15	Soil	Same As Above
H15030388-005	3-027E2-1824	02/11/15 8:54	03/27/15	Soil	Same As Above
H15030388-006	4-136-0006	02/03/15 14:23	03/27/15	Soil	Same As Above
H15030388-007	4-502-3642	02/02/15 9:31	03/27/15	Soil	Same As Above
H15030388-008	4-502-4248	02/02/15 9:30	03/27/15	Soil	Same As Above
H15030388-009	4-263-0006	01/19/15 13:02	03/27/15	Soil	Same As Above
H15030388-010	4-263-0612	01/19/15 13:01	03/27/15	Soil	Same As Above
H15030388-011	4-271W-1218	01/19/15 15:46	03/27/15	Soil	Same As Above
H15030388-012	4-271W-1824	01/19/15 15:45	03/27/15	Soil	Same As Above
H15030388-013	4-309-5460	01/19/15 16:44	03/27/15	Soil	Same As Above
H15030388-014	4-268-3642	01/21/15 8:31	03/27/15	Soil	Same As Above
H15030388-015	4-268-4248	01/21/15 8:30	03/27/15	Soil	Same As Above
H15030388-016	4-269-6066	01/21/15 9:16	03/27/15	Soil	Same As Above
H15030388-017	4-269-6672	01/21/15 9:15	03/27/15	Soil	Same As Above
H15030388-018	4-333-0006	01/21/15 15:15	03/27/15	Soil	Same As Above
H15030388-019	3-131W2-0006	11/06/14 8:35	03/27/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

ANALYTICAL SUMMARY REPORT

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15030388

Report Date: 04/03/15

CASE NARRATIVE

Prep Comments for Sample H15030388-010A, Test PRP-3050: processed soil was extracted

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15030388

Report Date: 04/03/15
Date Received: 03/27/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15030388-001	4-174-0006	0	0	7.5	187	51	3220	223	11300
H15030388-002	4-174-0612	0	0	7.5	54	8	490	70	2880
H15030388-003	4-214W-0006	0	0	7.7	590	8	3200	542	2600
H15030388-004	4-192-1824	0	0	7.7	7	< 1	23	10	49
H15030388-005	3-027E2-1824	0	0	7.6	28	< 1	108	22	115
H15030388-006	4-136-0006	0	0	7.4	571	3	1450	409	1300
H15030388-007	4-502-3642	0	0	5.1	13	< 1	25	12	47
H15030388-008	4-502-4248	0	0	7.1	43	< 1	237	46	269
H15030388-009	4-263-0006	0	0	7.6	474	7	2510	396	2160
H15030388-010	4-263-0612	0	0	7.7	697	10	4600	664	2780
H15030388-011	4-271W-1218	0	0	7.8	77	2	339	66	291
H15030388-012	4-271W-1824	0	0	8.0	40	< 1	166	50	157
H15030388-013	4-309-5460	0	0	4.8	141	1	600	155	528
H15030388-014	4-268-3642	0	0	7.0	6	3	1760	8	247
H15030388-015	4-268-4248	0	0	7.1	28	10	4210	13	850
H15030388-016	4-269-6066	0	0	6.5	21	3	872	284	563
H15030388-017	4-269-6672	0	0	7.6	111	2	1400	347	864
H15030388-018	4-333-0006	0	0	7.7	1470	13	8540	658	3280
H15030388-019	3-131W2-0006	0	0	8.1	102	1	188	28	130

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030388

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2							Analytical Run: SOIL PH METER_150401A			
Lab ID: ICV_1_150330_1		Initial Calibration Verification Standard							03/31/15 06:51	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150330_1		Continuing Calibration Verification Standard							03/31/15 07:43	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150330_1		Continuing Calibration Verification Standard							03/31/15 07:44	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150330_1		Initial Calibration Verification Standard							03/31/15 07:45	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150330_1		Continuing Calibration Verification Standard							03/31/15 07:55	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 28525
Lab ID: LCS-28525		Laboratory Control Sample				Run: SOIL PH METER_150401A			03/31/15 07:46	
pH, sat. paste		7.58	s.u.	0.10	101	95	105			
Lab ID: H15030388-010ADUP		Sample Duplicate				Run: SOIL PH METER_150401A			03/31/15 07:55	
pH, sat. paste		7.72	s.u.	0.10				0.3	30	
Lab ID: H15030388-019ADUP		Sample Duplicate				Run: SOIL PH METER_150401A			03/31/15 08:05	
pH, sat. paste		8.05	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030388

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150401A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							04/01/15 10:04	
Arsenic			0.788	mg/L	0.011	98	90	110			
Cadmium			0.380	mg/L	0.0010	95	90	110			
Copper			0.783	mg/L	0.010	98	90	110			
Lead			0.792	mg/L	0.019	99	90	110			
Zinc			0.778	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							04/01/15 10:19	
Arsenic			0.00212	mg/L	0.011		0	0			
Cadmium			0.00586	mg/L	0.0010		0	0			
Copper			-0.00407	mg/L	0.010		0	0			
Lead			-0.00567	mg/L	0.019		0	0			
Zinc			0.00404	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							04/01/15 10:23	
Arsenic			0.976	mg/L	0.011	98	80	120			
Cadmium			0.879	mg/L	0.0010	88	80	120			
Copper			0.501	mg/L	0.010	100	80	120			
Lead			0.907	mg/L	0.019	91	80	120			
Zinc			0.961	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							04/01/15 10:53	
Arsenic			2.53	mg/L	0.011	101	90	110			
Cadmium			2.40	mg/L	0.0010	96	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.51	mg/L	0.019	100	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							04/01/15 10:57	
Arsenic			0.00719	mg/L	0.011						
Cadmium			0.000620	mg/L	0.0010						
Copper			0.000920	mg/L	0.010						
Lead			-0.0203	mg/L	0.019						
Zinc			0.000260	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							04/01/15 13:07	
Arsenic			2.50	mg/L	0.011	100	90	110			
Cadmium			2.36	mg/L	0.0010	94	90	110			
Copper			2.45	mg/L	0.010	98	90	110			
Lead			2.46	mg/L	0.019	99	90	110			
Zinc			2.40	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							04/01/15 13:10	
Arsenic			-0.0124	mg/L	0.011						
Cadmium			0.00100	mg/L	0.0010						
Copper			-0.00436	mg/L	0.010						
Lead			8.00E-05	mg/L	0.019						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030388

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150401A	
Lab ID: CCB	5	Continuing Calibration Blank							04/01/15 13:10	
Zinc		-0.000210	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030388

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150401B		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							04/01/15 20:09	
Arsenic			0.0517	mg/L	0.0050	103	90	110			
Cadmium			0.0493	mg/L	0.0010	99	90	110			
Lead			0.0480	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							04/01/15 20:18	
Arsenic			3.81E-05	mg/L	0.0050						
Cadmium			1.17E-05	mg/L	0.0010						
Lead			-9.10E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							04/01/15 21:52	
Arsenic			0.0524	mg/L	0.0050	105	90	110			
Cadmium			0.0489	mg/L	0.0010	98	90	110			
Lead			0.0479	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							04/01/15 22:01	
Arsenic			2.05E-05	mg/L	0.0050						
Cadmium			6.00E-07	mg/L	0.0010						
Lead			2.70E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030388

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28539
Lab ID:	**MB-28539**	5	Method Blank				Run: ICP2-HE_150401A				04/01/15 11:20
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.7						
Zinc			0.3	mg/kg	0.10						
Lab ID:	**LFB-28539**	5	Laboratory Fortified Blank				Run: ICP2-HE_150401A				04/01/15 11:24
Arsenic			56.5	mg/kg	1.0	102	80	120			
Cadmium			26.7	mg/kg	1.0	96	80	120			
Copper			56.9	mg/kg	1.0	102	80	120			
Lead			56.4	mg/kg	1.0	101	80	120			
Zinc			55.6	mg/kg	1.0	100	80	120			
Lab ID:	**LCS-28539**	5	Laboratory Control Sample				Run: ICP2-HE_150401A				04/01/15 11:27
Arsenic			286	mg/kg	1.9	83	72.3	106.4			
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			254	mg/kg	1.1	91	77.5	109.6			
Lead			180	mg/kg	3.3	96	75.9	108.6			
Zinc			187	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H15030388-019APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150401A				04/01/15 12:59
Arsenic			341	mg/kg	1.9	92	75	125			
Cadmium			108	mg/kg	1.0	82	75	125			
Copper			434	mg/kg	1.1	95	75	125			
Lead			254	mg/kg	3.3	87	75	125			
Zinc			362	mg/kg	1.0	89	75	125			
Lab ID:	**H15030388-019AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150401A				04/01/15 13:03
Arsenic			148	mg/kg	1.8	92	75	125			
Cadmium			23.2	mg/kg	1.0	88	75	125			
Copper			244	mg/kg	1.1	111	75	125			
Lead			73.2	mg/kg	3.2	90	75	125			
Zinc			175	mg/kg	1.0	88	75	125			
Lab ID:	**H15030388-019AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150401A				04/01/15 13:14
Arsenic			149	mg/kg	1.8	96	75	125	1.0	20	
Cadmium			24.1	mg/kg	1.0	92	75	125	3.8	20	
Copper			241	mg/kg	1.1	106	75	125	1.2	20	
Lead			70.4	mg/kg	3.2	85	75	125	3.9	20	
Zinc			180	mg/kg	1.0	99	75	125	2.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 04/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030388

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150401B		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							04/01/15 17:34	
Arsenic			0.0632	mg/L	0.0010	105	90	110			
Cadmium			0.0316	mg/L	0.0010	105	90	110			
Lead			0.0594	mg/L	0.0010	99	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							04/01/15 17:39	
Arsenic			0.000128	mg/L	0.0010						
Cadmium			0.000610	mg/L	0.0010						
Lead			0.000222	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							04/01/15 17:43	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Cadmium			0.0102	mg/L	0.0010	102	70	130			
Lead			0.000218	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 28539	
Lab ID:	**MB-28539**	3	Method Blank				Run: ICPMS204-B_150401B			04/01/15 20:22	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28539**	3	Laboratory Control Sample				Run: ICPMS204-B_150401B			04/01/15 20:27	
Arsenic			332	mg/kg	1.0	97	72.3	106.4			
Cadmium			128	mg/kg	1.0	94	73	105.1			
Lead			187	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-28539**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150401B			04/01/15 20:31	
Arsenic			59.4	mg/kg	1.0	107	80	120			
Cadmium			30.2	mg/kg	1.0	109	80	120			
Lead			56.7	mg/kg	1.0	102	80	120			
Lab ID:	**H15030388-019APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150401B			04/01/15 21:40	
Arsenic			2630	mg/kg	1.0	100	75	125			
Cadmium			1210	mg/kg	1.0	95	75	125			
Lead			2450	mg/kg	1.0	96	75	125			
Lab ID:	**H15030388-019AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150401B			04/01/15 21:44	
Arsenic			148	mg/kg	1.0	86	75	125			
Cadmium			25.5	mg/kg	1.0	97	75	125			
Lead			74.0	mg/kg	1.0	91	75	125			
Lab ID:	**H15030388-019AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150401B			04/01/15 21:48	
Arsenic			157	mg/kg	1.0	106	75	125	6.1	20	
Cadmium			25.8	mg/kg	1.0	99	75	125	1.2	20	
Lead			75.2	mg/kg	1.0	94	75	125	1.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund

H15030388

Login completed by: Austin H. Nearpass

Reviewed by: BL2000\rwilliams

Reviewed Date: 3/30/2015

Date Received: 3/27/2015

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	5.4°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-174-0006	1627	1/13/15	Soil	A	B		1
4-174-0612	1626	1/13/15	Soil	A	B		1
4-214W-0006	1618	1/14/15	Soil	A	B		1
4-192-1824	854	1/27/15	Soil	A	B		1
3-027E2-1824	854	2/11/15	Soil	A	B		1
4-136-0006	1423	2/3/15	Soil	A	B		1
4-502-3642	931	2/2/15	Soil	A	B		1
4-502-4248	930	2/2/15	Soil	A	B		1
4-263-0006	1302	1/19/15	Soil	A	B		1
4-263-0612	1301	1/19/15	Soil	A	B		1
4-271W-1218	1546	1/19/15	Soil	A	B		1
4-271W-1824	1545	1/19/15	Soil	A	B		1
4-309-5460	1644	1/19/15	Soil	A	B		1
4-268-3642	831	1/21/15	Soil	A	B		1
4-268-4248	830	1/21/15	Soil	A	B		1
4-269-6066	916	1/21/15	Soil	A	B		1
4-269-6672	915	1/21/15	Soil	A	B		1
4-333-0006	1515	1/21/15	Soil	A	B		1
3-131w2-0006	835	11/6/14	Soil	A	B		1
[redacted]		[redacted]	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15030388

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 3/27/15 1515	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 5.4 TB on ice nmd del	3/27/15 15:15

ANALYTICAL SUMMARY REPORT

March 31, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15030250

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 35 samples for MT DEQ-Federal Superfund on 3/19/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15030250-001	4-169W-1218	01/15/15 8:11	03/19/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15030250-002	4-169W-1824	01/15/15 8:10	03/19/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15030250-003	4-215-3642	01/15/15 15:21	03/19/15	Soil	Same As Above
H15030250-004	4-215-4248	01/15/15 15:20	03/19/15	Soil	Same As Above
H15030250-005	4-213-1218	01/14/15 13:05	03/19/15	Soil	Same As Above
H15030250-006	4-213-1824	01/14/15 13:04	03/19/15	Soil	Same As Above
H15030250-007	4-286-0612	01/20/15 8:32	03/19/15	Soil	Same As Above
H15030250-008	4-287-2430	01/20/15 8:03	03/19/15	Soil	Same As Above
H15030250-009	4-325-0006	01/20/15 13:17	03/19/15	Soil	Same As Above
H15030250-010	4-329-3036	01/20/15 12:52	03/19/15	Soil	Same As Above
H15030250-011	4-329-3642	01/20/15 12:51	03/19/15	Soil	Same As Above
H15030250-012	4-162-3642	01/28/15 13:01	03/19/15	Soil	Same As Above
H15030250-013	4-162-4248	01/28/15 13:00	03/19/15	Soil	Same As Above
H15030250-014	4-179-3642	01/28/15 15:11	03/19/15	Soil	Same As Above
H15030250-015	4-179-4248	01/28/15 15:10	03/19/15	Soil	Same As Above
H15030250-016	4-211-3642	01/28/15 8:56	03/19/15	Soil	Same As Above
H15030250-017	4-211-4248	01/28/15 8:55	03/19/15	Soil	Same As Above
H15030250-018	4-227-4248	01/26/15 14:30	03/19/15	Soil	Same As Above
H15030250-019	4-233-3036	01/26/15 15:17	03/19/15	Soil	Same As Above
H15030250-020	4-233-3642	01/26/15 15:16	03/19/15	Soil	Same As Above
H15030250-021	4-238-4248	01/26/15 14:50	03/19/15	Soil	Same As Above
H15030250-022	4-192-1218	01/27/15 8:55	03/19/15	Soil	Same As Above
H15030250-023	4-195-4248	01/27/15 16:30	03/19/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15030250-024	4-052-1824	02/03/15 9:49	03/19/15	Soil	Same As Above
H15030250-025	4-052-2430	02/03/15 9:48	03/19/15	Soil	Same As Above
H15030250-026	4-124E-1824	02/03/15 7:52	03/19/15	Soil	Same As Above
H15030250-027	4-124E-2430	02/03/15 7:51	03/19/15	Soil	Same As Above
H15030250-028	4-109-1218	02/04/15 12:35	03/19/15	Soil	Same As Above
H15030250-029	4-109-1824	02/04/15 12:34	03/19/15	Soil	Same As Above
H15030250-030	4-154-4248	02/04/15 9:45	03/19/15	Soil	Same As Above
H15030250-031	4-155-1218	02/04/15 10:38	03/19/15	Soil	Same As Above
H15030250-032	4-155-1824	02/04/15 10:37	03/19/15	Soil	Same As Above
H15030250-033	4-003-6072	02/10/15 15:50	03/19/15	Soil	Same As Above
H15030250-034	4-018-3036	02/10/15 13:22	03/19/15	Soil	Same As Above
H15030250-035	4-050-4248	01/05/15 14:10	03/19/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15030250

Report Date: 03/31/15
Date Received: 03/19/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15030250-001	4-169W-1218	7.8	13	< 1	96	25	108
H15030250-002	4-169W-1824	7.8	8	< 1	55	19	91
H15030250-003	4-215-3642	7.3	6	4	1610	12	1020
H15030250-004	4-215-4248	7.4	6	< 1	1670	10	290
H15030250-005	4-213-1218	7.9	346	7	2080	318	2740
H15030250-006	4-213-1824	7.6	18	< 1	47	15	142
H15030250-007	4-286-0612	7.4	217	3	1370	191	764
H15030250-008	4-287-2430	7.7	8	< 1	18	7	93
H15030250-009	4-325-0006	7.0	2100	6	9100	1320	1760
H15030250-010	4-329-3036	7.7	121	6	809	110	900
H15030250-011	4-329-3642	7.6	101	5	894	93	788
H15030250-012	4-162-3642	6.4	12	< 1	29	9	549
H15030250-013	4-162-4248	7.9	6	< 1	21	8	154
H15030250-014	4-179-3642	5.6	3	< 1	16	10	34
H15030250-015	4-179-4248	4.5	7	< 1	17	10	339
H15030250-016	4-211-3642	6.9	6	14	1990	14	1570
H15030250-017	4-211-4248	7.6	3	1	810	10	206
H15030250-018	4-227-4248	6.4	66	1	271	19	179
H15030250-019	4-233-3036	7.2	14	1	1800	11	231
H15030250-020	4-233-3642	7.2	39	4	2960	23	781
H15030250-021	4-238-4248	7.1	25	3	1160	29	280
H15030250-022	4-192-1218	7.6	19	< 1	151	26	136
H15030250-023	4-195-4248	7.4	49	3	1130	29	645
H15030250-024	4-052-1824	6.2	61	2	832	152	340
H15030250-025	4-052-2430	7.4	4	< 1	28	10	46
H15030250-026	4-124E-1824	7.3	13	< 1	40	14	70
H15030250-027	4-124E-2430	6.6	8	< 1	43	15	76
H15030250-028	4-109-1218	7.7	18	< 1	99	22	103
H15030250-029	4-109-1824	7.6	4	< 1	24	11	56
H15030250-030	4-154-4248	7.6	35	2	1730	34	614
H15030250-031	4-155-1218	7.7	95	2	676	88	585
H15030250-032	4-155-1824	7.6	113	2	737	99	618
H15030250-033	4-003-6072	7.6	41	3	731	55	826
H15030250-034	4-018-3036	7.1	10	< 1	1210	16	169
H15030250-035	4-050-4248	7.6	12	< 1	5390	13	304

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/31/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030250

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150327A		
Lab ID: ICV_1_150323_1		Initial Calibration Verification Standard							03/24/15 07:45	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150324_1		Continuing Calibration Verification Standard							03/25/15 08:42	
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150324_1		Continuing Calibration Verification Standard							03/25/15 08:42	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150324_1		Initial Calibration Verification Standard							03/25/15 08:43	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150324_1		Continuing Calibration Verification Standard							03/25/15 08:54	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150324_1		Continuing Calibration Verification Standard							03/25/15 09:09	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150324_1		Continuing Calibration Verification Standard							03/25/15 09:10	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150324_1		Initial Calibration Verification Standard							03/25/15 09:10	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150324_1		Continuing Calibration Verification Standard							03/25/15 09:22	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150324_1		Initial Calibration Verification Standard							03/25/15 07:14	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150325_1		Initial Calibration Verification Standard							03/26/15 06:48	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150326_1		Initial Calibration Verification Standard							03/27/15 07:52	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 28461
Lab ID: LCS-28461		Laboratory Control Sample				Run: SOIL PH METER_150327A			03/25/15 08:44	
pH, sat. paste		7.60	s.u.	0.10	102	95	105			
Lab ID: H15030250-010ADUP		Sample Duplicate				Run: SOIL PH METER_150327A			03/25/15 08:53	
pH, sat. paste		7.72	s.u.	0.10				0.1	30	
Lab ID: H15030250-020ADUP		Sample Duplicate				Run: SOIL PH METER_150327A			03/25/15 09:04	
pH, sat. paste		7.25	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 28462
Lab ID: LCS-28462		Laboratory Control Sample				Run: SOIL PH METER_150327A			03/25/15 09:11	
pH, sat. paste		7.62	s.u.	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/31/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030250

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28462
Lab ID: H15030250-030ADUP	Sample Duplicate					Run: SOIL PH METER_150327A				03/25/15 09:21
pH, sat. paste		7.54	s.u.	0.10				0.3	30	
Lab ID: H15030250-035ADUP	Sample Duplicate					Run: SOIL PH METER_150327A				03/25/15 09:28
pH, sat. paste		7.59	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/31/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150325B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								03/25/15 08:38
Arsenic			0.788	mg/L	0.0085	98	90	110			
Cadmium			0.384	mg/L	0.0010	96	90	110			
Copper			0.791	mg/L	0.010	99	90	110			
Lead			0.777	mg/L	0.010	97	90	110			
Zinc			0.788	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/25/15 08:53
Arsenic			-0.00525	mg/L	0.0085		0	0			
Cadmium			0.00581	mg/L	0.0010		0	0			
Copper			-0.000510	mg/L	0.010		0	0			
Lead			-0.0498	mg/L	0.010		0	0			
Zinc			0.00269	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/25/15 08:57
Arsenic			0.989	mg/L	0.0085	99	80	120			
Cadmium			0.884	mg/L	0.0010	88	80	120			
Copper			0.502	mg/L	0.010	100	80	120			
Lead			0.892	mg/L	0.010	89	80	120			
Zinc			0.967	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/25/15 10:57
Arsenic			2.50	mg/L	0.0085	100	90	110			
Cadmium			2.32	mg/L	0.0010	93	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.44	mg/L	0.010	98	90	110			
Zinc			2.37	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/25/15 11:00
Arsenic			0.00275	mg/L	0.0085						
Cadmium			0.000370	mg/L	0.0010						
Copper			0.00387	mg/L	0.010						
Lead			-0.0104	mg/L	0.010						
Zinc			0.00144	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/25/15 11:41
Arsenic			2.60	mg/L	0.0085	104	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/25/15 11:44
Arsenic			0.00536	mg/L	0.0085						
Cadmium			0.000170	mg/L	0.0010						
Copper			0.00303	mg/L	0.010						
Lead			0.00174	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/31/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150325B	
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/25/15 11:44	
Zinc			-4.00E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/25/15 12:25	
Arsenic			2.56	mg/L	0.0085	102	90	110			
Cadmium			2.39	mg/L	0.0010	96	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.42	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/25/15 12:29	
Arsenic			0.00346	mg/L	0.0085						
Cadmium			0.000540	mg/L	0.0010						
Copper			0.00798	mg/L	0.010						
Lead			0.00639	mg/L	0.010						
Zinc			0.00158	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/25/15 12:51	
Arsenic			2.49	mg/L	0.0085	100	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/25/15 12:55	
Arsenic			-0.000660	mg/L	0.0085						
Cadmium			0.000550	mg/L	0.0010						
Copper			0.00119	mg/L	0.010						
Lead			-0.00254	mg/L	0.010						
Zinc			8.00E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/25/15 13:36	
Arsenic			2.49	mg/L	0.0085	99	90	110			
Cadmium			2.52	mg/L	0.0010	101	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/25/15 13:39	
Arsenic			-0.00255	mg/L	0.0085						
Cadmium			0.000930	mg/L	0.0010						
Copper			-0.000840	mg/L	0.010						
Lead			0.0175	mg/L	0.010						
Zinc			0.000700	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/25/15 14:20	
Arsenic			2.54	mg/L	0.0085	101	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/31/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150325B		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/25/15 14:20	
Cadmium			2.56	mg/L	0.0010	102	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.56	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/25/15 14:23	
Arsenic			0.00902	mg/L	0.0085						
Cadmium			5.00E-05	mg/L	0.0010						
Copper			-0.00360	mg/L	0.010						
Lead			-0.0190	mg/L	0.010						
Zinc			-8.00E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/25/15 14:53	
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.55	mg/L	0.0010	102	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.55	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/25/15 14:56	
Arsenic			-0.00429	mg/L	0.0085						
Cadmium			0.000760	mg/L	0.0010						
Copper			-0.00437	mg/L	0.010						
Lead			0.00505	mg/L	0.010						
Zinc			-0.000450	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/31/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28426	
Lab ID:	**MB-28426**	5	Method Blank				Run: ICP2-HE_150325B			03/25/15 10:49	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28426**	5	Laboratory Fortified Blank				Run: ICP2-HE_150325B			03/25/15 10:53	
Arsenic			51.5	mg/kg	1.0	103	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			51.0	mg/kg	1.0	101	80	120			
Lead			48.9	mg/kg	1.0	98	80	120			
Zinc			49.4	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-28426**	5	Laboratory Control Sample				Run: ICP2-HE_150325B			03/25/15 11:04	
Arsenic			303	mg/kg	1.9	88	72.3	106.4			
Cadmium			118	mg/kg	1.0	86	73	105.1			
Copper			260	mg/kg	1.1	93	77.5	109.6			
Lead			184	mg/kg	3.3	99	75.9	108.6			
Zinc			192	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H15030250-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150325B			03/25/15 12:59	
Arsenic			311	mg/kg	1.9	92	75	125			
Cadmium			118	mg/kg	1.0	88	75	125			
Copper			513	mg/kg	1.2	91	75	125			
Lead			252	mg/kg	3.4	88	75	125			
Zinc			426	mg/kg	1.0	93	75	125			
Lab ID:	**H15030250-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150325B			03/25/15 13:02	
Arsenic			116	mg/kg	1.8	98	75	125			
Cadmium			25.5	mg/kg	1.0	96	75	125			
Copper			323	mg/kg	1.1		75	125			A
Lead			70.8	mg/kg	3.2	101	75	125			
Zinc			234	mg/kg	1.0	108	75	125			
Lab ID:	**H15030250-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150325B			03/25/15 13:06	
Arsenic			119	mg/kg	1.8	104	75	125	2.4	20	
Cadmium			25.0	mg/kg	1.0	94	75	125	1.9	20	
Copper			325	mg/kg	1.1		75	125	0.8	20	A
Lead			71.6	mg/kg	3.2	103	75	125	1.2	20	
Zinc			234	mg/kg	1.0	108	75	125	0.1	20	
Method:	**SW6010B**									Batch: 28427	
Lab ID:	**MB-28427**	5	Method Blank				Run: ICP2-HE_150325B			03/25/15 13:10	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/31/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28427
Lab ID:	**MB-28427**	5	Method Blank				Run: ICP2-HE_150325B			03/25/15 13:10	
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28427**	5	Laboratory Fortified Blank				Run: ICP2-HE_150325B			03/25/15 13:14	
Arsenic			51.4	mg/kg	1.0	103	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Copper			51.2	mg/kg	1.0	102	80	120			
Lead			49.6	mg/kg	1.0	99	80	120			
Zinc			51.7	mg/kg	1.0	103	80	120			
Lab ID:	**LCS-28427**	5	Laboratory Control Sample				Run: ICP2-HE_150325B			03/25/15 13:17	
Arsenic			268	mg/kg	1.9	78	72.3	106.4			
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			246	mg/kg	1.2	88	77.5	109.6			
Lead			168	mg/kg	3.4	90	75.9	108.6			
Zinc			184	mg/kg	1.0	86	74.2	109.9			
Lab ID:	**H15030250-035APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150325B			03/25/15 14:42	
Arsenic			259	mg/kg	1.9	93	75	125			
Cadmium			124	mg/kg	1.0	93	75	125			
Copper			5580	mg/kg	1.2		75	125			A
Lead			254	mg/kg	3.4	91	75	125			
Zinc			557	mg/kg	1.0	95	75	125			
Lab ID:	**H15030250-035AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150325B			03/25/15 14:46	
Arsenic			61.1	mg/kg	1.9	93	75	125			
Cadmium			26.7	mg/kg	1.0	98	75	125			
Copper			4950	mg/kg	1.1		75	125			A
Lead			61.7	mg/kg	3.3	92	75	125			
Zinc			341	mg/kg	1.0		75	125			A
Lab ID:	**H15030250-035AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150325B			03/25/15 14:49	
Arsenic			62.3	mg/kg	1.9	96	75	125	2.0	20	
Cadmium			27.6	mg/kg	1.0	102	75	125	3.5	20	
Copper			5310	mg/kg	1.1		75	125	6.9	20	A
Lead			69.4	mg/kg	3.3	107	75	125	12	20	
Zinc			362	mg/kg	1.0		75	125	5.9	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/31/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150330B		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							03/30/15 12:57	
Arsenic			0.0592	mg/L	0.0010	99	90	110			
Cadmium			0.0312	mg/L	0.0010	104	90	110			
Lead			0.0582	mg/L	0.0010	97	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							03/30/15 13:02	
Arsenic			7.90E-05	mg/L	0.0010						
Cadmium			0.00100	mg/L	0.0010						
Lead			0.000209	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							03/30/15 13:06	
Arsenic			0.0103	mg/L	0.0010	103	70	130			
Cadmium			0.0107	mg/L	0.0010	107	70	130			
Lead			0.000214	mg/L	0.0010		0	0			
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/30/15 13:14	
Arsenic			0.0496	mg/L	0.0010	99	90	110			
Cadmium			0.0502	mg/L	0.0010	100	90	110			
Lead			0.0500	mg/L	0.0010	100	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/30/15 13:23	
Arsenic			-5.69E-05	mg/L	0.0010						
Cadmium			2.20E-06	mg/L	0.0010						
Lead			-4.90E-06	mg/L	0.0010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/30/15 14:15	
Arsenic			0.0475	mg/L	0.0050	95	90	110			
Cadmium			0.0509	mg/L	0.0010	102	90	110			
Lead			0.0487	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/30/15 14:24	
Arsenic			-3.61E-05	mg/L	0.0050						
Cadmium			1.00E-05	mg/L	0.0010						
Lead			-9.00E-07	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/30/15 15:16	
Arsenic			0.0485	mg/L	0.0050	97	90	110			
Cadmium			0.0513	mg/L	0.0010	103	90	110			
Lead			0.0496	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/30/15 15:25	
Arsenic			-5.61E-05	mg/L	0.0050						
Cadmium			6.60E-06	mg/L	0.0010						
Lead			3.88E-05	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/30/15 16:16	
Arsenic			0.0479	mg/L	0.0050	96	90	110			
Cadmium			0.0505	mg/L	0.0010	101	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/31/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150330B		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								03/30/15 16:16
Lead			0.0494	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								03/30/15 16:25
Arsenic			1.77E-05	mg/L	0.0050						
Cadmium			1.57E-05	mg/L	0.0010						
Lead			2.29E-05	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								03/30/15 17:23
Arsenic			0.0489	mg/L	0.0050	98	90	110			
Cadmium			0.0509	mg/L	0.0010	102	90	110			
Lead			0.0495	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								03/30/15 17:31
Arsenic			-4.40E-06	mg/L	0.0050						
Cadmium			6.70E-06	mg/L	0.0010						
Lead			2.75E-05	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								03/30/15 18:27
Arsenic			0.0499	mg/L	0.0050	100	90	110			
Cadmium			0.0501	mg/L	0.0010	100	90	110			
Lead			0.0492	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								03/30/15 18:35
Arsenic			-6.80E-06	mg/L	0.0050						
Cadmium			ND	mg/L	0.0010						
Lead			2.33E-05	mg/L	0.010						
Method:	**SW6020**										Batch: 28426
Lab ID:	**MB-28426**	2	Method Blank				Run: ICPMS204-B_150330B				03/30/15 14:28
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28426**	2	Laboratory Control Sample				Run: ICPMS204-B_150330B				03/30/15 14:37
Arsenic			304	mg/kg	1.0	89	72.3	106.4			
Lead			191	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-28426**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150330B				03/30/15 14:41
Arsenic			52.2	mg/kg	1.0	104	80	120			
Lead			51.4	mg/kg	1.0	103	80	120			
Lab ID:	**H15030250-018APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150330B				03/30/15 16:04
Arsenic			2950	mg/kg	1.0	112	75	125			
Lead			2790	mg/kg	1.0	107	75	125			
Lab ID:	**H15030250-018AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150330B				03/30/15 16:07
Arsenic			117	mg/kg	1.0	100	75	125			
Lead			68.4	mg/kg	1.0	95	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/31/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15030250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28426
Lab ID:	**H15030250-018AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150330B			03/30/15 16:12	
Arsenic			118	mg/kg	1.0	102	75	125	0.9	20	
Lead			70.5	mg/kg	1.0	99	75	125	2.9	20	
Method:	**SW6020**										Batch: 28427
Lab ID:	**MB-28427**	3	Method Blank				Run: ICPMS204-B_150330B			03/30/15 16:29	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28427**	3	Laboratory Control Sample				Run: ICPMS204-B_150330B			03/30/15 16:38	
Arsenic			269	mg/kg	1.0	78	72.3	106.4			
Cadmium			121	mg/kg	1.0	88	73	105.1			
Lead			171	mg/kg	1.0	92	75.9	108.6			
Lab ID:	**LFB-28427**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150330B			03/30/15 16:42	
Arsenic			49.2	mg/kg	1.0	99	80	120			
Cadmium			27.4	mg/kg	1.0	109	80	120			
Lead			50.1	mg/kg	1.0	100	80	120			
Lab ID:	**H15030250-035APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150330B			03/30/15 18:14	
Arsenic			3100	mg/kg	1.0	120	75	125			
Cadmium			1420	mg/kg	1.0	110	75	125			
Lead			2910	mg/kg	1.0	112	75	125			
Lab ID:	**H15030250-035AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150330B			03/30/15 18:18	
Arsenic			64.3	mg/kg	1.0	101	75	125			
Cadmium			27.5	mg/kg	1.0	103	75	125			
Lead			63.5	mg/kg	1.0	98	75	125			
Lab ID:	**H15030250-035AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150330B			03/30/15 18:22	
Arsenic			60.9	mg/kg	1.0	94	75	125	5.4	20	
Cadmium			27.6	mg/kg	1.0	103	75	125	0.1	20	
Lead			65.3	mg/kg	1.0	101	75	125	2.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund

H15030250

Login completed by: Austin H. Nearpass

Reviewed by: BL2000\rwilliams

Reviewed Date: 3/23/2015

Date Received: 3/19/2015

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	1.2°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-169W-1218	811	1/15/15	Soil	A	B		1
4-169W-1824	810	1/15/15	Soil	A	B		1
4-215-3642	1521	1/15/15	Soil	A	B		1
4-215-4248	1520	1/15/15	Soil	A	B		1
4-213-1218	1305	1/14/15	Soil	A	B		1
4-213-1824	1304	1/14/15	Soil	A	B		1
4-286-0612	832	1/20/15	Soil	A	B		1
4-287-2430	803	1/20/15	Soil	A	B		1
4-325-0006	1317	1/20/15	Soil	A	B		1
4-329-3036	1252	1/20/15	Soil	A	B		1
4-329-3642	1251	1/20/15	Soil	A	B		1
4-162-3642	1301	1/28/15	Soil	A	B		1
4-162-4248	1300	1/28/15	Soil	A	B		1
4-179-3642	1511	1/28/15	Soil	A	B		1
4-179-4248	1510	1/28/15	Soil	A	B		1
4-211-3642	856	1/28/15	Soil	A	B		1
4-211-4248	855	1/28/15	Soil	A	B		1
4-227-4248	1430	1/26/15	Soil	A	B		1
[redacted]	[redacted]	1/26/15	Soil	A	B		1
4-233-3036	1517	1/26/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

#15030250

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 3/19/15 1050	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	1.2 TB onice hand del [signature]	3/19/15 10:50

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-233-3642	1516	1/26/15	Soil	A	B		1
4-238-4248	1450	1/26/15	Soil	A	B		1
4-192-1218	855	1/27/15	Soil	A	B		1
4-195-4248	1630	1/27/15	Soil	A	B		1
4-052-1824	949	2/3/15	Soil	A	B		1
4-052-2430	948	2/3/15	Soil	A	B		1
4-124E-1824	752	2/3/15	Soil	A	B		1
4-124E-2430	751	2/3/15	Soil	A	B		1
4-109-1218	1235	2/4/15	Soil	A	B		1
4-109-1824	1234	2/4/15	Soil	A	B		1
4-154-4248	945	2/4/15	Soil	A	B		1
4-155-1218	1038	2/4/15	Soil	A	B		1
4-155-1824	1037	2/4/15	Soil	A	B		1
4-003-6072	1550	2/10/15	Soil	A	B		1
4-018-3036	1322	2/10/15	Soil	A	B		1
4-050-4248	1410	1/5/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15030250

Preservatives Used:
1 - Ice

Relinquished By (sign): (1)
Date/Time: 3/19/15 1050

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): 1.2 TB on ice bundled

Date/Time: 3/19/15 10:50

COC022315additional samples.xls

ANALYTICAL SUMMARY REPORT

March 11, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020271

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 60 samples for MT DEQ-Federal Superfund on 2/17/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020271-001	4-022-3036	02/09/15 16:02	02/17/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020271-002	4-022-3642	02/09/15 16:01	02/17/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020271-003	4-022-4248	02/09/15 16:00	02/17/15	Soil	Same As Above
H15020271-004	4-025-1218	02/09/15 15:45	02/17/15	Soil	Same As Above
H15020271-005	4-025-1824	02/09/15 15:44	02/17/15	Soil	Same As Above
H15020271-006	4-025-2430	02/09/15 15:43	02/17/15	Soil	Same As Above
H15020271-007	4-026-1824	02/09/15 16:29	02/17/15	Soil	Same As Above
H15020271-008	4-026-2430	02/09/15 16:28	02/17/15	Soil	Same As Above
H15020271-009	4-026-3036	02/09/15 16:27	02/17/15	Soil	Same As Above
H15020271-010	4-027-1824	02/09/15 16:44	02/17/15	Soil	Same As Above
H15020271-011	4-027-2430	02/09/15 16:43	02/17/15	Soil	Same As Above
H15020271-012	4-027-3036	02/09/15 16:42	02/17/15	Soil	Same As Above
H15020271-013	4-029-0006	02/09/15 15:22	02/17/15	Soil	Same As Above
H15020271-014	4-029-0612	02/09/15 15:21	02/17/15	Soil	Same As Above
H15020271-015	4-034-0612	02/09/15 14:51	02/17/15	Soil	Same As Above
H15020271-016	4-034-1218	02/09/15 14:50	02/17/15	Soil	Same As Above
H15020271-017	4-034-1824	02/09/15 14:49	02/17/15	Soil	Same As Above
H15020271-018	4-043-0612	02/09/15 14:32	02/17/15	Soil	Same As Above
H15020271-019	4-043-1218	02/09/15 14:30	02/17/15	Soil	Same As Above
H15020271-020	4-043-1218D	02/09/15 14:31	02/17/15	Soil	Same As Above
H15020271-021	4-043-1824	02/09/15 14:29	02/17/15	Soil	Same As Above
H15020271-022	4-044-0006	02/09/15 13:47	02/17/15	Soil	Same As Above
H15020271-023	4-044-0612	02/09/15 13:46	02/17/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020271-024	4-045-2430	02/09/15 13:23	02/17/15	Soil	Same As Above
H15020271-025	4-045-3036	02/09/15 13:22	02/17/15	Soil	Same As Above
H15020271-026	4-048-4248	02/09/15 12:20	02/17/15	Soil	Same As Above
H15020271-027	4-048-4854	02/09/15 12:56	02/17/15	Soil	Same As Above
H15020271-028	4-048-5460	02/09/15 12:55	02/17/15	Soil	Same As Above
H15020271-029	4-048E-0006	02/09/15 14:07	02/17/15	Soil	Same As Above
H15020271-030	4-048E-0612	02/09/15 14:06	02/17/15	Soil	Same As Above
H15020271-031	4-054-0006	02/09/15 11:38	02/17/15	Soil	Same As Above
H15020271-032	4-054-0612	02/09/15 11:37	02/17/15	Soil	Same As Above
H15020271-033	4-054-1218	02/09/15 11:35	02/17/15	Soil	Same As Above
H15020271-034	4-054-1218D	02/09/15 11:36	02/17/15	Soil	Same As Above
H15020271-035	4-055-3036	02/09/15 11:52	02/17/15	Soil	Same As Above
H15020271-036	4-055-3642	02/09/15 11:51	02/17/15	Soil	Same As Above
H15020271-037	4-055-4248	02/09/15 11:50	02/17/15	Soil	Same As Above
H15020271-038	4-057-1824	02/09/15 9:04	02/17/15	Soil	Same As Above
H15020271-039	4-057-2430	02/09/15 9:03	02/17/15	Soil	Same As Above
H15020271-040	4-057-3036	02/09/15 9:02	02/17/15	Soil	Same As Above
H15020271-041	4-057S-0612	02/09/15 10:51	02/17/15	Soil	Same As Above
H15020271-042	4-057S-1218	02/09/15 10:50	02/17/15	Soil	Same As Above
H15020271-043	4-057S-1824	02/09/15 10:49	02/17/15	Soil	Same As Above
H15020271-044	4-060E1S-0006	02/09/15 8:38	02/17/15	Soil	Same As Above
H15020271-045	4-060E1S-0612	02/09/15 8:37	02/17/15	Soil	Same As Above
H15020271-046	4-060E1S-1218	02/09/15 8:35	02/17/15	Soil	Same As Above
H15020271-047	4-060E1S-1218D	02/09/15 8:36	02/17/15	Soil	Same As Above
H15020271-048	4-060E2-0006	02/09/15 8:17	02/17/15	Soil	Same As Above
H15020271-049	4-060E2-0612	02/09/15 8:16	02/17/15	Soil	Same As Above
H15020271-050	4-060E2-1218	02/09/15 8:15	02/17/15	Soil	Same As Above
H15020271-051	4-061-1824	02/09/15 10:15	02/17/15	Soil	Same As Above
H15020271-052	4-062-1824	02/09/15 10:02	02/17/15	Soil	Same As Above
H15020271-053	4-062-2430	02/09/15 10:01	02/17/15	Soil	Same As Above
H15020271-054	4-062-3036	02/09/15 10:00	02/17/15	Soil	Same As Above
H15020271-055	4-063-3642	02/09/15 9:31	02/17/15	Soil	Same As Above
H15020271-056	4-063-4248	02/09/15 9:30	02/17/15	Soil	Same As Above
H15020271-057	4-063S-0006	02/09/15 10:47	02/17/15	Soil	Same As Above
H15020271-058	4-063S-0612	02/09/15 10:46	02/17/15	Soil	Same As Above
H15020271-059	4-071-0006	02/09/15 7:57	02/17/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020271-060	4-071-0612	02/09/15 7:56	02/17/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020271

Report Date: 03/11/15
Date Received: 02/17/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Client Sample ID		Results	Results	Results	Results	Results	Results
H15020271-001	4-022-3036		6.7	26	2	5210	18	462
H15020271-002	4-022-3642		7.6	14	2	655	7	259
H15020271-003	4-022-4248		7.8	8	1	239	10	221
H15020271-004	4-025-1218		7.9	1500	13	12200	1180	3270
H15020271-005	4-025-1824		7.7	72	4	811	176	1190
H15020271-006	4-025-2430		7.6	14	< 1	107	19	108
H15020271-007	4-026-1824		7.2	30	14	9740	42	3180
H15020271-008	4-026-2430		7.1	7	3	72	14	1770
H15020271-009	4-026-3036		7.2	13	4	604	21	729
H15020271-010	4-027-1824		6.7	40	< 1	2370	110	344
H15020271-011	4-027-2430		6.9	9	< 1	1770	18	156
H15020271-012	4-027-3036		7.1	7	< 1	1440	10	156
H15020271-013	4-029-0006		7.8	11	< 1	45	12	70
H15020271-014	4-029-0612		7.8	7	< 1	32	15	75
H15020271-015	4-034-0612		7.9	799	9	5310	566	2530
H15020271-016	4-034-1218		7.7	81	1	404	52	259
H15020271-017	4-034-1824		7.7	10	< 1	56	14	91
H15020271-018	4-043-0612		7.7	697	9	5020	585	2210
H15020271-019	4-043-1218		7.6	17	< 1	84	20	89
H15020271-020	4-043-1218D		7.5	11	< 1	44	16	76
H15020271-021	4-043-1824		7.5	8	< 1	39	19	79
H15020271-022	4-044-0006		7.9	479	5	2870	281	1340
H15020271-023	4-044-0612		8.2	116	1	452	47	251
H15020271-024	4-045-2430		7.2	102	6	896	111	1240
H15020271-025	4-045-3036		7.0	296	6	3390	369	2750
H15020271-026	4-048-4248		7.5	254	3	1890	153	763
H15020271-027	4-048-4854		7.3	76	1	459	55	193
H15020271-028	4-048-5460		7.0	101	1	293	48	163
H15020271-029	4-048E-0006		7.9	81	1	173	38	137
H15020271-030	4-048E-0612		8.0	63	< 1	119	23	96
H15020271-031	4-054-0006		7.7	219	3	1300	168	610
H15020271-032	4-054-0612		7.7	21	< 1	66	14	79
H15020271-033	4-054-1218		7.7	6	< 1	40	13	65
H15020271-034	4-054-1218D		7.7	6	< 1	45	14	75
H15020271-035	4-055-3036		7.2	275	5	2160	254	2230
H15020271-036	4-055-3642		7.5	399	6	2300	304	1870
H15020271-037	4-055-4248		7.5	416	5	1570	202	1400
H15020271-038	4-057-1824		7.8	319	14	7690	367	2350
H15020271-039	4-057-2430		7.7	7	< 1	40	9	222
H15020271-040	4-057-3036		7.6	5	< 1	28	9	226

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020271

Report Date: 03/11/15
Date Received: 02/17/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020271-041	4-057S-0612		7.7	776	6	4370	655	1540
H15020271-042	4-057S-1218		7.6	73	2	503	64	551
H15020271-043	4-057S-1824		7.4	24	< 1	81	16	181
H15020271-044	4-060E1S-0006		7.4	34	1	89	13	240
H15020271-045	4-060E1S-0612		7.7	16	< 1	33	12	67
H15020271-046	4-060E1S-1218		7.8	19	< 1	33	13	74
H15020271-047	4-060E1S-1218D		7.7	21	< 1	34	13	87
H15020271-048	4-060E2-0006		7.6	751	8	4080	741	2370
H15020271-049	4-060E2-0612		7.6	27	< 1	73	16	79
H15020271-050	4-060E2-1218		7.7	15	< 1	54	13	76
H15020271-051	4-061-1824		6.7	101	3	548	97	706
H15020271-052	4-062-1824		7.0	168	16	2190	145	3360
H15020271-053	4-062-2430		7.3	141	7	1250	145	2510
H15020271-054	4-062-3036		7.3	223	7	1350	178	1820
H15020271-055	4-063-3642		6.5	10	2	3290	14	478
H15020271-056	4-063-4248		6.8	150	2	1480	113	498
H15020271-057	4-063S-0006		7.5	171	3	605	118	490
H15020271-058	4-063S-0612		7.6	9	< 1	40	14	74
H15020271-059	4-071-0006		7.8	639	8	3260	547	2290
H15020271-060	4-071-0612		7.6	19	< 1	83	14	92

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150311A		
Lab ID: CCV_1_150310_1	Continuing Calibration Verification Standard								03/11/15 08:24	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150310_1	Continuing Calibration Verification Standard								03/11/15 08:25	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150310_1	Initial Calibration Verification Standard								03/11/15 08:26	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150310_1	Continuing Calibration Verification Standard								03/11/15 08:36	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150310_1	Continuing Calibration Verification Standard								03/11/15 08:48	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150310_1	Continuing Calibration Verification Standard								03/11/15 08:48	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150310_1	Initial Calibration Verification Standard								03/11/15 08:49	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150310_1	Continuing Calibration Verification Standard								03/11/15 08:57	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150310_1	Continuing Calibration Verification Standard								03/11/15 09:18	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150310_1	Continuing Calibration Verification Standard								03/11/15 09:18	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150310_1	Initial Calibration Verification Standard								03/11/15 09:19	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150310_1	Continuing Calibration Verification Standard								03/11/15 09:32	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150310_1	Initial Calibration Verification Standard								03/11/15 07:13	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 28295
Lab ID: LCS-28295	Laboratory Control Sample					Run: SOIL PH METER_150311A			03/11/15 08:26	
pH, sat. paste		7.67	s.u.	0.10	103	95	105			
Lab ID: H15020271-010ADUP	Sample Duplicate					Run: SOIL PH METER_150311A			03/11/15 08:35	
pH, sat. paste		6.72	s.u.	0.10				0.1	30	
Lab ID: H15020271-020ADUP	Sample Duplicate					Run: SOIL PH METER_150311A			03/11/15 08:42	
pH, sat. paste		7.46	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 28296

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28296
Lab ID: LCS-28296		Laboratory Control Sample				Run: SOIL PH METER_150311A				03/11/15 08:50
pH, sat. paste		7.61	s.u.	0.10	102	95	105			
Lab ID: H15020271-030ADUP		Sample Duplicate				Run: SOIL PH METER_150311A				03/11/15 08:56
pH, sat. paste		8.04	s.u.	0.10				0.1	30	
Lab ID: H15020271-040ADUP		Sample Duplicate				Run: SOIL PH METER_150311A				03/11/15 09:13
pH, sat. paste		7.65	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 28297
Lab ID: LCS-28297		Laboratory Control Sample				Run: SOIL PH METER_150311A				03/11/15 09:23
pH, sat. paste		7.61	s.u.	0.10	102	95	105			
Lab ID: H15020271-050ADUP		Sample Duplicate				Run: SOIL PH METER_150311A				03/11/15 09:31
pH, sat. paste		7.67	s.u.	0.10				0.0	30	
Lab ID: H15020271-060ADUP		Sample Duplicate				Run: SOIL PH METER_150311A				03/11/15 09:45
pH, sat. paste		7.57	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150309A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							03/09/15 10:11	
Arsenic			0.796	mg/L	0.0085	100	90	110			
Cadmium			0.380	mg/L	0.0010	95	90	110			
Copper			0.784	mg/L	0.010	98	90	110			
Lead			0.776	mg/L	0.010	97	90	110			
Zinc			0.778	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							03/09/15 10:26	
Arsenic			0.00921	mg/L	0.0085		0	0			
Cadmium			0.00548	mg/L	0.0010		0	0			
Copper			-0.00473	mg/L	0.010		0	0			
Lead			-0.00497	mg/L	0.010		0	0			
Zinc			0.00256	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							03/09/15 10:30	
Arsenic			0.977	mg/L	0.0085	98	80	120			
Cadmium			0.895	mg/L	0.0010	89	80	120			
Copper			0.504	mg/L	0.010	101	80	120			
Lead			0.908	mg/L	0.010	91	80	120			
Zinc			0.977	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 11:46	
Arsenic			2.40	mg/L	0.0085	96	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.43	mg/L	0.010	97	90	110			
Lead			2.38	mg/L	0.010	95	90	110			
Zinc			2.44	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 11:50	
Arsenic			0.00975	mg/L	0.0085						
Cadmium			0.000330	mg/L	0.0010						
Copper			-0.00183	mg/L	0.010						
Lead			0.00234	mg/L	0.010						
Zinc			0.000360	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 12:31	
Arsenic			2.41	mg/L	0.0085	97	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.46	mg/L	0.010	99	90	110			
Lead			2.38	mg/L	0.010	95	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 12:35	
Arsenic			0.00639	mg/L	0.0085						
Cadmium			0.000570	mg/L	0.0010						
Copper			-0.00379	mg/L	0.010						
Lead			-0.000120	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150309A	
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 12:35	
Zinc			-0.000880	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 13:15	
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.41	mg/L	0.010	97	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 13:19	
Arsenic			0.00369	mg/L	0.0085						
Cadmium			0.000200	mg/L	0.0010						
Copper			-0.00510	mg/L	0.010						
Lead			-0.0214	mg/L	0.010						
Zinc			-0.000990	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 13:59	
Arsenic			2.42	mg/L	0.0085	97	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.44	mg/L	0.010	98	90	110			
Lead			2.39	mg/L	0.010	96	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 14:02	
Arsenic			0.0120	mg/L	0.0085						
Cadmium			0.000170	mg/L	0.0010						
Copper			-0.00617	mg/L	0.010						
Lead			-0.00664	mg/L	0.010						
Zinc			-0.000240	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 14:25	
Arsenic			2.50	mg/L	0.0085	100	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 14:29	
Arsenic			0.00600	mg/L	0.0085						
Cadmium			0.000710	mg/L	0.0010						
Copper			0.00224	mg/L	0.010						
Lead			-0.00344	mg/L	0.010						
Zinc			0.000370	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 15:09	
Arsenic			2.41	mg/L	0.0085	96	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150309A	
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 15:09	
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.39	mg/L	0.010	96	90	110			
Zinc			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 15:13	
Arsenic			-0.0106	mg/L	0.0085						
Cadmium			0.000160	mg/L	0.0010						
Copper			0.00324	mg/L	0.010						
Lead			-0.00228	mg/L	0.010						
Zinc			0.000950	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 15:54	
Arsenic			2.36	mg/L	0.0085	95	90	110			
Cadmium			2.37	mg/L	0.0010	95	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.35	mg/L	0.010	94	90	110			
Zinc			2.41	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 15:57	
Arsenic			0.00305	mg/L	0.0085						
Cadmium			0.000960	mg/L	0.0010						
Copper			-0.00408	mg/L	0.010						
Lead			-0.00706	mg/L	0.010						
Zinc			0.000990	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 16:38	
Arsenic			2.43	mg/L	0.0085	97	90	110			
Cadmium			2.40	mg/L	0.0010	96	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.37	mg/L	0.010	95	90	110			
Zinc			2.44	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 16:41	
Arsenic			0.00523	mg/L	0.0085						
Cadmium			0.000680	mg/L	0.0010						
Copper			-0.000180	mg/L	0.010						
Lead			0.00915	mg/L	0.010						
Zinc			0.000440	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 17:22	
Arsenic			2.39	mg/L	0.0085	96	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.37	mg/L	0.010	95	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150309A	
Lab ID: CCB	5	Continuing Calibration Blank								03/09/15 17:26
Arsenic		0.00445	mg/L	0.0085						
Cadmium		0.000660	mg/L	0.0010						
Copper		0.00139	mg/L	0.010						
Lead		-0.00912	mg/L	0.010						
Zinc		-0.000450	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard								03/09/15 18:06
Arsenic		2.40	mg/L	0.0085	96	90	110			
Cadmium		2.42	mg/L	0.0010	97	90	110			
Copper		2.49	mg/L	0.010	100	90	110			
Lead		2.37	mg/L	0.010	95	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank								03/09/15 18:09
Arsenic		0.0112	mg/L	0.0085						
Cadmium		0.000360	mg/L	0.0010						
Copper		-0.00119	mg/L	0.010						
Lead		-0.00384	mg/L	0.010						
Zinc		0.00124	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard								03/09/15 18:32
Arsenic		2.45	mg/L	0.0085	98	90	110			
Cadmium		2.44	mg/L	0.0010	98	90	110			
Copper		2.44	mg/L	0.010	98	90	110			
Lead		2.41	mg/L	0.010	97	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank								03/09/15 18:36
Arsenic		0.000510	mg/L	0.0085						
Cadmium		0.000160	mg/L	0.0010						
Copper		-0.000460	mg/L	0.010						
Lead		-0.0242	mg/L	0.010						
Zinc		0.000510	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard								03/09/15 19:17
Arsenic		2.47	mg/L	0.0085	99	90	110			
Cadmium		2.45	mg/L	0.0010	98	90	110			
Copper		2.46	mg/L	0.010	99	90	110			
Lead		2.44	mg/L	0.010	98	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank								03/09/15 19:20
Arsenic		0.00314	mg/L	0.0085						
Cadmium		0.000250	mg/L	0.0010						
Copper		-0.00236	mg/L	0.010						
Lead		-0.0232	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150309A	
Lab ID: CCB	5	Continuing Calibration Blank							03/09/15 19:20	
Zinc		0.000420	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/09/15 16:47	
Arsenic			0.0503	mg/L	0.0050	101	90	110			
Lead			0.0498	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/09/15 16:56	
Arsenic			-1.00E-07	mg/L	0.0050						
Lead			-7.00E-07	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/09/15 17:39	
Arsenic			0.0499	mg/L	0.0050	100	90	110			
Lead			0.0503	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/09/15 17:47	
Arsenic			-9.00E-07	mg/L	0.0050						
Lead			6.00E-07	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/09/15 18:35	
Arsenic			0.0504	mg/L	0.0050	101	90	110			
Lead			0.0492	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/09/15 18:44	
Arsenic			-9.40E-06	mg/L	0.0050						
Lead			-3.80E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/09/15 19:41	
Arsenic			0.0505	mg/L	0.0050	101	90	110			
Lead			0.0492	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/09/15 19:49	
Arsenic			-6.00E-07	mg/L	0.0050						
Lead			-9.00E-07	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28279
Lab ID:	**MB-28279**	5	Method Blank				Run: ICP2-HE_150309A			03/09/15 12:13	
Arsenic			0.7	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-28279**	5	Laboratory Fortified Blank				Run: ICP2-HE_150309A			03/09/15 12:17	
Arsenic			46.0	mg/kg	1.0	91	80	120			
Cadmium			23.0	mg/kg	1.0	92	80	120			
Copper			47.9	mg/kg	1.0	96	80	120			
Lead			45.0	mg/kg	1.0	90	80	120			
Zinc			52.4	mg/kg	1.0	102	80	120			
Lab ID:	**LCS-28279**	5	Laboratory Control Sample				Run: ICP2-HE_150309A			03/09/15 12:20	
Arsenic			264	mg/kg	1.8	77	72.3	106.4			
Cadmium			113	mg/kg	1.0	83	73	105.1			
Copper			245	mg/kg	1.1	87	77.5	109.6			
Lead			161	mg/kg	3.2	86	75.9	108.6			
Zinc			181	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H15020271-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150309A			03/09/15 13:48	
Arsenic			912	mg/kg	1.8	85	75	125			
Cadmium			118	mg/kg	1.0	87	75	125			
Copper			5050	mg/kg	1.1		75	125			A
Lead			798	mg/kg	3.2	85	75	125			
Zinc			2410	mg/kg	1.0		75	125			A
Lab ID:	**H15020271-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150309A			03/09/15 13:52	
Arsenic			730	mg/kg	1.8		75	125			A
Cadmium			29.9	mg/kg	1.0	87	75	125			
Copper			4890	mg/kg	1.1		75	125			A
Lead			639	mg/kg	3.1		75	125			A
Zinc			2240	mg/kg	1.0		75	125			A
Lab ID:	**H15020271-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150309A			03/09/15 13:55	
Arsenic			749	mg/kg	1.8		75	125	2.6	20	A
Cadmium			30.7	mg/kg	1.0	90	75	125	2.8	20	
Copper			4830	mg/kg	1.1		75	125	1.0	20	A
Lead			650	mg/kg	3.1		75	125	1.7	20	A
Zinc			2300	mg/kg	1.0		75	125	2.3	20	A
Method:	**SW6010B**										Batch: 28280
Lab ID:	**MB-28280**	5	Method Blank				Run: ICP2-HE_150309A			03/09/15 14:32	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28280
Lab ID:	**MB-28280**	5	Method Blank				Run: ICP2-HE_150309A			03/09/15 14:32	
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28280**	5	Laboratory Fortified Blank				Run: ICP2-HE_150309A			03/09/15 14:36	
Arsenic			44.6	mg/kg	1.0	89	80	120			
Cadmium			21.6	mg/kg	1.0	87	80	120			
Copper			48.4	mg/kg	1.0	97	80	120			
Lead			43.1	mg/kg	1.0	86	80	120			
Zinc			45.4	mg/kg	1.0	90	80	120			
Lab ID:	**LCS-28280**	5	Laboratory Control Sample				Run: ICP2-HE_150309A			03/09/15 14:40	
Arsenic			253	mg/kg	1.8	74	72.3	106.4			
Cadmium			108	mg/kg	1.0	79	73	105.1			
Copper			244	mg/kg	1.1	87	77.5	109.6			
Lead			151	mg/kg	3.2	81	75.9	108.6			
Zinc			175	mg/kg	1.0	82	74.2	109.9			
Lab ID:	**H15020271-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150309A			03/09/15 16:09	
Arsenic			619	mg/kg	1.9	85	75	125			
Cadmium			114	mg/kg	1.0	84	75	125			
Copper			2550	mg/kg	1.1		75	125			A
Lead			519	mg/kg	3.3	83	75	125			
Zinc			2060	mg/kg	1.0		75	125			A
Lab ID:	**H15020271-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150309A			03/09/15 16:12	
Arsenic			420	mg/kg	1.8		75	125			A
Cadmium			27.2	mg/kg	1.0	87	75	125			
Copper			2250	mg/kg	1.1		75	125			A
Lead			340	mg/kg	3.2		75	125			A
Zinc			1720	mg/kg	1.0		75	125			A
Lab ID:	**H15020271-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150309A			03/09/15 16:16	
Arsenic			449	mg/kg	1.8		75	125	6.6	20	A
Cadmium			27.3	mg/kg	1.0	87	75	125	0.6	20	
Copper			2330	mg/kg	1.1		75	125	3.5	20	A
Lead			341	mg/kg	3.2		75	125	0.3	20	A
Zinc			1840	mg/kg	1.0		75	125	6.5	20	A
Method:	**SW6010B**										Batch: 28281
Lab ID:	**MB-28281**	5	Method Blank				Run: ICP2-HE_150309A			03/09/15 16:19	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28281
Lab ID:	**LFB-28281**	5	Laboratory Fortified Blank				Run: ICP2-HE_150309A				03/09/15 16:23
Arsenic			46.0	mg/kg	1.0	92	80	120			
Cadmium			23.0	mg/kg	1.0	92	80	120			
Copper			48.7	mg/kg	1.0	97	80	120			
Lead			44.2	mg/kg	1.0	88	80	120			
Zinc			47.6	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-28281**	5	Laboratory Control Sample				Run: ICP2-HE_150309A				03/09/15 16:27
Arsenic			262	mg/kg	1.8	76	72.3	106.4			
Cadmium			110	mg/kg	1.0	80	73	105.1			
Copper			237	mg/kg	1.1	85	77.5	109.6			
Lead			161	mg/kg	3.2	86	75.9	108.6			
Zinc			178	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H15020271-054APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150309A				03/09/15 17:55
Arsenic			453	mg/kg	1.8	90	75	125			
Cadmium			117	mg/kg	1.0	87	75	125			
Copper			1600	mg/kg	1.1		75	125			A
Lead			402	mg/kg	3.2	88	75	125			
Zinc			2070	mg/kg	1.0		75	125			A
Lab ID:	**H15020271-054AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150309A				03/09/15 17:59
Arsenic			261	mg/kg	1.8		75	125			A
Cadmium			28.3	mg/kg	1.0	87	75	125			
Copper			1360	mg/kg	1.1		75	125			A
Lead			210	mg/kg	3.2	64	75	125			S
Zinc			1790	mg/kg	1.0		75	125			A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.

Lab ID:	**H15020271-054AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150309A				03/09/15 18:02
Arsenic			264	mg/kg	1.8		75	125	1.2	20	A
Cadmium			28.8	mg/kg	1.0	89	75	125	1.8	20	
Copper			1350	mg/kg	1.1		75	125	0.6	20	A
Lead			223	mg/kg	3.2	90	75	125	6.0	20	
Zinc			1850	mg/kg	1.0		75	125	3.1	20	A
Method:	**SW6010B**										Batch: 28315
Lab ID:	**MB-28315**	5	Method Blank				Run: ICP2-HE_150309A				03/09/15 18:40
Arsenic			0.5	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			4	mg/kg	0.09						
Lab ID:	**LFB-28315**	5	Laboratory Fortified Blank				Run: ICP2-HE_150309A				03/09/15 18:43
Arsenic			48.9	mg/kg	1.0	97	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28315
Lab ID:	**LFB-28315**	5	Laboratory Fortified Blank				Run: ICP2-HE_150309A				03/09/15 18:43
Copper			49.0	mg/kg	1.0	98	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			48.8	mg/kg	1.0	90	80	120			
Lab ID:	**LCS-28315**	5	Laboratory Control Sample				Run: ICP2-HE_150309A				03/09/15 18:47
Arsenic			272	mg/kg	1.8	79	72.3	106.4			
Cadmium			112	mg/kg	1.0	82	73	105.1			
Copper			244	mg/kg	1.1	87	77.5	109.6			
Lead			167	mg/kg	3.1	89	75.9	108.6			
Zinc			184	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H15020271-060APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150309A				03/09/15 19:24
Arsenic			239	mg/kg	1.8	87	75	125			
Cadmium			108	mg/kg	1.0	86	75	125			
Copper			306	mg/kg	1.1	89	75	125			
Lead			237	mg/kg	3.2	88	75	125			
Zinc			316	mg/kg	1.0	90	75	125			
Lab ID:	**H15020271-060AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150309A				03/09/15 19:28
Arsenic			66.1	mg/kg	1.7	93	75	125			
Cadmium			23.0	mg/kg	1.0	92	75	125			
Copper			129	mg/kg	1.1	94	75	125			
Lead			60.0	mg/kg	3.1	88	75	125			
Zinc			143	mg/kg	1.0	106	75	125			
Lab ID:	**H15020271-060AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150309A				03/09/15 19:32
Arsenic			62.3	mg/kg	1.7	85	75	125	5.9	20	
Cadmium			22.1	mg/kg	1.0	88	75	125	4.0	20	
Copper			123	mg/kg	1.1	82	75	125	4.7	20	
Lead			59.8	mg/kg	3.1	87	75	125	0.3	20	
Zinc			138	mg/kg	1.0	95	75	125	3.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150309A	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							03/09/15 11:29	
Arsenic			0.0631	mg/L	0.0010	105	90	110			
Lead			0.0618	mg/L	0.0010	103	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							03/09/15 11:34	
Arsenic			6.20E-05	mg/L	0.0010						
Lead			0.000244	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							03/09/15 11:38	
Arsenic			0.0112	mg/L	0.0010	112	70	130			
Lead			0.000245	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 28279	
Lab ID:	**MB-28279**	2	Method Blank				Run: ICPMS204-B_150309A			03/10/15 11:32	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28279**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/10/15 11:36	
Arsenic			317	mg/kg	1.0	92	72.3	106.4			
Lead			190	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-28279**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/10/15 11:41	
Arsenic			52.9	mg/kg	1.0	106	80	120			
Lead			48.4	mg/kg	1.0	97	80	120			
Lab ID:	**H15020271-018APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/10/15 16:07	
Arsenic			3240	mg/kg	1.0	101	75	125			
Lead			2800	mg/kg	1.0	89	75	125			
Lab ID:	**H15020271-018AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/10/15 16:11	
Arsenic			825	mg/kg	1.0		75	125			A
Lead			656	mg/kg	1.0		75	125			A
Lab ID:	**H15020271-018AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/10/15 16:15	
Arsenic			806	mg/kg	1.0		75	125	2.3	20	A
Lead			647	mg/kg	1.0		75	125	1.4	20	A
Method:	**SW6020**									Batch: 28280	
Lab ID:	**MB-28280**	2	Method Blank				Run: ICPMS204-B_150309A			03/10/15 16:24	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28280**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/10/15 16:28	
Arsenic			292	mg/kg	1.0	85	72.3	106.4			
Lead			175	mg/kg	1.0	94	75.9	108.6			
Lab ID:	**LFB-28280**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/10/15 16:33	
Arsenic			48.4	mg/kg	1.0	97	80	120			
Lead			46.8	mg/kg	1.0	94	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28280
Lab ID:	**LFB-28280**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/10/15 16:33	
Lab ID:	**H15020271-036APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/10/15 17:25	
Arsenic			2860	mg/kg	1.0	97	75	125			
Lead			2570	mg/kg	1.0	90	75	125			
Lab ID:	**H15020271-036AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/10/15 17:29	
Arsenic			428	mg/kg	1.0		75	125			A
Lead			334	mg/kg	1.0		75	125			A
Lab ID:	**H15020271-036AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/10/15 17:33	
Arsenic			458	mg/kg	1.0		75	125	6.9	20	A
Lead			340	mg/kg	1.0		75	125	1.9	20	A
Method:	**SW6020**										Batch: 28281
Lab ID:	**MB-28281**	2	Method Blank				Run: ICPMS204-B_150309A			03/10/15 17:51	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28281**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/10/15 17:55	
Arsenic			298	mg/kg	1.0	87	72.3	106.4			
Lead			179	mg/kg	1.0	96	75.9	108.6			
Lab ID:	**LFB-28281**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/10/15 17:59	
Arsenic			47.2	mg/kg	1.0	94	80	120			
Lead			45.6	mg/kg	1.0	91	80	120			
Lab ID:	**H15020271-054APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/10/15 19:09	
Arsenic			2650	mg/kg	1.0	97	75	125			
Lead			2510	mg/kg	1.0	94	75	125			
Lab ID:	**H15020271-054AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/10/15 19:13	
Arsenic			287	mg/kg	1.0		75	125			A
Lead			222	mg/kg	1.0	81	75	125			
Lab ID:	**H15020271-054AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/10/15 19:17	
Arsenic			282	mg/kg	1.0		75	125	1.7	20	A
Lead			225	mg/kg	1.0	88	75	125	1.5	20	
Method:	**SW6020**										Batch: 28315
Lab ID:	**MB-28315**	2	Method Blank				Run: ICPMS204-B_150309A			03/09/15 15:54	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28315**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/09/15 15:58	
Arsenic			302	mg/kg	1.0	88	72.3	106.4			
Lead			181	mg/kg	1.0	97	75.9	108.6			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020271

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28315
Lab ID:	**LFB-28315**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A				03/09/15 16:02
Arsenic			49.4	mg/kg	1.0	99	80	120			
Lead			47.9	mg/kg	1.0	96	80	120			
Lab ID:	**H15020271-060APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A				03/10/15 19:43
Arsenic			2430	mg/kg	1.0	99	75	125			
Lead			2270	mg/kg	1.0	93	75	125			
Lab ID:	**H15020271-060AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A				03/10/15 19:47
Arsenic			65.3	mg/kg	1.0	96	75	125			
Lead			60.0	mg/kg	1.0	94	75	125			
Lab ID:	**H15020271-060AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A				03/10/15 19:51
Arsenic			63.8	mg/kg	1.0	92	75	125	2.3	20	
Lead			58.8	mg/kg	1.0	91	75	125	2.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020271

Login completed by: Austin H. Nearpass
Date Received: 2/17/2015
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 2/19/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	Comments °C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 0.1 °C, Cooler 2 at 0.2 °C.
Time on sample 4-044-0006 states "14:47" -COC states "13:47". Logged in with ID from COC.
Time on sample 4-044-0612 states "14:46" -COC states "13:46". Logged in with ID from COC. An 2/18/15

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID C1	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
4-022-3036	1602	2/9/15	Soil	A	B		1
4-022-3642	1601	2/9/15	Soil	A	B		1
4-022-4248	1600	2/9/15	Soil	A	B		1
4-025-1218	1545	2/9/15	Soil	A	B		1
4-025-1824	1544	2/9/15	Soil	A	B		1
4-025-2430	1543	2/9/15	Soil	A	B		1
4-026-1824	1629	2/9/15	Soil	A	B		1
4-026-2430	1628	2/9/15	Soil	A	B		1
4-026-3036	1627	2/9/15	Soil	A	B		1
4-027-1824	1644	2/9/15	Soil	A	B		1
4-027-2430	1643	2/9/15	Soil	A	B		1
4-027-3036	1642	2/9/15	Soil	A	B		1
4-029-0006	1522	2/9/15	Soil	A	B		1
4-029-0612	1521	2/9/15	Soil	A	B		1
4-034-0612	1451	2/9/15	Soil	A	B		1
4-034-1218	1450	2/9/15	Soil	A	B		1
4-034-1824	1449	2/9/15	Soil	A	B		1
4-043-0612	1432	2/9/15	Soil	A	B		1
4-043-1218	1430	2/9/15	Soil	A	B		1
4-043-1218D	1431	2/9/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15020271

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/17/15 1630

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 0.1
C2 = 2.2

Date/Time: Hand del.

On Ice: (Y) N

Temp Blank: (Y) N 2/17/15 16:30

COC02_09_15 EL.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
C1							
4-043-1824	1429	2/9/15	Soil	A	B		1
4-044-0006	1347	2/9/15	Soil	A	B		1
4-044-0612	1346	2/9/15	Soil	A	B		1
4-045-2430	1323	2/9/15	Soil	A	B		1
4-045-3036	1322	2/9/15	Soil	A	B		1
4-048-4248	1220	2/9/15	Soil	A	B		1
4-048-4854	1256	2/9/15	Soil	A	B		1
4-048-5460	1255	2/9/15	Soil	A	B		1
4-048E-0006	1407	2/9/15	Soil	A	B		1
4-048E-0612	1406	2/9/15	Soil	A	B		1
4-054-0006	1138	2/9/15	Soil	A	B		1
4-054-0612	1137	2/9/15	Soil	A	B		1
4-054-1218	1135	2/9/15	Soil	A	B		1
4-054-1218D	1136	2/9/15	Soil	A	B		1
C2							
4-055-3036	1152	2/9/15	Soil	A	B		1
4-055-3642	1151	2/9/15	Soil	A	B		1
4-055-4248	1150	2/9/15	Soil	A	B		1
4-057-1824	904	2/9/15	Soil	A	B		1
4-057-2430	903	2/9/15	Soil	A	B		1
4-057-3036	902	2/9/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15020271

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/17/15 1630

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 0.1
C2 = 2.2
On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: Hand del. 2/17/15 16:30

COC02_09_15 EL.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-057S-0612	1051	2/9/15	Soil	A	B		1
4-057S-1218	1050		Soil	A	B		1
4-057S-1824	1049		Soil	A	B		1
4-060E1S-0006	838		Soil	A	B		1
4-060E1S-0612	837		Soil	A	B		1
4-060E1S-1218	835		Soil	A	B		1
4-060E1S-1218D	836		Soil	A	B		1
4-060E2-0006	817		Soil	A	B		1
4-060E2-0612	816		Soil	A	B		1
4-060E2-1218	815		Soil	A	B		1
4-061-1824	1015		Soil	A	B		1
4-062-1824	1002		Soil	A	B		1
4-062-2430	1001		Soil	A	B		1
4-062-3036	1000		Soil	A	B		1
4-063-3642	931		Soil	A	B		1
4-063-4248	930		Soil	A	B		1
4-063S-0006	1047		Soil	A	B		1
4-063S-0612	1046		Soil	A	B		1
4-071-0006	757		Soil	A	B		1
4-071-0612	756		Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15020271

Preservatives Used:

1 - Ice

Relinquished By (sign): [signature]
Date/Time: 2/17/15 1630

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 0.1
C2 = 2.2
On Ice: (Y) N
Temp Blank (Y) N

Date/Time: Hand del. 2/17/15 16:30

ANALYTICAL SUMMARY REPORT

March 10, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020270

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 25 samples for MT DEQ-Federal Superfund on 2/17/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020270-001	3-378-2430	12/15/14 14:43	02/17/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020270-002	3-401-1218	12/15/14 11:15	02/17/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020270-003	3-401-1218D	12/15/14 11:16	02/17/15	Soil	Same As Above
H15020270-004	3-257-4248	12/17/14 14:05	02/17/15	Soil	Same As Above
H15020270-005	3-335-1218	12/17/14 11:47	02/17/15	Soil	Same As Above
H15020270-006	3-335-1824	12/17/14 11:46	02/17/15	Soil	Same As Above
H15020270-007	3-348E2-1218	12/17/14 10:21	02/17/15	Soil	Same As Above
H15020270-008	3-348E2-1824	12/17/14 10:20	02/17/15	Soil	Same As Above
H15020270-009	3-376E2-1218	12/17/14 10:51	02/17/15	Soil	Same As Above
H15020270-010	3-376E2-1824	12/17/14 10:52	02/17/15	Soil	Same As Above
H15020270-011	3-412-6672	12/16/14 8:25	02/17/15	Soil	Same As Above
H15020270-012	3-421S-1218	12/16/14 11:35	02/17/15	Soil	Same As Above
H15020270-013	4-011-1218	12/23/14 14:25	02/17/15	Soil	Same As Above
H15020270-014	4-035-3642	12/24/14 10:56	02/17/15	Soil	Same As Above
H15020270-015	4-035-4248	12/24/14 10:55	02/17/15	Soil	Same As Above
H15020270-016	3-414-1218	12/22/14 8:20	02/17/15	Soil	Same As Above
H15020270-017	3-414-1824	12/22/14 8:19	02/17/15	Soil	Same As Above
H15020270-018	3-414-2430	12/22/14 8:18	02/17/15	Soil	Same As Above
H15020270-019	4-123N-3036	01/08/15 10:10	02/17/15	Soil	Same As Above
H15020270-020	4-039-4248	01/05/15 9:00	02/17/15	Soil	Same As Above
H15020270-021	4-046-4248	01/05/15 11:40	02/17/15	Soil	Same As Above
H15020270-022	4-050-3036	01/05/15 14:12	02/17/15	Soil	Same As Above
H15020270-023	4-050-3642	01/05/15 14:11	02/17/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020270-024	4-259-4248	01/16/15 10:40 02/17/15	Soil	Same As Above
H15020270-025	4-236-4248	01/16/15 13:25 02/17/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2							Analytical Run: SOIL PH METER_150304A			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 08:48
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 09:14
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 09:41
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 06:54
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 07:30
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 08:16
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 08:52
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard								03/05/15 06:43
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard								03/05/15 07:09
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard								03/05/15 07:39
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 09:28
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150304_1		Continuing Calibration Verification Standard								03/05/15 08:05
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150304_1		Continuing Calibration Verification Standard								03/05/15 08:06
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard								03/05/15 08:07
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150304_1		Continuing Calibration Verification Standard								03/05/15 08:17
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150304_1		Continuing Calibration Verification Standard								03/05/15 08:27
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 28287

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28287
Lab ID: LCS-28287	Laboratory Control Sample					Run: SOIL PH METER_150304A				03/05/15 08:08
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H15020270-010ADUP	Sample Duplicate					Run: SOIL PH METER_150304A				03/05/15 08:16
pH, sat. paste		7.64	s.u.	0.10				0.1	30	
Lab ID: H15020270-020ADUP	Sample Duplicate					Run: SOIL PH METER_150304A				03/05/15 08:27
pH, sat. paste		7.36	s.u.	0.10				0.1	30	
Lab ID: H15020270-025ADUP	Sample Duplicate					Run: SOIL PH METER_150304A				03/05/15 08:34
pH, sat. paste		7.42	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150305A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								03/05/15 09:32
Arsenic			0.778	mg/L	0.0085	97	90	110			
Cadmium			0.388	mg/L	0.0010	97	90	110			
Copper			0.800	mg/L	0.010	100	90	110			
Lead			0.799	mg/L	0.010	100	90	110			
Zinc			0.788	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/05/15 09:47
Arsenic			-0.0144	mg/L	0.0085		0	0			
Cadmium			0.000650	mg/L	0.0010		0	0			
Copper			-0.000980	mg/L	0.010		0	0			
Lead			0.00811	mg/L	0.010		0	0			
Zinc			0.00448	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/05/15 09:51
Arsenic			0.963	mg/L	0.0085	96	80	120			
Cadmium			0.898	mg/L	0.0010	90	80	120			
Copper			0.502	mg/L	0.010	100	80	120			
Lead			0.877	mg/L	0.010	88	80	120			
Zinc			0.981	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 15:16
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.43	mg/L	0.010	97	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/05/15 15:20
Arsenic			-0.00204	mg/L	0.0085						
Cadmium			0.00110	mg/L	0.0010						
Copper			0.00381	mg/L	0.010						
Lead			0.00369	mg/L	0.010						
Zinc			0.000610	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 16:01
Arsenic			2.39	mg/L	0.0085	96	90	110			
Cadmium			2.37	mg/L	0.0010	95	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.41	mg/L	0.010	96	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/05/15 16:04
Arsenic			-0.00740	mg/L	0.0085						
Cadmium			0.000720	mg/L	0.0010						
Copper			-0.000640	mg/L	0.010						
Lead			-0.0144	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150305A	
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/05/15 16:04
Zinc			0.000930	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 16:45
Arsenic			2.40	mg/L	0.0085	96	90	110			
Cadmium			2.38	mg/L	0.0010	95	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.36	mg/L	0.010	94	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/05/15 16:49
Arsenic			-0.00159	mg/L	0.0085						
Cadmium			0.00138	mg/L	0.0010						
Copper			0.00270	mg/L	0.010						
Lead			-0.00744	mg/L	0.010						
Zinc			0.000960	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 17:29
Arsenic			2.46	mg/L	0.0085	98	90	110			
Cadmium			2.44	mg/L	0.0010	98	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.40	mg/L	0.010	96	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/05/15 17:33
Arsenic			-0.0127	mg/L	0.0085						
Cadmium			0.000390	mg/L	0.0010						
Copper			0.00398	mg/L	0.010						
Lead			-0.00417	mg/L	0.010						
Zinc			0.00135	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 17:56
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.46	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/05/15 17:59
Arsenic			0.00733	mg/L	0.0085						
Cadmium			0.000470	mg/L	0.0010						
Copper			0.00524	mg/L	0.010						
Lead			0.00791	mg/L	0.010						
Zinc			0.000880	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 18:40
Arsenic			2.51	mg/L	0.0085	100	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150305A		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/05/15 18:40	
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/05/15 18:43	
Arsenic			-0.000820	mg/L	0.0085						
Cadmium			0.000550	mg/L	0.0010						
Copper			0.00367	mg/L	0.010						
Lead			-0.0151	mg/L	0.010						
Zinc			0.000550	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/05/15 19:06	
Arsenic			2.54	mg/L	0.0085	102	90	110			
Cadmium			2.54	mg/L	0.0010	102	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/05/15 19:09	
Arsenic			-0.00367	mg/L	0.0085						
Cadmium			0.000870	mg/L	0.0010						
Copper			0.00302	mg/L	0.010						
Lead			-0.0173	mg/L	0.010						
Zinc			0.000760	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/10/15 09:10	
Arsenic			0.0510	mg/L	0.0050	102	90	110			
Cadmium			0.0491	mg/L	0.0010	98	90	110			
Lead			0.0507	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/10/15 09:19	
Arsenic			1.35E-05	mg/L	0.0050						
Cadmium			2.20E-06	mg/L	0.0010						
Lead			1.70E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/10/15 10:47	
Arsenic			0.0500	mg/L	0.0050	100	90	110			
Cadmium			0.0481	mg/L	0.0010	96	90	110			
Lead			0.0495	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/10/15 10:56	
Arsenic			2.50E-05	mg/L	0.0050						
Cadmium			1.60E-06	mg/L	0.0010						
Lead			1.10E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28239	
Lab ID:	**MB-28239**	4	Method Blank				Run: ICP2-HE_150305A			03/05/15 15:05	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28239**	4	Laboratory Fortified Blank				Run: ICP2-HE_150305A			03/05/15 15:09	
Arsenic			47.9	mg/kg	1.0	96	80	120			
Cadmium			23.9	mg/kg	1.0	96	80	120			
Copper			50.1	mg/kg	1.0	100	80	120			
Zinc			50.3	mg/kg	1.0	100	80	120			
Lab ID:	**LCS-28239**	4	Laboratory Control Sample				Run: ICP2-HE_150305A			03/05/15 15:13	
Arsenic			254	mg/kg	3.5	74	72.3	106.4			
Cadmium			111	mg/kg	1.0	81	73	105.1			
Copper			243	mg/kg	2.2	87	77.5	109.6			
Zinc			183	mg/kg	1.0	86	74.2	109.9			
Lab ID:	**H15020270-011APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150305A			03/05/15 16:56	
Arsenic			234	mg/kg	1.8	90	75	125			
Cadmium			110	mg/kg	1.0	86	75	125			
Copper			274	mg/kg	1.1	93	75	125			
Zinc			1160	mg/kg	1.0	81	75	125			
Lab ID:	**H15020270-011AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150305A			03/05/15 17:00	
Arsenic			51.0	mg/kg	1.8	94	75	125			
Cadmium			23.1	mg/kg	1.0	93	75	125			
Copper			89.7	mg/kg	1.1	106	75	125			
Zinc			1070	mg/kg	1.0		75	125			A
Lab ID:	**H15020270-011AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150305A			03/05/15 17:04	
Arsenic			52.5	mg/kg	1.8	97	75	125	3.0	20	
Cadmium			22.5	mg/kg	1.0	90	75	125	2.8	20	
Copper			89.5	mg/kg	1.1	105	75	125	0.3	20	
Zinc			1100	mg/kg	1.0		75	125	2.5	20	A
Method:	**SW6010B**									Batch: 28272	
Lab ID:	**MB-28272**	5	Method Blank				Run: ICP2-HE_150305A			03/05/15 17:07	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-28272**	5	Laboratory Fortified Blank				Run: ICP2-HE_150305A			03/05/15 17:11	
Arsenic			46.9	mg/kg	1.0	94	80	120			
Cadmium			23.3	mg/kg	1.0	93	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28272
Lab ID:	**LFB-28272**	5	Laboratory Fortified Blank				Run: ICP2-HE_150305A			03/05/15 17:11	
Copper			49.6	mg/kg	1.0	99	80	120			
Lead			47.0	mg/kg	1.0	94	80	120			
Zinc			49.4	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-28272**	5	Laboratory Control Sample				Run: ICP2-HE_150305A			03/05/15 17:15	
Arsenic			246	mg/kg	3.5	72	72.3	106.4			
Cadmium			106	mg/kg	1.0	77	73	105.1			
Copper			235	mg/kg	2.2	84	77.5	109.6			
Lead			155	mg/kg	6.2	83	75.9	108.6			
Zinc			172	mg/kg	1.0	81	74.2	109.9			
Lab ID:	**H15020270-025APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150305A			03/05/15 18:55	
Arsenic			240	mg/kg	1.8	93	75	125			
Cadmium			114	mg/kg	1.0	91	75	125			
Copper			1900	mg/kg	1.1		75	125			A
Lead			237	mg/kg	3.2	92	75	125			
Zinc			444	mg/kg	1.0	90	75	125			
Lab ID:	**H15020270-025AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150305A			03/05/15 18:58	
Arsenic			54.4	mg/kg	1.7	98	75	125			
Cadmium			24.1	mg/kg	1.0	98	75	125			
Copper			1660	mg/kg	1.1		75	125			A
Lead			63.8	mg/kg	3.1	118	75	125			
Zinc			258	mg/kg	1.0		75	125			A
Lab ID:	**H15020270-025AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150305A			03/05/15 19:02	
Arsenic			54.7	mg/kg	1.7	99	75	125	0.6	20	
Cadmium			23.8	mg/kg	1.0	97	75	125	1.6	20	
Copper			1630	mg/kg	1.1		75	125	2.1	20	A
Lead			52.1	mg/kg	3.1	94	75	125	20	20	R
Zinc			258	mg/kg	1.0		75	125	0.1	20	A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard								03/09/15 11:29
Arsenic			0.0631	mg/L	0.0010	105	90	110			
Cadmium			0.0327	mg/L	0.0010	109	90	110			
Lead			0.0618	mg/L	0.0010	103	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A								03/09/15 11:34
Arsenic			6.20E-05	mg/L	0.0010						
Cadmium			0.000924	mg/L	0.0010						
Lead			0.000244	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB								03/09/15 11:38
Arsenic			0.0112	mg/L	0.0010	112	70	130			
Cadmium			0.0111	mg/L	0.0010	111	70	130			
Lead			0.000245	mg/L	0.0010		0	0			
Method:	**SW6020**										Batch: 28239
Lab ID:	**MB-28239**	2	Method Blank				Run: ICPMS204-B_150309A				03/10/15 06:35
Arsenic			ND	mg/kg	0.3						
Lead			0.2	mg/kg	0.2						
Lab ID:	**LCS-28239**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A				03/10/15 06:40
Arsenic			270	mg/kg	1.0	79	72.3	106.4			
Lead			160	mg/kg	1.0	85	75.9	108.6			
Lab ID:	**LFB-28239**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A				03/10/15 06:44
Arsenic			50.1	mg/kg	1.0	100	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H15020270-011APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A				03/10/15 08:58
Arsenic			2460	mg/kg	1.0	99	75	125			
Lead			2320	mg/kg	1.0	93	75	125			
Lab ID:	**H15020270-011AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A				03/10/15 09:02
Arsenic			57.6	mg/kg	1.0	104	75	125			
Lead			65.9	mg/kg	1.0	101	75	125			
Lab ID:	**H15020270-011AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A				03/10/15 09:06
Arsenic			55.9	mg/kg	1.0	101	75	125	3.0	20	
Lead			67.6	mg/kg	1.0	104	75	125	2.6	20	
Method:	**SW6020**										Batch: 28272
Lab ID:	**MB-28272**	3	Method Blank				Run: ICPMS204-B_150309A				03/10/15 09:28
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28272**	3	Laboratory Control Sample				Run: ICPMS204-B_150309A				03/10/15 09:32
Arsenic			281	mg/kg	1.0	82	72.3	106.4			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28272
Lab ID:	**LCS-28272**	3	Laboratory Control Sample				Run: ICPMS204-B_150309A				03/10/15 09:32
Cadmium			110	mg/kg	1.0	80	73	105.1			
Lead			165	mg/kg	1.0	88	75.9	108.6			
Lab ID:	**LFB-28272**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150309A				03/10/15 09:37
Arsenic			50.9	mg/kg	1.0	102	80	120			
Cadmium			24.9	mg/kg	1.0	100	80	120			
Lead			49.3	mg/kg	1.0	99	80	120			
Lab ID:	**H15020270-025APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A				03/10/15 10:34
Arsenic			2380	mg/kg	1.0	98	75	125			
Cadmium			1100	mg/kg	1.0	90	75	125			
Lead			2290	mg/kg	1.0	94	75	125			
Lab ID:	**H15020270-025AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150309A				03/10/15 10:38
Arsenic			57.1	mg/kg	1.0	103	75	125			
Cadmium			24.0	mg/kg	1.0	97	75	125			
Lead			60.2	mg/kg	1.0	106	75	125			
Lab ID:	**H15020270-025AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A				03/10/15 10:42
Arsenic			57.5	mg/kg	1.0	104	75	125	0.6	20	
Cadmium			23.9	mg/kg	1.0	97	75	125	0.3	20	
Lead			56.6	mg/kg	1.0	98	75	125	6.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2							Analytical Run: SOIL PH METER_150304A			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 08:48
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 09:14
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 09:41
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 06:54
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 07:30
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 08:16
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 08:52
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard								03/05/15 06:43
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard								03/05/15 07:09
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard								03/05/15 07:39
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 09:28
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150304_1		Continuing Calibration Verification Standard								03/05/15 08:05
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150304_1		Continuing Calibration Verification Standard								03/05/15 08:06
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard								03/05/15 08:07
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150304_1		Continuing Calibration Verification Standard								03/05/15 08:17
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150304_1		Continuing Calibration Verification Standard								03/05/15 08:27
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 28287

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28287
Lab ID: LCS-28287	Laboratory Control Sample					Run: SOIL PH METER_150304A				03/05/15 08:08
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H15020270-010ADUP	Sample Duplicate					Run: SOIL PH METER_150304A				03/05/15 08:16
pH, sat. paste		7.64	s.u.	0.10				0.1	30	
Lab ID: H15020270-020ADUP	Sample Duplicate					Run: SOIL PH METER_150304A				03/05/15 08:27
pH, sat. paste		7.36	s.u.	0.10				0.1	30	
Lab ID: H15020270-025ADUP	Sample Duplicate					Run: SOIL PH METER_150304A				03/05/15 08:34
pH, sat. paste		7.42	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150305A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							03/05/15 09:32	
Arsenic			0.778	mg/L	0.0085	97	90	110			
Cadmium			0.388	mg/L	0.0010	97	90	110			
Copper			0.800	mg/L	0.010	100	90	110			
Lead			0.799	mg/L	0.010	100	90	110			
Zinc			0.788	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							03/05/15 09:47	
Arsenic			-0.0144	mg/L	0.0085		0	0			
Cadmium			0.000650	mg/L	0.0010		0	0			
Copper			-0.000980	mg/L	0.010		0	0			
Lead			0.00811	mg/L	0.010		0	0			
Zinc			0.00448	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							03/05/15 09:51	
Arsenic			0.963	mg/L	0.0085	96	80	120			
Cadmium			0.898	mg/L	0.0010	90	80	120			
Copper			0.502	mg/L	0.010	100	80	120			
Lead			0.877	mg/L	0.010	88	80	120			
Zinc			0.981	mg/L	0.010	98	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28239
Lab ID:	**MB-28239**	4	Method Blank				Run: ICP2-HE_150305A			03/05/15 15:05	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28239**	4	Laboratory Fortified Blank				Run: ICP2-HE_150305A			03/05/15 15:09	
Arsenic			47.9	mg/kg	1.0	96	80	120			
Cadmium			23.9	mg/kg	1.0	96	80	120			
Copper			50.1	mg/kg	1.0	100	80	120			
Zinc			50.3	mg/kg	1.0	100	80	120			
Lab ID:	**LCS-28239**	4	Laboratory Control Sample				Run: ICP2-HE_150305A			03/05/15 15:13	
Arsenic			254	mg/kg	3.5	74	72.3	106.4			
Cadmium			111	mg/kg	1.0	81	73	105.1			
Copper			243	mg/kg	2.2	87	77.5	109.6			
Zinc			183	mg/kg	1.0	86	74.2	109.9			
Lab ID:	**H15020269-005AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150305A			03/05/15 15:50	
Arsenic			208	mg/kg	1.8		75	125			A
Cadmium			2.46	mg/kg	1.0	-2	75	125			S
Copper			682	mg/kg	1.1		75	125			A
Zinc			822	mg/kg	1.0		75	125			A
Lab ID:	**H15020269-005AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150305A			03/05/15 15:53	
Arsenic			210	mg/kg	1.8		75	125	0.9	20	A
Cadmium			2.34	mg/kg	1.0	-2	75	125	5.2	20	S
Copper			668	mg/kg	1.1		75	125	2.2	20	A
Zinc			796	mg/kg	1.0		75	125	3.2	20	A
Lab ID:	**H15020270-011AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150305A			03/05/15 17:00	
Arsenic			51.0	mg/kg	1.8	94	75	125			
Cadmium			23.1	mg/kg	1.0	93	75	125			
Copper			89.7	mg/kg	1.1	106	75	125			
Zinc			1070	mg/kg	1.0		75	125			A
Lab ID:	**H15020270-011AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150305A			03/05/15 17:04	
Arsenic			52.5	mg/kg	1.8	97	75	125	3.0	20	
Cadmium			22.5	mg/kg	1.0	90	75	125	2.8	20	
Copper			89.5	mg/kg	1.1	105	75	125	0.3	20	
Zinc			1100	mg/kg	1.0		75	125	2.5	20	A
Method:	**SW6010B**										Batch: 28272
Lab ID:	**MB-28272**	5	Method Blank				Run: ICP2-HE_150305A			03/05/15 17:07	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28272
Lab ID:	**MB-28272**	5	Method Blank				Run: ICP2-HE_150305A			03/05/15 17:07	
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-28272**	5	Laboratory Fortified Blank				Run: ICP2-HE_150305A			03/05/15 17:11	
Arsenic			46.9	mg/kg	1.0	94	80	120			
Cadmium			23.3	mg/kg	1.0	93	80	120			
Copper			49.6	mg/kg	1.0	99	80	120			
Lead			47.0	mg/kg	1.0	94	80	120			
Zinc			49.4	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-28272**	5	Laboratory Control Sample				Run: ICP2-HE_150305A			03/05/15 17:15	
Arsenic			246	mg/kg	3.5	72	72.3	106.4			
Cadmium			106	mg/kg	1.0	77	73	105.1			
Copper			235	mg/kg	2.2	84	77.5	109.6			
Lead			155	mg/kg	6.2	83	75.9	108.6			
Zinc			172	mg/kg	1.0	81	74.2	109.9			
Lab ID:	**H15020270-025AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150305A			03/05/15 18:58	
Arsenic			54.4	mg/kg	1.7	98	75	125			
Cadmium			24.1	mg/kg	1.0	98	75	125			
Copper			1660	mg/kg	1.1		75	125			A
Lead			63.8	mg/kg	3.1	118	75	125			
Zinc			258	mg/kg	1.0		75	125			A
Lab ID:	**H15020270-025AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150305A			03/05/15 19:02	
Arsenic			54.7	mg/kg	1.7	99	75	125	0.6	20	
Cadmium			23.8	mg/kg	1.0	97	75	125	1.6	20	
Copper			1630	mg/kg	1.1		75	125	2.1	20	A
Lead			52.1	mg/kg	3.1	94	75	125	20	20	R
Zinc			258	mg/kg	1.0		75	125	0.1	20	A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150309A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							03/09/15 11:29	
Arsenic			0.0631	mg/L	0.0010	105	90	110			
Cadmium			0.0327	mg/L	0.0010	109	90	110			
Lead			0.0618	mg/L	0.0010	103	90	110			
Method:	**SW6020**									Batch: 28239	
Lab ID:	**MB-28239**	2	Method Blank				Run: ICPMS204-B_150309A			03/10/15 06:35	
Arsenic			ND	mg/kg	0.3						
Lead			0.2	mg/kg	0.2						
Lab ID:	**LCS-28239**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/10/15 06:40	
Arsenic			270	mg/kg	1.0	79	72.3	106.4			
Lead			160	mg/kg	1.0	85	75.9	108.6			
Lab ID:	**LFB-28239**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/10/15 06:44	
Arsenic			50.1	mg/kg	1.0	100	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H15020269-005AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/10/15 07:26	
Arsenic			218	mg/kg	1.0		75	125			A
Lead			79.8	mg/kg	1.0	-4	75	125			S
Lab ID:	**H15020269-005AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/10/15 07:30	
Arsenic			213	mg/kg	1.0		75	125	2.6	20	A
Lead			89.8	mg/kg	1.0	16	75	125	12	20	S
Lab ID:	**H15020270-011AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/10/15 09:02	
Arsenic			57.6	mg/kg	1.0	104	75	125			
Lead			65.9	mg/kg	1.0	101	75	125			
Lab ID:	**H15020270-011AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/10/15 09:06	
Arsenic			55.9	mg/kg	1.0	101	75	125	3.0	20	
Lead			67.6	mg/kg	1.0	104	75	125	2.6	20	
Method:	**SW6020**									Batch: 28272	
Lab ID:	**MB-28272**	3	Method Blank				Run: ICPMS204-B_150309A			03/10/15 09:28	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28272**	3	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/10/15 09:32	
Arsenic			281	mg/kg	1.0	82	72.3	106.4			
Cadmium			110	mg/kg	1.0	80	73	105.1			
Lead			165	mg/kg	1.0	88	75.9	108.6			
Lab ID:	**LFB-28272**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/10/15 09:37	
Arsenic			50.9	mg/kg	1.0	102	80	120			
Cadmium			24.9	mg/kg	1.0	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020270

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28272
Lab ID:	**LFB-28272**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/10/15 09:37	
Lead			49.3	mg/kg	1.0	99	80	120			
Lab ID:	**H15020270-025AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/10/15 10:38	
Arsenic			57.1	mg/kg	1.0	103	75	125			
Cadmium			24.0	mg/kg	1.0	97	75	125			
Lead			60.2	mg/kg	1.0	106	75	125			
Lab ID:	**H15020270-025AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/10/15 10:42	
Arsenic			57.5	mg/kg	1.0	104	75	125	0.6	20	
Cadmium			23.9	mg/kg	1.0	97	75	125	0.3	20	
Lead			56.6	mg/kg	1.0	98	75	125	6.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020270

Login completed by: Austin H. Nearpass
Date Received: 2/17/2015
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 2/19/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	0.4°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample 3-376e2-1218 time on bag says "10:56" COC states 10:51, used COC at login. An 2/18/15

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record E

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-378-2430	1443	12/15/14	Soil	A	B		1
3-401-1218	1115	12/15/14	Soil	A	B		1
3-401-1218D	1116	12/15/14	Soil	A	B		1
3-257-4248	1405	12/17/14	Soil	A	B		1
3-335-1218	1147	12/17/14	Soil	A	B		1
3-335-1824	1146	12/17/14	Soil	A	B		1
3-348e2-1218	1021	12/17/14	Soil	A	B		1
3-348e2-1824	1020	12/17/14	Soil	A	B		1
3-376e2-1218	1051	12/17/14	Soil	A	B		1
3-376e2-1824	1052	12/17/14	Soil	A	B		1
3-412-6672	825	12/16/14	Soil	A	B		1
3-421S-1218	1135	12/16/14	Soil	A	B		1
4-011-1218	1425	12/23/14	Soil	A	B		1
4-035-3642	1056	12/24/14	Soil	A	B		1
4-035-4248	1055	12/24/14	Soil	A	B		1
3-414-1218	820	12/22/14	Soil	A	B		1
3-414-1824	819	12/22/14	Soil	A	B		1
3-414-2430	818	12/22/14	Soil	A	B		1
4-123n-3036	1010	1/8/15	Soil	A	B		1
4-039-4248	900	1/5/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15020270

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 2/17/15 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 0.4° TB on ice Hand del.	2/17/15 16:30

COC020515additional samples.xls

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-046-4248	1140	1/5/15	Soil	A	B		1
4-050-3036	1412	1/5/15	Soil	A	B		1
4-050-3642	1411	1/5/15	Soil	A	B		1
4-259-4248	1040	1/16/15	Soil	A	B		1
H-236-4248	1325	1/16/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

H1502020 *Preservatives Used:* *1 - Ice*

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) Erin M Ford
Date/Time: 2/17/15 1630

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): Tracy Lerast

On Ice: (Y) N
Temp Blank: (Y) N
0.4 Hand del.

Date/Time: 2/17/15 16:30

COC020515additional samples.xls

ANALYTICAL SUMMARY REPORT

March 11, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020269

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 5 samples for MT DEQ-Federal Superfund on 2/17/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020269-001	4-085-3642	01/06/15 14:02	02/17/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020269-002	4-085-4248	01/06/15 14:01	02/17/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020269-003	3-040-3642	11/26/14 11:21	02/17/15	Soil	Same As Above
H15020269-004	3-040-4248	11/26/14 11:20	02/17/15	Soil	Same As Above
H15020269-005	3-326-4248	12/10/14 9:30	02/17/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020269

Report Date: 03/11/15
Date Received: 02/17/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020269-001	4-085-3642		7.6	5	< 1	543	9	197
H15020269-002	4-085-4248		6.9	8	1	3120	12	510
H15020269-003	3-040-3642		7.5	11	1	1970	9	294
H15020269-004	3-040-4248		6.1	18	< 1	257	13	217
H15020269-005	3-326-4248		7.3	217	3	712	96	791

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020269

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150304A		
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard							03/03/15 08:48	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard							03/03/15 09:14	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard							03/03/15 09:41	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 06:54	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 07:30	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 08:16	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 08:52	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 06:43	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 07:09	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 07:39	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV1_1_150303_1		Continuing Calibration Verification Standard							03/04/15 09:27	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 09:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150303_1		Continuing Calibration Verification Standard							03/04/15 09:39	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 08:07	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 28273
Lab ID: LCS-28273		Laboratory Control Sample				Run: SOIL PH METER_150304A			03/04/15 09:29	
pH, sat. paste		7.58	s.u.	0.10	101	95	105			
Lab ID: H15020269-005ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/04/15 09:50	
pH, sat. paste		7.30	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020269

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS204-B_150309A	
Lab ID: CCV	5	Continuing Calibration Verification Standard							03/10/15 13:37	
Arsenic		0.0498	mg/L	0.0050	100	90	110			
Cadmium		0.0493	mg/L	0.0010	99	90	110			
Copper		0.0496	mg/L	0.010	99	90	110			
Lead		0.0504	mg/L	0.010	101	90	110			
Zinc		0.0474	mg/L	0.010	95	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							03/10/15 13:45	
Arsenic		8.00E-06	mg/L	0.0050						
Cadmium		3.40E-06	mg/L	0.0010						
Copper		-5.82E-05	mg/L	0.010						
Lead		-7.00E-07	mg/L	0.010						
Zinc		-3.20E-05	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							03/10/15 14:46	
Arsenic		0.0495	mg/L	0.0050	99	90	110			
Cadmium		0.0486	mg/L	0.0010	97	90	110			
Copper		0.0490	mg/L	0.010	98	90	110			
Lead		0.0499	mg/L	0.010	100	90	110			
Zinc		0.0460	mg/L	0.010	92	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							03/10/15 14:54	
Arsenic		6.10E-06	mg/L	0.0050						
Cadmium		1.90E-06	mg/L	0.0010						
Copper		-5.28E-05	mg/L	0.010						
Lead		2.10E-06	mg/L	0.010						
Zinc		1.02E-05	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020269

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							03/09/15 11:29	
Arsenic			0.0631	mg/L	0.0010	105	90	110			
Cadmium			0.0327	mg/L	0.0010	109	90	110			
Copper			0.0644	mg/L	0.0010	107	90	110			
Lead			0.0618	mg/L	0.0010	103	90	110			
Zinc			0.0626	mg/L	0.0010	104	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							03/09/15 11:34	
Arsenic			6.20E-05	mg/L	0.0010						
Cadmium			0.000924	mg/L	0.0010						
Copper			0.000916	mg/L	0.0010						
Lead			0.000244	mg/L	0.0010						
Zinc			0.00122	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							03/09/15 11:38	
Arsenic			0.0112	mg/L	0.0010	112	70	130			
Cadmium			0.0111	mg/L	0.0010	111	70	130			
Copper			0.0218	mg/L	0.0010	109	70	130			
Lead			0.000245	mg/L	0.0010		0	0			
Zinc			0.0116	mg/L	0.0010	116	70	130			
Method:	**SW6020**									Batch: 28319	
Lab ID:	**MB-28319**	5	Method Blank				Run: ICPMS204-B_150309A			03/10/15 13:50	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			5	mg/kg	4						
Lab ID:	**LCS-28319**	5	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/10/15 13:54	
Arsenic			302	mg/kg	1.0	89	72.3	106.4			
Cadmium			119	mg/kg	1.0	88	73	105.1			
Copper			269	mg/kg	1.0	97	77.5	109.6			
Lead			186	mg/kg	1.0	101	75.9	108.6			
Zinc			199	mg/kg	3.5	92	74.2	109.9			
Lab ID:	**LFB-28319**	5	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/10/15 13:58	
Arsenic			50.1	mg/kg	1.0	100	80	120			
Cadmium			24.1	mg/kg	1.0	96	80	120			
Copper			51.2	mg/kg	1.0	102	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Zinc			53.7	mg/kg	3.5	97	80	120			
Lab ID:	**H15020269-005APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/10/15 14:33	
Arsenic			2580	mg/kg	1.0	96	75	125			
Cadmium			1070	mg/kg	1.0	86	75	125			
Copper			2870	mg/kg	1.0	87	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/11/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020269

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28319
Lab ID:	**H15020269-005APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/10/15 14:33	
Lead			2320	mg/kg	1.0	90	75	125			
Zinc			2880	mg/kg	3.5	84	75	125			
Lab ID:	**H15020269-005AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/10/15 14:37	
Arsenic			275	mg/kg	1.0		75	125			A
Cadmium			25.2	mg/kg	1.0	93	75	125			
Copper			753	mg/kg	1.0		75	125			A
Lead			128	mg/kg	1.0	65	75	125			S
Zinc			836	mg/kg	3.4		75	125			A
Lab ID:	**H15020269-005AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/10/15 14:41	
Arsenic			258	mg/kg	1.0		75	125	6.2	20	A
Cadmium			25.3	mg/kg	1.0	93	75	125	0.2	20	
Copper			729	mg/kg	1.0		75	125	3.1	20	A
Lead			124	mg/kg	1.0	57	75	125	2.8	20	S
Zinc			838	mg/kg	3.4		75	125	0.3	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020269

Login completed by: Austin H. Nearpass
Reviewed by: BL2000\rwilliams
Reviewed Date: 2/19/2015

Date Received: 2/17/2015
Received by: TLL
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	0.4°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-085-3642	1402	1/6/15	Soil	A	B		1
4-085-4248	1401	1/6/15	Soil	A	B		1
3-040-3642	1121	11/26/14	Soil	A	B		1
3-040-4248	1120	11/26/14	Soil	A	B		1
3-326-4248	930	12/10/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

H15020269

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature] Date/Time: 2/17/15 1630

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) _____ Date/Time:

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

0.4
Hand del.

On Ice: (Y) N

~~Temp Blank: (Y) N~~

Date/Time: 2/17/15 16:30

COC add samp 1_6_15.xls

ANALYTICAL SUMMARY REPORT

March 10, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020263

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 64 samples for MT DEQ-Federal Superfund on 2/17/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020263-001	4-001-0006	02/10/15 16:37	02/17/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020263-002	4-001-0612	02/10/15 16:36	02/17/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020263-003	4-002-4248	02/10/15 15:55	02/17/15	Soil	Same As Above
H15020263-004	4-002-4854	02/10/15 16:06	02/17/15	Soil	Same As Above
H15020263-005	4-002-5460	02/10/15 16:05	02/17/15	Soil	Same As Above
H15020263-006	4-003-3642	02/10/15 15:21	02/17/15	Soil	Same As Above
H15020263-007	4-003-4248	02/10/15 15:02	02/17/15	Soil	Same As Above
H15020263-008	4-003-4854	02/10/15 15:31	02/17/15	Soil	Same As Above
H15020263-009	4-003-5460	02/10/15 15:30	02/17/15	Soil	Same As Above
H15020263-010	4-008-0006	02/10/15 16:53	02/17/15	Soil	Same As Above
H15020263-011	4-008-0612	02/10/15 16:51	02/17/15	Soil	Same As Above
H15020263-012	4-008-0612D	02/10/15 16:52	02/17/15	Soil	Same As Above
H15020263-013	4-009-3642	02/10/15 14:39	02/17/15	Soil	Same As Above
H15020263-014	4-009-4248	02/10/15 14:38	02/17/15	Soil	Same As Above
H15020263-015	4-009-4854	02/10/15 15:01	02/17/15	Soil	Same As Above
H15020263-016	4-013-0006	02/10/15 13:12	02/17/15	Soil	Same As Above
H15020263-017	4-013-0612	02/10/15 13:11	02/17/15	Soil	Same As Above
H15020263-018	4-014-0006	02/10/15 13:38	02/17/15	Soil	Same As Above
H15020263-019	4-014-0612	02/10/15 13:36	02/17/15	Soil	Same As Above
H15020263-020	4-016-0006	02/10/15 14:20	02/17/15	Soil	Same As Above
H15020263-021	4-016-0612	02/10/15 14:19	02/17/15	Soil	Same As Above
H15020263-022	4-017-0006	02/10/15 12:53	02/17/15	Soil	Same As Above
H15020263-023	4-017-0612	02/10/15 12:51	02/17/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020263-024	4-017E-0006	02/10/15 12:32	02/17/15	Soil	Same As Above
H15020263-025	4-017E-0612	02/10/15 12:31	02/17/15	Soil	Same As Above
H15020263-026	4-018-0612	02/10/15 13:26	02/17/15	Soil	Same As Above
H15020263-027	4-018-1218	02/10/15 13:25	02/17/15	Soil	Same As Above
H15020263-028	4-018-1824	02/10/15 13:24	02/17/15	Soil	Same As Above
H15020263-029	4-018-2430	02/10/15 13:23	02/17/15	Soil	Same As Above
H15020263-030	4-019-0006	02/10/15 14:05	02/17/15	Soil	Same As Above
H15020263-031	4-019-0612	02/10/15 14:04	02/17/15	Soil	Same As Above
H15020263-032	4-021-1218	02/10/15 10:20	02/17/15	Soil	Same As Above
H15020263-033	4-021-1824	02/10/15 10:19	02/17/15	Soil	Same As Above
H15020263-034	4-021-2430	02/10/15 10:18	02/17/15	Soil	Same As Above
H15020263-035	4-021E2-0006	02/10/15 11:42	02/17/15	Soil	Same As Above
H15020263-036	4-021E2-0612	02/10/15 11:41	02/17/15	Soil	Same As Above
H15020263-037	4-021E-3036	02/10/15 11:00	02/17/15	Soil	Same As Above
H15020263-038	4-021E-3642	02/10/15 11:11	02/17/15	Soil	Same As Above
H15020263-039	4-021E-4248	02/10/15 11:10	02/17/15	Soil	Same As Above
H15020263-040	4-023-1824	02/10/15 8:27	02/17/15	Soil	Same As Above
H15020263-041	4-023-2430	02/10/15 8:26	02/17/15	Soil	Same As Above
H15020263-042	4-023-3036	02/10/15 8:25	02/17/15	Soil	Same As Above
H15020263-043	4-025E2-1824	02/10/15 9:34	02/17/15	Soil	Same As Above
H15020263-044	4-025E2-2430	02/10/15 9:33	02/17/15	Soil	Same As Above
H15020263-045	4-025E2-3036	02/10/15 9:32	02/17/15	Soil	Same As Above
H15020263-046	4-025E-2430	02/10/15 8:53	02/17/15	Soil	Same As Above
H15020263-047	4-025E2N-0006	02/10/15 10:37	02/17/15	Soil	Same As Above
H15020263-048	4-025E2N-0612	02/10/15 10:36	02/17/15	Soil	Same As Above
H15020263-049	4-025E-3036	02/10/15 8:52	02/17/15	Soil	Same As Above
H15020263-050	4-025E3-1824	02/10/15 11:22	02/17/15	Soil	Same As Above
H15020263-051	4-025E3-2430	02/10/15 11:21	02/17/15	Soil	Same As Above
H15020263-052	4-025E3-3036	02/10/15 11:20	02/17/15	Soil	Same As Above
H15020263-053	4-025E-3642	02/10/15 8:51	02/17/15	Soil	Same As Above
H15020263-054	4-025E3N-0006	02/10/15 12:15	02/17/15	Soil	Same As Above
H15020263-055	4-025E3N-0612	02/10/15 12:14	02/17/15	Soil	Same As Above
H15020263-056	4-025E4-0006	02/10/15 12:05	02/17/15	Soil	Same As Above
H15020263-057	4-025E4-0612	02/10/15 12:04	02/17/15	Soil	Same As Above
H15020263-058	4-025E4-1218	02/10/15 12:03	02/17/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020263-059	4-031-2430	02/10/15 8:01	02/17/15	Soil	Same As Above
H15020263-060	4-031-3036	02/10/15 8:00	02/17/15	Soil	Same As Above
H15020263-061	4-032-0006	02/10/15 7:45	02/17/15	Soil	Same As Above
H15020263-062	4-032-0612	02/10/15 7:44	02/17/15	Soil	Same As Above
H15020263-063	4-014-0612D	02/10/15 13:37	02/17/15	Soil	Same As Above
H15020263-064	4-017-0612D	02/10/15 12:52	02/17/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020263

Report Date: 03/10/15
Date Received: 02/17/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020263-001	4-001-0006	7.2	21	< 1	66	16	55
H15020263-002	4-001-0612	7.2	22	< 1	54	14	43
H15020263-003	4-002-4248	6.8	4	< 1	27	12	1440
H15020263-004	4-002-4854	6.9	8	< 1	47	11	1350
H15020263-005	4-002-5460	7.0	7	< 1	22	10	163
H15020263-006	4-003-3642	7.0	170	5	2520	222	1680
H15020263-007	4-003-4248	7.1	102	17	1890	162	2080
H15020263-008	4-003-4854	7.1	129	8	2470	174	2510
H15020263-009	4-003-5460	7.2	117	6	1620	140	1620
H15020263-010	4-008-0006	7.1	33	< 1	111	30	104
H15020263-011	4-008-0612	7.5	19	< 1	61	13	41
H15020263-012	4-008-0612D	7.5	23	< 1	72	16	50
H15020263-013	4-009-3642	6.7	68	20	3820	19	3380
H15020263-014	4-009-4248	6.9	27	3	543	9	1080
H15020263-015	4-009-4854	7.5	8	15	341	12	756
H15020263-016	4-013-0006	7.3	21	< 1	62	19	71
H15020263-017	4-013-0612	7.4	24	< 1	76	21	60
H15020263-018	4-014-0006	7.7	16	< 1	61	12	39
H15020263-019	4-014-0612	7.8	33	< 1	127	26	126
H15020263-020	4-016-0006	7.3	92	2	467	82	535
H15020263-021	4-016-0612	6.9	57	1	342	59	356
H15020263-022	4-017-0006	7.3	23	< 1	68	21	87
H15020263-023	4-017-0612	7.6	25	< 1	50	14	43
H15020263-024	4-017E-0006	7.0	20	< 1	95	22	100
H15020263-025	4-017E-0612	7.2	25	< 1	99	24	131
H15020263-026	4-018-0612	7.2	417	3	1410	277	908
H15020263-027	4-018-1218	7.3	114	3	402	70	480
H15020263-028	4-018-1824	7.0	103	< 1	577	71	263
H15020263-029	4-018-2430	6.7	37	< 1	4810	187	456
H15020263-030	4-019-0006	7.7	414	2	1040	244	834
H15020263-031	4-019-0612	7.2	50	2	613	82	607
H15020263-032	4-021-1218	7.1	24	4	456	28	1380
H15020263-033	4-021-1824	6.4	7	< 1	25	12	106
H15020263-034	4-021-2430	6.6	6	< 1	25	11	55
H15020263-035	4-021E2-0006	7.1	39	1	232	34	268
H15020263-036	4-021E2-0612	7.0	36	1	221	36	258
H15020263-037	4-021E-3036	7.1	787	14	17700	1110	3480
H15020263-038	4-021E-3642	7.0	43	< 1	87	49	185
H15020263-039	4-021E-4248	7.4	7	< 1	45	14	68
H15020263-040	4-023-1824	7.0	18	1	3080	45	564

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020263

Report Date: 03/10/15
Date Received: 02/17/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020263-041	4-023-2430	7.4	8	< 1	1040	13	223
H15020263-042	4-023-3036	7.5	9	< 1	1330	14	229
H15020263-043	4-025E2-1824	7.1	622	16	11700	937	3900
H15020263-044	4-025E2-2430	7.4	30	< 1	61	13	110
H15020263-045	4-025E2-3036	7.2	5	< 1	27	10	55
H15020263-046	4-025E-2430	7.5	469	11	10600	1130	2700
H15020263-047	4-025E2N-0006	7.8	119	3	637	84	457
H15020263-048	4-025E2N-0612	7.8	41	< 1	208	21	137
H15020263-049	4-025E-3036	7.5	9	< 1	32	12	70
H15020263-050	4-025E3-1824	7.5	539	17	14300	1400	3800
H15020263-051	4-025E3-2430	7.2	13	< 1	59	14	79
H15020263-052	4-025E3-3036	7.7	21	< 1	130	17	109
H15020263-053	4-025E-3642	7.3	3	< 1	17	7	44
H15020263-054	4-025E3N-0006	7.5	246	6	1020	147	907
H15020263-055	4-025E3N-0612	7.5	28	< 1	217	25	132
H15020263-056	4-025E4-0006	7.6	143	2	1290	86	374
H15020263-057	4-025E4-0612	7.7	64	1	407	27	291
H15020263-058	4-025E4-1218	7.7	25	< 1	52	9	60
H15020263-059	4-031-2430	7.3	217	14	1340	140	2210
H15020263-060	4-031-3036	7.1	180	11	2170	357	2390
H15020263-061	4-032-0006	7.5	119	3	858	109	791
H15020263-062	4-032-0612	7.4	82	1	451	61	433
H15020263-063	4-014-0612D	7.7	22	< 1	62	18	56
H15020263-064	4-017-0612D	7.5	23	< 1	53	13	45

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150306A		
Lab ID: CCV_1_150305_1		Continuing Calibration Verification Standard							03/06/15 07:18	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150305_1		Continuing Calibration Verification Standard							03/06/15 07:19	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150305_1		Initial Calibration Verification Standard							03/06/15 07:20	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150305_1		Continuing Calibration Verification Standard							03/06/15 07:31	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150305_1		Continuing Calibration Verification Standard							03/06/15 07:50	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150305_1		Continuing Calibration Verification Standard							03/06/15 07:51	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150305_1		Initial Calibration Verification Standard							03/06/15 07:51	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150305_1		Continuing Calibration Verification Standard							03/06/15 08:01	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150305_1		Continuing Calibration Verification Standard							03/06/15 08:16	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150305_1		Continuing Calibration Verification Standard							03/06/15 08:16	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150305_1		Initial Calibration Verification Standard							03/06/15 08:17	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150305_1		Continuing Calibration Verification Standard							03/06/15 08:29	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150305_1		Continuing Calibration Verification Standard							03/06/15 08:39	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 28292
Lab ID: LCS-28292		Laboratory Control Sample				Run: SOIL PH METER_150306A			03/06/15 07:21	
pH, sat. paste		7.59	s.u.	0.10	101	95	105			
Lab ID: H15020263-010ADUP		Sample Duplicate				Run: SOIL PH METER_150306A			03/06/15 07:30	
pH, sat. paste		7.15	s.u.	0.10				0.1	30	
Lab ID: H15020263-020ADUP		Sample Duplicate				Run: SOIL PH METER_150306A			03/06/15 07:40	
pH, sat. paste		7.27	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 28293

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28293
Lab ID: LCS-28293	Laboratory Control Sample					Run: SOIL PH METER_150306A				03/06/15 07:52
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15020263-030ADUP	Sample Duplicate					Run: SOIL PH METER_150306A				03/06/15 08:01
pH, sat. paste		7.67	s.u.	0.10				0.1	30	
Lab ID: H15020263-040ADUP	Sample Duplicate					Run: SOIL PH METER_150306A				03/06/15 08:10
pH, sat. paste		6.96	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 28294
Lab ID: LCS-28294	Laboratory Control Sample					Run: SOIL PH METER_150306A				03/06/15 08:18
pH, sat. paste		7.59	s.u.	0.10	101	95	105			
Lab ID: H15020263-050ADUP	Sample Duplicate					Run: SOIL PH METER_150306A				03/06/15 08:28
pH, sat. paste		7.52	s.u.	0.10				0.0	30	
Lab ID: H15020263-060ADUP	Sample Duplicate					Run: SOIL PH METER_150306A				03/06/15 08:38
pH, sat. paste		7.11	s.u.	0.10				0.1	30	
Lab ID: H15020263-064ADUP	Sample Duplicate					Run: SOIL PH METER_150306A				03/06/15 08:43
pH, sat. paste		7.54	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150304B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								03/04/15 15:20
Arsenic			0.785	mg/L	0.0085	98	90	110			
Cadmium			0.388	mg/L	0.0010	97	90	110			
Copper			0.807	mg/L	0.010	101	90	110			
Lead			0.778	mg/L	0.010	97	90	110			
Zinc			0.785	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/04/15 15:35
Arsenic			-0.00312	mg/L	0.0085		0	0			
Cadmium			0.00174	mg/L	0.0010		0	0			
Copper			-0.000500	mg/L	0.010		0	0			
Lead			-0.0151	mg/L	0.010		0	0			
Zinc			0.00377	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/04/15 15:39
Arsenic			0.965	mg/L	0.0085	97	80	120			
Cadmium			0.907	mg/L	0.0010	91	80	120			
Copper			0.515	mg/L	0.010	103	80	120			
Lead			0.917	mg/L	0.010	92	80	120			
Zinc			0.993	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/04/15 22:33
Arsenic			2.54	mg/L	0.0085	102	90	110			
Cadmium			2.54	mg/L	0.0010	101	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.56	mg/L	0.010	102	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/04/15 22:37
Arsenic			0.00333	mg/L	0.0085						
Cadmium			0.000620	mg/L	0.0010						
Copper			0.00210	mg/L	0.010						
Lead			-0.0115	mg/L	0.010						
Zinc			0.00136	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/04/15 23:18
Arsenic			2.55	mg/L	0.0085	102	90	110			
Cadmium			2.52	mg/L	0.0010	101	90	110			
Copper			2.56	mg/L	0.010	103	90	110			
Lead			2.51	mg/L	0.010	100	90	110			
Zinc			2.53	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/04/15 23:21
Arsenic			0.00293	mg/L	0.0085						
Cadmium			0.000950	mg/L	0.0010						
Copper			0.00116	mg/L	0.010						
Lead			-0.00155	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150304B	
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/04/15 23:21
Zinc			0.000500	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/04/15 23:44
Arsenic			2.42	mg/L	0.0085	97	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.43	mg/L	0.010	97	90	110			
Zinc			2.42	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/04/15 23:48
Arsenic			0.00495	mg/L	0.0085						
Cadmium			0.000660	mg/L	0.0010						
Copper			-0.00294	mg/L	0.010						
Lead			0.0111	mg/L	0.010						
Zinc			-0.000340	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 00:28
Arsenic			2.47	mg/L	0.0085	99	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.44	mg/L	0.010	97	90	110			
Zinc			2.46	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/05/15 00:32
Arsenic			0.0140	mg/L	0.0085						
Cadmium			0.000360	mg/L	0.0010						
Copper			-0.000190	mg/L	0.010						
Lead			-0.00188	mg/L	0.010						
Zinc			-0.000130	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 01:12
Arsenic			2.49	mg/L	0.0085	100	90	110			
Cadmium			2.49	mg/L	0.0010	99	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.45	mg/L	0.010	98	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/05/15 01:16
Arsenic			0.0127	mg/L	0.0085						
Cadmium			0.000140	mg/L	0.0010						
Copper			-0.00586	mg/L	0.010						
Lead			0.0161	mg/L	0.010						
Zinc			0.000970	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 01:57
Arsenic			2.50	mg/L	0.0085	100	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150304B		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/05/15 01:57	
Cadmium			2.50	mg/L	0.0010	100	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/05/15 02:01	
Arsenic			0.0107	mg/L	0.0085						
Cadmium			0.000270	mg/L	0.0010						
Copper			-0.000560	mg/L	0.010						
Lead			-0.00345	mg/L	0.010						
Zinc			0.000390	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/05/15 02:41	
Arsenic			2.50	mg/L	0.0085	100	90	110			
Cadmium			2.52	mg/L	0.0010	101	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.54	mg/L	0.010	101	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/05/15 02:45	
Arsenic			0.0112	mg/L	0.0085						
Cadmium			0.000710	mg/L	0.0010						
Copper			-0.000850	mg/L	0.010						
Lead			-0.0120	mg/L	0.010						
Zinc			0.00129	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/05/15 03:07	
Arsenic			2.51	mg/L	0.0085	101	90	110			
Cadmium			2.52	mg/L	0.0010	101	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.51	mg/L	0.010	101	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/05/15 03:11	
Arsenic			0.00663	mg/L	0.0085						
Cadmium			0.000450	mg/L	0.0010						
Copper			7.00E-05	mg/L	0.010						
Lead			-0.0249	mg/L	0.010						
Zinc			0.000280	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150305A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								03/05/15 09:32
Arsenic			0.778	mg/L	0.0085	97	90	110			
Cadmium			0.388	mg/L	0.0010	97	90	110			
Copper			0.800	mg/L	0.010	100	90	110			
Lead			0.799	mg/L	0.010	100	90	110			
Zinc			0.788	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/05/15 09:47
Arsenic			-0.0144	mg/L	0.0085		0	0			
Cadmium			0.000650	mg/L	0.0010		0	0			
Copper			-0.000980	mg/L	0.010		0	0			
Lead			0.00811	mg/L	0.010		0	0			
Zinc			0.00448	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/05/15 09:51
Arsenic			0.963	mg/L	0.0085	96	80	120			
Cadmium			0.898	mg/L	0.0010	90	80	120			
Copper			0.502	mg/L	0.010	100	80	120			
Lead			0.877	mg/L	0.010	88	80	120			
Zinc			0.981	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 11:53
Arsenic			2.51	mg/L	0.0085	100	90	110			
Cadmium			2.49	mg/L	0.0010	100	90	110			
Copper			2.54	mg/L	0.010	101	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.44	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/05/15 11:57
Arsenic			-0.00300	mg/L	0.0085						
Cadmium			0.000710	mg/L	0.0010						
Copper			-0.00122	mg/L	0.010						
Lead			0.0165	mg/L	0.010						
Zinc			0.00129	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/05/15 12:37
Arsenic			2.51	mg/L	0.0085	100	90	110			
Cadmium			2.49	mg/L	0.0010	100	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/05/15 12:41
Arsenic			-0.00523	mg/L	0.0085						
Cadmium			0.000660	mg/L	0.0010						
Copper			-0.00369	mg/L	0.010						
Lead			0.0180	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150305A	
Lab ID: CCB	5	Continuing Calibration Blank							03/05/15 12:41	
Zinc		0.00119	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/10/15 03:57	
Arsenic			0.0503	mg/L	0.0050	101	90	110			
Lead			0.0502	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/10/15 04:06	
Arsenic			3.50E-06	mg/L	0.0050						
Lead			-4.00E-07	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/10/15 05:12	
Arsenic			0.0505	mg/L	0.0050	101	90	110			
Lead			0.0498	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/10/15 05:21	
Arsenic			3.32E-05	mg/L	0.0050						
Lead			1.00E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/10/15 06:22	
Arsenic			0.0502	mg/L	0.0050	100	90	110			
Lead			0.0498	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/10/15 06:31	
Arsenic			2.83E-05	mg/L	0.0050						
Lead			1.30E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28235	
Lab ID:	**MB-28235**	5	Method Blank				Run: ICP2-HE_150304B			03/04/15 22:59	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-28235**	5	Laboratory Fortified Blank				Run: ICP2-HE_150304B			03/04/15 23:03	
Arsenic			49.6	mg/kg	1.0	99	80	120			
Cadmium			24.7	mg/kg	1.0	99	80	120			
Copper			49.4	mg/kg	1.0	99	80	120			
Lead			49.2	mg/kg	1.0	98	80	120			
Zinc			49.8	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-28235**	5	Laboratory Control Sample				Run: ICP2-HE_150304B			03/04/15 23:07	
Arsenic			287	mg/kg	1.8	84	72.3	106.4			
Cadmium			120	mg/kg	1.0	88	73	105.1			
Copper			258	mg/kg	1.1	92	77.5	109.6			
Lead			179	mg/kg	3.2	96	75.9	108.6			
Zinc			193	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H15020263-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150304B			03/05/15 01:01	
Arsenic			251	mg/kg	1.9	91	75	125			
Cadmium			114	mg/kg	1.0	89	75	125			
Copper			298	mg/kg	1.1	92	75	125			
Lead			240	mg/kg	3.3	91	75	125			
Zinc			273	mg/kg	1.0	91	75	125			
Lab ID:	**H15020263-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150304B			03/05/15 01:05	
Arsenic			64.9	mg/kg	1.8	98	75	125			
Cadmium			23.4	mg/kg	1.0	93	75	125			
Copper			112	mg/kg	1.1	101	75	125			
Lead			60.3	mg/kg	3.2	110	75	125			
Zinc			87.9	mg/kg	1.0	99	75	125			
Lab ID:	**H15020263-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150304B			03/05/15 01:09	
Arsenic			65.6	mg/kg	1.8	99	75	125	1.1	20	
Cadmium			23.9	mg/kg	1.0	95	75	125	2.0	20	
Copper			113	mg/kg	1.1	105	75	125	1.6	20	
Lead			59.8	mg/kg	3.2	109	75	125	0.8	20	
Zinc			88.3	mg/kg	1.0	99	75	125	0.4	20	
Method:	**SW6010B**									Batch: 28236	
Lab ID:	**MB-28236**	5	Method Blank				Run: ICP2-HE_150304B			03/05/15 01:20	
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28236
Lab ID:	**MB-28236**	5	Method Blank				Run: ICP2-HE_150304B			03/05/15 01:20	
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28236**	5	Laboratory Fortified Blank				Run: ICP2-HE_150304B			03/05/15 01:24	
Arsenic			47.9	mg/kg	1.0	95	80	120			
Cadmium			23.9	mg/kg	1.0	95	80	120			
Copper			49.7	mg/kg	1.0	99	80	120			
Lead			48.0	mg/kg	1.0	96	80	120			
Zinc			48.5	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-28236**	5	Laboratory Control Sample				Run: ICP2-HE_150304B			03/05/15 01:27	
Arsenic			268	mg/kg	1.8	78	72.3	106.4			
Cadmium			113	mg/kg	1.0	82	73	105.1			
Copper			241	mg/kg	1.1	86	77.5	109.6			
Lead			167	mg/kg	3.2	89	75.9	108.6			
Zinc			181	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H15020263-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150304B			03/05/15 02:56	
Arsenic			263	mg/kg	1.8	89	75	125			
Cadmium			113	mg/kg	1.0	87	75	125			
Copper			467	mg/kg	1.1	96	75	125			
Lead			252	mg/kg	3.2	86	75	125			
Zinc			504	mg/kg	1.0	97	75	125			
Lab ID:	**H15020263-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150304B			03/05/15 03:00	
Arsenic			86.0	mg/kg	1.8	100	75	125			
Cadmium			24.1	mg/kg	1.0	92	75	125			
Copper			314	mg/kg	1.1		75	125			A
Lead			80.3	mg/kg	3.2	94	75	125			
Zinc			342	mg/kg	1.0		75	125			A
Lab ID:	**H15020263-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150304B			03/05/15 03:03	
Arsenic			89.3	mg/kg	1.8	107	75	125	3.8	20	
Cadmium			24.5	mg/kg	1.0	94	75	125	1.7	20	
Copper			316	mg/kg	1.1		75	125	0.6	20	A
Lead			87.3	mg/kg	3.2	109	75	125	8.3	20	
Zinc			352	mg/kg	1.0		75	125	3.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28237
Lab ID:	**MB-28237**	5	Method Blank				Run: ICP2-HE_150305A			03/05/15 12:52	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			1	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28237**	5	Laboratory Fortified Blank				Run: ICP2-HE_150305A			03/05/15 12:56	
Arsenic			47.7	mg/kg	1.0	95	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			50.2	mg/kg	1.0	100	80	120			
Lead			48.6	mg/kg	1.0	94	80	120			
Zinc			48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28237**	5	Laboratory Control Sample				Run: ICP2-HE_150305A			03/05/15 12:59	
Arsenic			288	mg/kg	3.5	84	72.3	106.4			
Cadmium			121	mg/kg	1.0	88	73	105.1			
Copper			253	mg/kg	2.2	90	77.5	109.6			
Lead			175	mg/kg	6.2	93	75.9	108.6			
Zinc			191	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H15020263-054APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150305A			03/05/15 14:54	
Arsenic			470	mg/kg	1.8	88	75	125			
Cadmium			114	mg/kg	1.0	84	75	125			
Copper			1230	mg/kg	1.1		75	125			A
Lead			356	mg/kg	3.2	82	75	125			
Zinc			1110	mg/kg	1.0	80	75	125			
Lab ID:	**H15020263-054AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150305A			03/05/15 14:58	
Arsenic			293	mg/kg	1.8		75	125			A
Cadmium			28.2	mg/kg	1.0	88	75	125			
Copper			1090	mg/kg	1.1		75	125			A
Lead			187	mg/kg	3.2	81	75	125			
Zinc			943	mg/kg	1.0		75	125			A
Lab ID:	**H15020263-054AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150305A			03/05/15 15:01	
Arsenic			296	mg/kg	1.8		75	125	0.8	20	A
Cadmium			28.4	mg/kg	1.0	89	75	125	0.7	20	
Copper			1080	mg/kg	1.1		75	125	0.9	20	A
Lead			195	mg/kg	3.2	98	75	125	4.4	20	
Zinc			952	mg/kg	1.0		75	125	0.9	20	A
Method:	**SW6010B**										Batch: 28238
Lab ID:	**MB-28238**	5	Method Blank				Run: ICP2-HE_150305A			03/05/15 11:16	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28238
Lab ID:	**MB-28238**	5	Method Blank				Run: ICP2-HE_150305A				03/05/15 11:16
Lead			0.8	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-28238**	5	Laboratory Fortified Blank				Run: ICP2-HE_150305A				03/05/15 11:20
Arsenic			48.9	mg/kg	1.0	98	80	120			
Cadmium			24.1	mg/kg	1.0	96	80	120			
Copper			49.9	mg/kg	1.0	100	80	120			
Lead			48.0	mg/kg	1.0	94	80	120			
Zinc			47.9	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-28238**	5	Laboratory Control Sample				Run: ICP2-HE_150305A				03/05/15 11:24
Arsenic			267	mg/kg	3.5	78	72.3	106.4			
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			243	mg/kg	2.2	87	77.5	109.6			
Lead			173	mg/kg	6.2	92	75.9	108.6			
Zinc			180	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H15020334-002APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150305A				03/05/15 11:35
Arsenic			220	mg/kg	5.0	89	75	125			
Cadmium			110	mg/kg	2.0	85	75	125			
Copper			250	mg/kg	5.0	90	75	125			
Lead			220	mg/kg	5.0	85	75	125			
Zinc			280	mg/kg	5.0	87	75	125			
Lab ID:	**H15020334-002AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150305A				03/05/15 11:38
Arsenic			49	mg/kg	5.0	95	75	125			
Cadmium			22	mg/kg	2.0	89	75	125			
Copper			72	mg/kg	5.0	98	75	125			
Lead			66	mg/kg	5.0	110	75	125			
Zinc			110	mg/kg	5.0	89	75	125			
Lab ID:	**H15020334-002AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150305A				03/05/15 11:42
Arsenic			49	mg/kg	5.0	95	75	125	0.1	20	
Cadmium			22	mg/kg	2.0	90	75	125	0.7	20	
Copper			72	mg/kg	5.0	97	75	125	0.4	20	
Lead			62	mg/kg	5.0	103	75	125	5.2	20	
Zinc			110	mg/kg	5.0	96	75	125	3.4	20	
Lab ID:	**H15020263-064APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150305A				03/05/15 12:33
Arsenic			249	mg/kg	1.8	89	75	125			
Cadmium			112	mg/kg	1.0	88	75	125			
Copper			288	mg/kg	1.1	93	75	125			
Lead			241	mg/kg	3.2	87	75	125			
Zinc			270	mg/kg	1.0	88	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28238
Lab ID:	**H15020263-064AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150305A			03/05/15 12:45	
Arsenic			68.4	mg/kg	1.8	96	75	125			
Cadmium			23.3	mg/kg	1.0	93	75	125			
Copper			101	mg/kg	1.1	99	75	125			
Lead			65.3	mg/kg	3.2	92	75	125			
Zinc			91.6	mg/kg	1.0	93	75	125			
Lab ID:	**H15020263-064AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150305A			03/05/15 12:48	
Arsenic			67.4	mg/kg	1.8	94	75	125	1.5	20	
Cadmium			23.5	mg/kg	1.0	94	75	125	0.9	20	
Copper			101	mg/kg	1.1	97	75	125	0.8	20	
Lead			63.3	mg/kg	3.2	88	75	125	3.0	20	
Zinc			92.2	mg/kg	1.0	95	75	125	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							03/09/15 11:29	
Arsenic			0.0631	mg/L	0.0010	105	90	110			
Lead			0.0618	mg/L	0.0010	103	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							03/09/15 11:34	
Arsenic			6.20E-05	mg/L	0.0010						
Lead			0.000244	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							03/09/15 11:38	
Arsenic			0.0112	mg/L	0.0010	112	70	130			
Lead			0.000245	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 28235	
Lab ID:	**MB-28235**	2	Method Blank				Run: ICPMS204-B_150309A			03/09/15 23:57	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28235**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/10/15 00:01	
Arsenic			303	mg/kg	1.0	88	72.3	106.4			
Lead			186	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-28235**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/10/15 00:05	
Arsenic			46.2	mg/kg	1.0	92	80	120			
Lead			45.5	mg/kg	1.0	91	80	120			
Lab ID:	**H15020263-018APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/10/15 01:33	
Arsenic			2410	mg/kg	1.0	96	75	125			
Lead			2390	mg/kg	1.0	95	75	125			
Lab ID:	**H15020263-018AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/10/15 01:37	
Arsenic			64.4	mg/kg	1.0	96	75	125			
Lead			58.5	mg/kg	1.0	93	75	125			
Lab ID:	**H15020263-018AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/10/15 01:41	
Arsenic			64.4	mg/kg	1.0	96	75	125	0.0	20	
Lead			59.6	mg/kg	1.0	96	75	125	1.8	20	
Method:	**SW6020**									Batch: 28236	
Lab ID:	**MB-28236**	2	Method Blank				Run: ICPMS204-B_150309A			03/10/15 02:12	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28236**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/10/15 02:17	
Arsenic			287	mg/kg	1.0	84	72.3	106.4			
Lead			172	mg/kg	1.0	92	75.9	108.6			
Lab ID:	**LFB-28236**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/10/15 02:21	
Arsenic			49.2	mg/kg	1.0	99	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28236
Lab ID:	**LFB-28236**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A				03/10/15 02:21
Lead			48.8	mg/kg	1.0	98	80	120			
Lab ID:	**H15020263-036APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A				03/10/15 03:27
Arsenic			2440	mg/kg	1.0	97	75	125			
Lead			2360	mg/kg	1.0	94	75	125			
Lab ID:	**H15020263-036AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A				03/10/15 03:31
Arsenic			92.8	mg/kg	1.0	107	75	125			
Lead			85.5	mg/kg	1.0	101	75	125			
Lab ID:	**H15020263-036AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A				03/10/15 03:35
Arsenic			87.6	mg/kg	1.0	96	75	125	5.8	20	
Lead			83.2	mg/kg	1.0	96	75	125	2.7	20	
Method:	**SW6020**										Batch: 28237
Lab ID:	**MB-28237**	2	Method Blank				Run: ICPMS204-B_150309A				03/10/15 03:44
Arsenic			0.4	mg/kg	0.3						
Lead			0.3	mg/kg	0.2						
Lab ID:	**LCS-28237**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A				03/10/15 03:49
Arsenic			294	mg/kg	1.0	86	72.3	106.4			
Lead			183	mg/kg	1.0	98	75.9	108.6			
Lab ID:	**LFB-28237**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A				03/10/15 03:53
Arsenic			48.3	mg/kg	1.0	96	80	120			
Lead			47.0	mg/kg	1.0	93	80	120			
Lab ID:	**H15020263-054APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A				03/10/15 04:59
Arsenic			2670	mg/kg	1.0	97	75	125			
Lead			2450	mg/kg	1.0	93	75	125			
Lab ID:	**H15020263-054AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A				03/10/15 05:03
Arsenic			302	mg/kg	1.0		75	125			A
Lead			198	mg/kg	1.0	100	75	125			
Lab ID:	**H15020263-054AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A				03/10/15 05:07
Arsenic			302	mg/kg	1.0		75	125	0.1	20	A
Lead			194	mg/kg	1.0	92	75	125	2.1	20	
Method:	**SW6020**										Batch: 28238
Lab ID:	**MB-28238**	2	Method Blank				Run: ICPMS204-B_150309A				03/10/15 05:25
Arsenic			1	mg/kg	0.3						
Lead			0.8	mg/kg	0.2						
Lab ID:	**LCS-28238**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A				03/10/15 05:29
Arsenic			274	mg/kg	1.0	80	72.3	106.4			
Lead			161	mg/kg	1.0	86	75.9	108.6			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020263

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28238
Lab ID:	**LFB-28238**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A				03/10/15 05:34
Arsenic			49.6	mg/kg	1.0	97	80	120			
Lead			48.0	mg/kg	1.0	94	80	120			
Lab ID:	**H15020263-064APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A				03/10/15 06:09
Arsenic			2490	mg/kg	1.0	99	75	125			
Lead			2380	mg/kg	1.0	96	75	125			
Lab ID:	**H15020263-064AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A				03/10/15 06:13
Arsenic			71.8	mg/kg	1.0	99	75	125			
Lead			60.0	mg/kg	1.0	94	75	125			
Lab ID:	**H15020263-064AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A				03/10/15 06:18
Arsenic			71.0	mg/kg	1.0	97	75	125	1.1	20	
Lead			61.9	mg/kg	1.0	98	75	125	3.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020263

Login completed by: Austin H. Nearpass
Date Received: 2/17/2015
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 2/19/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	Comments°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Samples were received on wet ice, cooler 1 0.3 °C Temp blank, cooler 2 6.0 °C temp taken from client sample.
Sample time on COC for sample 4-003-4248 is "15:02" -Time on bag is "1520" . Logged in with time from COC .
Sample 4-017-0006 has no date on bag. Used COC at login.
Sample ID on COC is "4-025E2N-0006" -ID on bottles is "4-025E2/N-0006" . Logged in with ID from COC.
Sample ID on COC is "4-025E2N-0612" -ID on bottles is "4-025E2/N-0612" . Logged in with ID from COC.
Sample ID on COC is "4-025E3N-0006" -ID on bottles is "4-025E3/N-0006" . Logged in with ID from COC.
Sample ID on COC is "4-025E3N-0612" -ID on bottles is "4-025E3/N-0612" . Logged in with ID from COC. An 2/18/15

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

4-014
4-017 No 12-18.

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record B

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID C1	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
4-001-0006	1637	2/10/15	Soil	A	B		1
4-001-0612	1636	2/10/15	Soil	A	B		1
4-002-4248	1555	2/10/15	Soil	A	B		1
4-002-4854	1606	2/10/15	Soil	A	B		1
4-002-5460	1605	2/10/15	Soil	A	B		1
4-003-3642	1521	2/10/15	Soil	A	B		1
4-003-4248	1502	2/10/15	Soil	A	B		1
4-003-4854	1531	2/10/15	Soil	A	B		1
4-003-5460	1530	2/10/15	Soil	A	B		1
4-008-0006	1653	2/10/15	Soil	A	B		1
4-008-0612	1651	2/10/15	Soil	A	B		1
4-008-0612d	1652	2/10/15	Soil	A	B		1
4-009-3642	1439	2/10/15	Soil	A	B		1
4-009-4248	1438	2/10/15	Soil	A	B		1
4-009-4854	1501	2/10/15	Soil	A	B		1
4-013-0006	1312	2/10/15	Soil	A	B		1
4-013-0612	1311	2/10/15	Soil	A	B		1
4-014-0006	1338	2/10/15	Soil	A	B		1
4-014-0612	1336	2/10/15	Soil	A	B		1
4-016-0006	1420	2/10/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15020263

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/17/15 1630

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 0.3
C2 6.0
On Ice: (Y) N
Temp Blank: (Y) N
C1

Date/Time: Hand del
2/17/15 16:30

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
C1							
4-016-0612	1419	2/10/15	Soil	A	B		1
4-017-0006	1253	2/10/15	Soil	A	B		1
4-017-0612	1251	2/10/15	Soil	A	B		1
C2							
4-017e-0006	1232	2/10/15	Soil	A	B		1
4-017e-0612	1231	2/10/15	Soil	A	B		1
4-018-0612	1326	2/10/15	Soil	A	B		1
4-018-1218	1325	2/10/15	Soil	A	B		1
4-018-1824	1324	2/10/15	Soil	A	B		1
4-018-2430	1323	2/10/15	Soil	A	B		1
4-019-0006	1405	2/10/15	Soil	A	B		1
4-019-0612	1404	2/10/15	Soil	A	B		1
4-021-1218	1020	2/10/15	Soil	A	B		1
4-021-1824	1019	2/10/15	Soil	A	B		1
4-021-2430	1018	2/10/15	Soil	A	B		1
4-021e2-0006	1142	2/10/15	Soil	A	B		1
4-021e2-0612	1141	2/10/15	Soil	A	B		1
4-021e-3036	1100	2/10/15	Soil	A	B		1
4-021e-3642	1111	2/10/15	Soil	A	B		1
4-021e-4248	1110	2/10/15	Soil	A	B		1
4-023-1824	827	2/10/15	Soil	A	B		1

H15020263

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 2/17/15 1630

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 0.3
C2 = 6.0
On Ice: (Y) N
Temp Blank: (Y) N
C1

Date/Time: Hand del
2/17/15 16:30

COC02_10_15 EL.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-023-2430	826	2/10/15	Soil	A	B		1
4-023-3036	825	2/10/15	Soil	A	B		1
4-025e2-1824	934	2/10/15	Soil	A	B		1
4-025e2-2430	933	2/10/15	Soil	A	B		1
4-025e2-3036	932	2/10/15	Soil	A	B		1
4-025e-2430	853	2/10/15	Soil	A	B		1
4-025E2N-0006	1037	2/10/15	Soil	A	B		1
4-025E2N-0612	1036	2/10/15	Soil	A	B		1
4-025e-3036	852	2/10/15	Soil	A	B		1
4-025e3-1824	1122	2/10/15	Soil	A	B		1
4-025e3-2430	1121	2/10/15	Soil	A	B		1
4-025e3-3036	1120	2/10/15	Soil	A	B		1
4-025e-3642	851	2/10/15	Soil	A	B		1
4-025e3n-0006	1215	2/10/15	Soil	A	B		1
4-025e3n-0612	1214	2/10/15	Soil	A	B		1
4-025e4-0006	1205	2/10/15	Soil	A	B		1
4-025e4-0612	1204	2/10/15	Soil	A	B		1
4-025e4-1218	1203	2/10/15	Soil	A	B		1
4-031-2430	801	2/10/15	Soil	A	B		1
4-031-3036	800	2/10/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15020263

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/17/15 1630

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

Cl = 0.3
C2 = 6.0
On Ice: (Y) N
Temp Blank: (Y) N
Cl

Date/Time: Hand del
2/17/15 16:30

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
C2							
4-032-0006	745	2/10/15	Soil	A	B		1
4-032-0612	744	2/10/15	Soil	A	B		1
C1							
4-014-0612d	1337	2/10/15	Soil	A	B		1
4-017-0612d	1252	2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1
		2/10/15	Soil	A	B		1

H15020263

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature] Date/Time: 2/17/15 1630

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) _____ Date/Time:

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 0.3
C2 = 6.0
On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: Hand del
2/17/15 16:30

COC02_10_15 EL.xls

ANALYTICAL SUMMARY REPORT

March 10, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020255

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 15 samples for MT DEQ-Federal Superfund on 2/17/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020255-001	3-001E2-0006	02/11/15 10:07	02/17/15	Soil	Cancelled Sample
H15020255-002	3-001E2-0006	02/11/15 10:07	02/17/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020255-003	3-001E2-0612	02/11/15 10:06	02/17/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020255-004	3-014E3-1824	02/11/15 8:49	02/17/15	Soil	Same As Above
H15020255-005	3-014E3-2430	02/11/15 8:48	02/17/15	Soil	Same As Above
H15020255-006	3-014E3-3036	02/11/15 8:47	02/17/15	Soil	Same As Above
H15020255-007	3-027E2-0006	02/11/15 8:58	02/17/15	Soil	Same As Above
H15020255-008	3-027E2-0612	02/11/15 8:57	02/17/15	Soil	Same As Above
H15020255-009	3-027E2-1218	02/11/15 8:55	02/17/15	Soil	Same As Above
H15020255-010	3-027E2-1218D	02/11/15 8:56	02/17/15	Soil	Same As Above
H15020255-011	3-036E2-1218	02/11/15 9:13	02/17/15	Soil	Same As Above
H15020255-012	3-036E2-1824	02/11/15 9:12	02/17/15	Soil	Same As Above
H15020255-013	3-036E2-2430	02/11/15 9:11	02/17/15	Soil	Same As Above
H15020255-014	3-045E2-0006	02/11/15 9:33	02/17/15	Soil	Same As Above
H15020255-015	3-045E2-0612	02/11/15 9:32	02/17/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020255

Report Date: 03/10/15
Date Received: 02/17/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020255-002	3-001E2-0006	6.9	68	6	1200	261	677
H15020255-003	3-001E2-0612	7.4	19	< 1	65	12	108
H15020255-004	3-014E3-1824	7.6	216	4	2860	187	1030
H15020255-005	3-014E3-2430	7.6	37	< 1	322	37	234
H15020255-006	3-014E3-3036	7.4	14	< 1	61	11	77
H15020255-007	3-027E2-0006	7.4	494	16	3620	379	2290
H15020255-008	3-027E2-0612	7.5	207	4	1840	200	762
H15020255-009	3-027E2-1218	7.5	149	2	869	90	457
H15020255-010	3-027E2-1218D	7.5	28	< 1	138	25	114
H15020255-011	3-036E2-1218	7.4	569	9	4520	419	2030
H15020255-012	3-036E2-1824	7.5	97	1	673	72	318
H15020255-013	3-036E2-2430	7.0	17	< 1	46	16	83
H15020255-014	3-045E2-0006	7.4	41	1	304	51	245
H15020255-015	3-045E2-0612	7.6	13	< 1	42	15	87

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020255

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2							Analytical Run: SOIL PH METER_150304A			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard							03/03/15 08:48	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard							03/03/15 09:14	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard							03/03/15 09:41	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 06:54	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 07:30	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 08:16	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 08:52	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 06:43	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 07:09	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 07:39	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150303_1		Continuing Calibration Verification Standard							03/04/15 09:27	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150303_1		Continuing Calibration Verification Standard							03/04/15 09:27	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 09:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150303_1		Continuing Calibration Verification Standard							03/04/15 09:39	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 08:07	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 28273	
Lab ID: LCS-28273		Laboratory Control Sample				Run: SOIL PH METER_150304A			03/04/15 09:29	
pH, sat. paste		7.58	s.u.	0.10	101	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020255

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28273
Lab ID: H15020255-010ADUP	Sample Duplicate					Run: SOIL PH METER_150304A			03/04/15 09:37	
pH, sat. paste		7.54	s.u.	0.10				0.0	30	
Lab ID: H15020255-015ADUP	Sample Duplicate					Run: SOIL PH METER_150304A			03/04/15 09:43	
pH, sat. paste		7.58	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020255

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150304B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								03/04/15 15:20
Arsenic			0.785	mg/L	0.0085	98	90	110			
Cadmium			0.388	mg/L	0.0010	97	90	110			
Copper			0.807	mg/L	0.010	101	90	110			
Lead			0.778	mg/L	0.010	97	90	110			
Zinc			0.785	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/04/15 15:35
Arsenic			-0.00312	mg/L	0.0085		0	0			
Cadmium			0.00174	mg/L	0.0010		0	0			
Copper			-0.000500	mg/L	0.010		0	0			
Lead			-0.0151	mg/L	0.010		0	0			
Zinc			0.00377	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/04/15 15:39
Arsenic			0.965	mg/L	0.0085	97	80	120			
Cadmium			0.907	mg/L	0.0010	91	80	120			
Copper			0.515	mg/L	0.010	103	80	120			
Lead			0.917	mg/L	0.010	92	80	120			
Zinc			0.993	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/04/15 21:05
Arsenic			2.49	mg/L	0.0085	100	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/04/15 21:09
Arsenic			0.00537	mg/L	0.0085						
Cadmium			0.000490	mg/L	0.0010						
Copper			0.00326	mg/L	0.010						
Lead			0.00154	mg/L	0.010						
Zinc			0.00208	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/04/15 21:49
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.50	mg/L	0.0010	100	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/04/15 21:53
Arsenic			-0.000120	mg/L	0.0085						
Cadmium			0.000610	mg/L	0.0010						
Copper			0.00235	mg/L	0.010						
Lead			-0.0167	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020255

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150304B	
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/04/15 21:53	
Zinc			0.00175	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/04/15 22:33	
Arsenic			2.54	mg/L	0.0085	102	90	110			
Cadmium			2.54	mg/L	0.0010	101	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.56	mg/L	0.010	102	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/04/15 22:37	
Arsenic			0.00333	mg/L	0.0085						
Cadmium			0.000620	mg/L	0.0010						
Copper			0.00210	mg/L	0.010						
Lead			-0.0115	mg/L	0.010						
Zinc			0.00136	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/04/15 23:18	
Arsenic			2.55	mg/L	0.0085	102	90	110			
Cadmium			2.52	mg/L	0.0010	101	90	110			
Copper			2.56	mg/L	0.010	103	90	110			
Lead			2.51	mg/L	0.010	100	90	110			
Zinc			2.53	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/04/15 23:21	
Arsenic			0.00293	mg/L	0.0085						
Cadmium			0.000950	mg/L	0.0010						
Copper			0.00116	mg/L	0.010						
Lead			-0.00155	mg/L	0.010						
Zinc			0.000500	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020255

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/09/15 22:29	
Arsenic			0.0515	mg/L	0.0050	103	90	110			
Lead			0.0502	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/09/15 22:38	
Arsenic			3.21E-05	mg/L	0.0050						
Lead			-3.60E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/09/15 23:43	
Arsenic			0.0506	mg/L	0.0050	101	90	110			
Lead			0.0500	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/09/15 23:52	
Arsenic			4.21E-05	mg/L	0.0050						
Lead			1.00E-07	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020255

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28234
Lab ID:	**MB-28234**	5	Method Blank				Run: ICP2-HE_150304B				03/04/15 21:27
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28234**	5	Laboratory Fortified Blank				Run: ICP2-HE_150304B				03/04/15 21:31
Arsenic			48.7	mg/kg	1.0	97	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			49.2	mg/kg	1.0	98	80	120			
Lead			48.4	mg/kg	1.0	97	80	120			
Zinc			49.1	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-28234**	5	Laboratory Control Sample				Run: ICP2-HE_150304B				03/04/15 21:35
Arsenic			288	mg/kg	1.8	84	72.3	106.4			
Cadmium			122	mg/kg	1.0	89	73	105.1			
Copper			258	mg/kg	1.1	92	77.5	109.6			
Lead			177	mg/kg	3.2	95	75.9	108.6			
Zinc			194	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H15020255-015APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150304B				03/04/15 22:48
Arsenic			243	mg/kg	1.9	88	75	125			
Cadmium			110	mg/kg	1.0	85	75	125			
Copper			270	mg/kg	1.1	89	75	125			
Lead			237	mg/kg	3.3	85	75	125			
Zinc			314	mg/kg	1.0	88	75	125			
Lab ID:	**H15020255-015AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150304B				03/04/15 22:52
Arsenic			59.7	mg/kg	1.8	86	75	125			
Cadmium			21.9	mg/kg	1.0	87	75	125			
Copper			91.4	mg/kg	1.1	99	75	125			
Lead			62.4	mg/kg	3.2	89	75	125			
Zinc			136	mg/kg	1.0	99	75	125			
Lab ID:	**H15020255-015AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150304B				03/04/15 22:55
Arsenic			60.9	mg/kg	1.8	89	75	125	1.9	20	
Cadmium			21.8	mg/kg	1.0	87	75	125	0.3	20	
Copper			86.6	mg/kg	1.1	90	75	125	5.4	20	
Lead			58.5	mg/kg	3.2	81	75	125	6.4	20	
Zinc			132	mg/kg	1.0	91	75	125	3.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020255

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							03/09/15 11:29	
Arsenic			0.0631	mg/L	0.0010	105	90	110			
Lead			0.0618	mg/L	0.0010	103	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							03/09/15 11:34	
Arsenic			6.20E-05	mg/L	0.0010						
Lead			0.000244	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							03/09/15 11:38	
Arsenic			0.0112	mg/L	0.0010	112	70	130			
Lead			0.000245	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 28234	
Lab ID:	**MB-28234**	2	Method Blank				Run: ICPMS204-B_150309A			03/09/15 22:43	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28234**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/09/15 22:47	
Arsenic			324	mg/kg	1.0	94	72.3	106.4			
Lead			192	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-28234**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/09/15 22:51	
Arsenic			50.4	mg/kg	1.0	101	80	120			
Lead			48.7	mg/kg	1.0	97	80	120			
Lab ID:	**H15020255-015APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/09/15 23:31	
Arsenic			2510	mg/kg	1.0	100	75	125			
Lead			2410	mg/kg	1.0	96	75	125			
Lab ID:	**H15020255-015AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/09/15 23:35	
Arsenic			61.3	mg/kg	1.0	97	75	125			
Lead			62.8	mg/kg	1.0	95	75	125			
Lab ID:	**H15020255-015AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/09/15 23:39	
Arsenic			62.2	mg/kg	1.0	99	75	125	1.5	20	
Lead			62.2	mg/kg	1.0	94	75	125	1.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020255

Login completed by: Tracy L. Lorash
Date Received: 2/17/2015
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 2/19/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	0.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

The COC has 3-001E2-0006 collected on 2/11/15 @ 1007 listed twice, however we only received one sample.
Sample ID on COC is 3-027E2-0612 -ID on bag is 3-027E-0612. Logged in with ID from COC.
Sample ID on COC is 3-027E2-1218D -ID on bag is 3-027E-1218D. Logged in with ID from COC. TI 2/18/15

CDM Smith

Chain of Custody Record 4

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020255

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-001E2-0006	1007	2/11/15	Soil	A	B		1
3-001E2-0006	1007	2/11/15	Soil	A	B		1
3-001E2-0612	1006	2/11/15	Soil	A	B		1
3-014E3-1824	849	2/11/15	Soil	A	B		1
3-014E3-2430	848	2/11/15	Soil	A	B		1
3-014E3-3036	847	2/11/15	Soil	A	B		1
3-027E2-0006	858	2/11/15	Soil	A	B		1
3-027E2-0612	857	2/11/15	Soil	A	B		1
3-027E2-1218	855	2/11/15	Soil	A	B		1
3-027E2-1218D	856	2/11/15	Soil	A	B		1
3-036E2-1218	913	2/11/15	Soil	A	B		1
3-036E2-1824	912	2/11/15	Soil	A	B		1
3-036E2-2430	911	2/11/15	Soil	A	B		1
3-045E2-0006	933	2/11/15	Soil	A	B		1
3-045E2-0612	932	2/11/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/17/15 1630

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

0.0
On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: Hand del
2/17/15 16:30

ANALYTICAL SUMMARY REPORT

March 04, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020251

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 60 samples for MT DEQ-Federal Superfund on 2/17/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020251-001	CCB42-011315	01/13/15 17:31	02/17/15	Aqueous	Metals by ICP/ICPMS, Total pH Metals Digestion by EPA 200.2
H15020251-002	CCB43-011415	01/14/15 17:21	02/17/15	Aqueous	Same As Above
H15020251-003	CCB44-011515	01/15/15 17:31	02/17/15	Aqueous	Same As Above
H15020251-004	CCB45-011615	01/16/15 13:51	02/17/15	Aqueous	Same As Above
H15020251-005	CCB46-012115	01/21/15 17:20	02/17/15	Aqueous	Same As Above
H15020251-006	CCB47-012215	01/22/15 17:10	02/17/15	Aqueous	Same As Above
H15020251-007	CCB48-012615	01/26/15 17:10	02/17/15	Aqueous	Same As Above
H15020251-008	CCB49-012715	01/27/15 17:05	02/17/15	Aqueous	Same As Above
H15020251-009	CCB50-012815	01/28/15 17:01	02/17/15	Aqueous	Same As Above
H15020251-010	CCB51-012915	01/29/15 17:01	02/17/15	Aqueous	Same As Above
H15020251-011	CCB52-020215	02/02/15 17:05	02/17/15	Aqueous	Same As Above
H15020251-012	CCB53-020315	02/03/15 17:00	02/17/15	Aqueous	Same As Above
H15020251-013	CCB54-020415	02/04/15 17:21	02/17/15	Aqueous	Same As Above
H15020251-014	CCB55-020515	02/05/15 17:10	02/17/15	Aqueous	Same As Above
H15020251-015	CCB56-020915	02/09/15 17:10	02/17/15	Aqueous	Same As Above
H15020251-016	CCB57-021015	02/10/15 17:10	02/17/15	Aqueous	Same As Above
H15020251-017	CCB58-021115	02/11/15 10:45	02/17/15	Aqueous	Same As Above
H15020251-018	FB102-011315	01/13/15 17:30	02/17/15	Aqueous	Same As Above
H15020251-019	FB103-011415	01/14/15 17:20	02/17/15	Aqueous	Same As Above
H15020251-020	FB104-011515	01/15/15 17:30	02/17/15	Aqueous	Same As Above
H15020251-021	FB105-011615	01/16/15 13:50	02/17/15	Aqueous	Same As Above
H15020251-022	FB106-012115	01/21/15 13:20	02/17/15	Aqueous	Same As Above
H15020251-023	FB107-012115	01/21/15 16:10	02/17/15	Aqueous	Same As Above
H15020251-024	FB108-012115	01/21/15 17:15	02/17/15	Aqueous	Same As Above
H15020251-025	FB109-012215	01/22/15 9:40	02/17/15	Aqueous	Same As Above
H15020251-026	FB110-012215	01/22/15 12:10	02/17/15	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

H15020251-027	FB111-012215	01/22/15 15:20	02/17/15	Aqueous	Same As Above
H15020251-028	FB112-012215	01/22/15 17:05	02/17/15	Aqueous	Same As Above
H15020251-029	FB113-012615	01/26/15 10:10	02/17/15	Aqueous	Same As Above
H15020251-030	FB114-012615	01/26/15 12:30	02/17/15	Aqueous	Same As Above
H15020251-031	FB115-012615	01/26/15 14:40	02/17/15	Aqueous	Same As Above
H15020251-032	FB116-012615	01/26/15 17:05	02/17/15	Aqueous	Same As Above
H15020251-033	FB117-012715	01/27/15 9:45	02/17/15	Aqueous	Same As Above
H15020251-034	FB118-012715	01/27/15 12:30	02/17/15	Aqueous	Same As Above
H15020251-035	FB119-012715	01/27/15 14:55	02/17/15	Aqueous	Same As Above
H15020251-036	FB120-012715	01/27/15 17:00	02/17/15	Aqueous	Same As Above
H15020251-037	FB121-012815	01/28/15 11:50	02/17/15	Aqueous	Same As Above
H15020251-038	FB122-012815	01/28/15 17:00	02/17/15	Aqueous	Same As Above
H15020251-039	FB123-012915	01/29/15 11:05	02/17/15	Aqueous	Same As Above
H15020251-040	FB124-012915	01/29/15 13:40	02/17/15	Aqueous	Same As Above
H15020251-041	FB125-012915	01/29/15 17:00	02/17/15	Aqueous	Same As Above
H15020251-042	FB126-020215	02/02/15 11:00	02/17/15	Aqueous	Same As Above
H15020251-043	FB127-020215	02/02/15 12:55	02/17/15	Aqueous	Same As Above
H15020251-044	FB128-020315	02/03/15 11:00	02/17/15	Aqueous	Same As Above
H15020251-045	FB129-020315	02/03/15 16:55	02/17/15	Aqueous	Same As Above
H15020251-046	FB130-020415	02/04/15 12:55	02/17/15	Aqueous	Same As Above
H15020251-047	FB131-020415	02/04/15 17:20	02/17/15	Aqueous	Same As Above
H15020251-048	FB132-020515	02/05/15 9:50	02/17/15	Aqueous	Same As Above
H15020251-049	FB133-020515	02/05/15 11:40	02/17/15	Aqueous	Same As Above
H15020251-050	FB134-020515	02/05/15 14:20	02/17/15	Aqueous	Same As Above
H15020251-051	FB135-020515	02/05/15 17:05	02/17/15	Aqueous	Same As Above
H15020251-052	FB136-020915	02/09/15 10:10	02/17/15	Aqueous	Same As Above
H15020251-053	FB137-020915	02/09/15 13:55	02/17/15	Aqueous	Same As Above
H15020251-054	FB138-020915	02/09/15 15:30	02/17/15	Aqueous	Same As Above
H15020251-055	FB139-020915	02/09/15 17:05	02/17/15	Aqueous	Same As Above
H15020251-056	FB140-021015	02/10/15 10:55	02/17/15	Aqueous	Same As Above
H15020251-057	FB141-021015	02/10/15 12:40	02/17/15	Aqueous	Same As Above
H15020251-058	FB142-021015	02/10/15 14:40	02/17/15	Aqueous	Same As Above
H15020251-059	FB143-021015	02/10/15 17:05	02/17/15	Aqueous	Same As Above
H15020251-060	FB144-021115	02/11/15 10:40	02/17/15	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-001
Client Sample ID: CCB42-011315

Report Date: 03/04/15
Collection Date: 01/13/15 17:31
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 11:32 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 03:53 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 03:53 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 03:53 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 03:53 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 03:53 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-002
Client Sample ID: CCB43-011415

Report Date: 03/04/15
Collection Date: 01/14/15 17:21
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 11:38 / SRW
METALS, TOTAL							
Arsenic	0.001	mg/L		0.001		E200.8	02/27/15 03:58 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 03:58 / dck
Copper	0.010	mg/L		0.005		E200.8	02/27/15 03:58 / dck
Lead	0.001	mg/L		0.001		E200.8	02/27/15 03:58 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 03:58 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-003
Client Sample ID: CCB44-011515

Report Date: 03/04/15
Collection Date: 01/15/15 17:31
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 11:40 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 04:02 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 04:02 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 04:02 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 04:02 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 04:02 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-004
Client Sample ID: CCB45-011615

Report Date: 03/04/15
Collection Date: 01/16/15 13:51
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 11:43 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 04:07 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 04:07 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 04:07 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 04:07 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 04:07 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-005
Client Sample ID: CCB46-012115

Report Date: 03/04/15
Collection Date: 01/21/15 17:20
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.10		A4500-H B	02/18/15 11:46 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 04:11 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 04:11 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 04:11 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 04:11 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 04:11 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-006
Client Sample ID: CCB47-012215

Report Date: 03/04/15
Collection Date: 01/22/15 17:10
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.10		A4500-H B	02/18/15 11:49 / SRW
METALS, TOTAL							
Arsenic	0.002	mg/L		0.001		E200.8	02/27/15 04:16 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 04:16 / dck
Copper	0.013	mg/L		0.005		E200.8	02/27/15 04:16 / dck
Lead	0.002	mg/L		0.001		E200.8	02/27/15 04:16 / dck
Zinc	0.01	mg/L		0.01		E200.8	02/27/15 04:16 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-007
Client Sample ID: CCB48-012615

Report Date: 03/04/15
Collection Date: 01/26/15 17:10
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.0	s.u.	H	0.10		A4500-H B	02/18/15 11:51 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 04:35 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 04:35 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 04:35 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 04:35 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 04:35 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-008
Client Sample ID: CCB49-012715

Report Date: 03/04/15
Collection Date: 01/27/15 17:05
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.0	s.u.	H	0.10		A4500-H B	02/18/15 11:54 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 04:53 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 04:53 / dck
Copper	0.009	mg/L		0.005		E200.8	02/27/15 04:53 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 04:53 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 04:53 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-009
Client Sample ID: CCB50-012815

Report Date: 03/04/15
Collection Date: 01/28/15 17:01
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.10		A4500-H B	02/18/15 11:57 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 04:57 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 04:57 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 04:57 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 04:57 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 04:57 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-010
Client Sample ID: CCB51-012915

Report Date: 03/04/15
Collection Date: 01/29/15 17:01
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.10		A4500-H B	02/18/15 12:00 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 05:02 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 05:02 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 05:02 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 05:02 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 05:02 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-011
Client Sample ID: CCB52-020215

Report Date: 03/04/15
Collection Date: 02/02/15 17:05
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.10		A4500-H B	02/18/15 12:03 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 05:06 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 05:06 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 05:06 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 05:06 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 05:06 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-012
Client Sample ID: CCB53-020315

Report Date: 03/04/15
Collection Date: 02/03/15 17:00
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.8	s.u.	H	0.10		A4500-H B	02/18/15 12:06 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 05:11 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 05:11 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 05:11 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 05:11 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 05:11 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-013
Client Sample ID: CCB54-020415

Report Date: 03/04/15
Collection Date: 02/04/15 17:21
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.7	s.u.	H	0.10		A4500-H B	02/18/15 12:08 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 05:16 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 05:16 / dck
Copper	0.005	mg/L		0.005		E200.8	02/27/15 05:16 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 05:16 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 05:16 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-014
Client Sample ID: CCB55-020515

Report Date: 03/04/15
Collection Date: 02/05/15 17:10
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 12:11 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 05:20 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 05:20 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 05:20 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 05:20 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 05:20 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-015
Client Sample ID: CCB56-020915

Report Date: 03/04/15
Collection Date: 02/09/15 17:10
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.8	s.u.	H	0.10		A4500-H B	02/18/15 12:14 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 05:39 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 05:39 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 05:39 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 05:39 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 05:39 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-016
Client Sample ID: CCB57-021015

Report Date: 03/04/15
Collection Date: 02/10/15 17:10
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.10		A4500-H B	02/18/15 12:17 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 05:43 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 05:43 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 05:43 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 05:43 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 05:43 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-017
Client Sample ID: CCB58-021115

Report Date: 03/04/15
Collection Date: 02/11/15 10:45
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.10		A4500-H B	02/18/15 12:20 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 06:06 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 06:06 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 06:06 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 06:06 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 06:06 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-018
Client Sample ID: FB102-011315

Report Date: 03/04/15
Collection Date: 01/13/15 17:30
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 12:22 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 06:24 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 06:24 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 06:24 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 06:24 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 06:24 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-019
Client Sample ID: FB103-011415

Report Date: 03/04/15
Collection Date: 01/14/15 17:20
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.10		A4500-H B	02/18/15 12:25 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 06:29 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 06:29 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 06:29 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 06:29 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 06:29 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-020
Client Sample ID: FB104-011515

Report Date: 03/04/15
Collection Date: 01/15/15 17:30
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 12:28 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 06:34 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 06:34 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 06:34 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 06:34 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 06:34 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-021
Client Sample ID: FB105-011615

Report Date: 03/04/15
Collection Date: 01/16/15 13:50
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 12:42 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 06:38 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 06:38 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 06:38 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 06:38 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 06:38 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-022
Client Sample ID: FB106-012115

Report Date: 03/04/15
Collection Date: 01/21/15 13:20
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 12:48 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 06:43 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 06:43 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 06:43 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 06:43 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 06:43 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-023
Client Sample ID: FB107-012115

Report Date: 03/04/15
Collection Date: 01/21/15 16:10
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.3	s.u.	H	0.10		A4500-H B	02/18/15 12:50 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 07:15 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 07:15 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 07:15 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 07:15 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 07:15 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-024
Client Sample ID: FB108-012115

Report Date: 03/04/15
Collection Date: 01/21/15 17:15
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 12:53 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 07:20 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 07:20 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 07:20 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 07:20 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 07:20 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-025
Client Sample ID: FB109-012215

Report Date: 03/04/15
Collection Date: 01/22/15 09:40
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 12:56 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 07:24 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 07:24 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 07:24 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 07:24 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 07:24 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-026
Client Sample ID: FB110-012215

Report Date: 03/04/15
Collection Date: 01/22/15 12:10
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 12:59 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 07:29 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 07:29 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 07:29 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 07:29 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 07:29 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-027
Client Sample ID: FB111-012215

Report Date: 03/04/15
Collection Date: 01/22/15 15:20
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:02 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 07:34 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 07:34 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 07:34 / dck
Lead	ND	mg/L		0.001		E200.8	03/03/15 20:14 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 07:34 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-028
Client Sample ID: FB112-012215

Report Date: 03/04/15
Collection Date: 01/22/15 17:05
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:05 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 07:52 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 07:52 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 07:52 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 07:52 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 07:52 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-029
Client Sample ID: FB113-012615

Report Date: 03/04/15
Collection Date: 01/26/15 10:10
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.3	s.u.	H	0.10		A4500-H B	02/18/15 13:08 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 07:57 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 07:57 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 07:57 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 07:57 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 07:57 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-030
Client Sample ID: FB114-012615

Report Date: 03/04/15
Collection Date: 01/26/15 12:30
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:10 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 08:01 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 08:01 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 08:01 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 08:01 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 08:01 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-031
Client Sample ID: FB115-012615

Report Date: 03/04/15
Collection Date: 01/26/15 14:40
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:13 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 08:34 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 08:34 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 08:34 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 08:34 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 08:34 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-032
Client Sample ID: FB116-012615

Report Date: 03/04/15
Collection Date: 01/26/15 17:05
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:16 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 08:38 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 08:38 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 08:38 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 08:38 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 08:38 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-033
Client Sample ID: FB117-012715

Report Date: 03/04/15
Collection Date: 01/27/15 09:45
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:19 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 08:43 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 08:43 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 08:43 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 08:43 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 08:43 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-034
Client Sample ID: FB118-012715

Report Date: 03/04/15
Collection Date: 01/27/15 12:30
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:22 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 08:48 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 08:48 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 08:48 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 08:48 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 08:48 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-035
Client Sample ID: FB119-012715

Report Date: 03/04/15
Collection Date: 01/27/15 14:55
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:24 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 08:52 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 08:52 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 08:52 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 08:52 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 08:52 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-036
Client Sample ID: FB120-012715

Report Date: 03/04/15
Collection Date: 01/27/15 17:00
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:27 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 08:57 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 08:57 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 08:57 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 08:57 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 08:57 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-037
Client Sample ID: FB121-012815

Report Date: 03/04/15
Collection Date: 01/28/15 11:50
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:30 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 09:20 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 09:20 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 09:20 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 09:20 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 09:20 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-038
Client Sample ID: FB122-012815

Report Date: 03/04/15
Collection Date: 01/28/15 17:00
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:33 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 09:53 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 09:53 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 09:53 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 09:53 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 09:53 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-039
Client Sample ID: FB123-012915

Report Date: 03/04/15
Collection Date: 01/29/15 11:05
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:36 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 09:57 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 09:57 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 09:57 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 09:57 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 09:57 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-040
Client Sample ID: FB124-012915

Report Date: 03/04/15
Collection Date: 01/29/15 13:40
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:39 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 10:02 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 10:02 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 10:02 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 10:02 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 10:02 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-041
Client Sample ID: FB125-012915

Report Date: 03/04/15
Collection Date: 01/29/15 17:00
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:53 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 10:07 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 10:07 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 10:07 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 10:07 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 10:07 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-042
Client Sample ID: FB126-020215

Report Date: 03/04/15
Collection Date: 02/02/15 11:00
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 13:59 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 10:11 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 10:11 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 10:11 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 10:11 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 10:11 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-043
Client Sample ID: FB127-020215

Report Date: 03/04/15
Collection Date: 02/02/15 12:55
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:01 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 10:16 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 10:16 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 10:16 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 10:16 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 10:16 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-044
Client Sample ID: FB128-020315

Report Date: 03/04/15
Collection Date: 02/03/15 11:00
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.3	s.u.	H	0.10		A4500-H B	02/18/15 14:04 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 10:21 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 10:21 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 10:21 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 10:21 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 10:21 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-045
Client Sample ID: FB129-020315

Report Date: 03/04/15
Collection Date: 02/03/15 16:55
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:07 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 10:25 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 10:25 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 10:25 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 10:25 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 10:25 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-046
Client Sample ID: FB130-020415

Report Date: 03/04/15
Collection Date: 02/04/15 12:55
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:10 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	03/02/15 13:23 / dck
Cadmium	ND	mg/L		0.001		E200.8	03/02/15 13:23 / dck
Copper	ND	mg/L		0.005		E200.8	03/02/15 13:23 / dck
Lead	ND	mg/L		0.001		E200.8	03/02/15 13:23 / dck
Zinc	ND	mg/L		0.01		E200.8	03/02/15 13:23 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-047
Client Sample ID: FB131-020415

Report Date: 03/04/15
Collection Date: 02/04/15 17:20
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.10		A4500-H B	02/18/15 14:13 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 13:38 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 13:38 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 13:38 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 13:38 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 13:38 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-048
Client Sample ID: FB132-020515

Report Date: 03/04/15
Collection Date: 02/05/15 09:50
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:16 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 13:57 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 13:57 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 13:57 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 13:57 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 13:57 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-049
Client Sample ID: FB133-020515

Report Date: 03/04/15
Collection Date: 02/05/15 11:40
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:19 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 14:01 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 14:01 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 14:01 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 14:01 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 14:01 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-050
Client Sample ID: FB134-020515

Report Date: 03/04/15
Collection Date: 02/05/15 14:20
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:21 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 14:06 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 14:06 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 14:06 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 14:06 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 14:06 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-051
Client Sample ID: FB135-020515

Report Date: 03/04/15
Collection Date: 02/05/15 17:05
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.3	s.u.	H	0.10		A4500-H B	02/18/15 14:24 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 14:11 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 14:11 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 14:11 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 14:11 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 14:11 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-052
Client Sample ID: FB136-020915

Report Date: 03/04/15
Collection Date: 02/09/15 10:10
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:27 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 14:15 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 14:15 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 14:15 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 14:15 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 14:15 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-053
Client Sample ID: FB137-020915

Report Date: 03/04/15
Collection Date: 02/09/15 13:55
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:29 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 14:20 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 14:20 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 14:20 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 14:20 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 14:20 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-054
Client Sample ID: FB138-020915

Report Date: 03/04/15
Collection Date: 02/09/15 15:30
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:32 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 14:25 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 14:25 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 14:25 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 14:25 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 14:25 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-055
Client Sample ID: FB139-020915

Report Date: 03/04/15
Collection Date: 02/09/15 17:05
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:35 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 14:43 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 14:43 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 14:43 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 14:43 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 14:43 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-056
Client Sample ID: FB140-021015

Report Date: 03/04/15
Collection Date: 02/10/15 10:55
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.10		A4500-H B	02/18/15 14:37 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 14:48 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 14:48 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 14:48 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 14:48 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 14:48 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-057
Client Sample ID: FB141-021015

Report Date: 03/04/15
Collection Date: 02/10/15 12:40
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.3	s.u.	H	0.10		A4500-H B	02/18/15 14:40 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 15:11 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 15:11 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 15:11 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 15:11 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 15:11 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-058
Client Sample ID: FB142-021015

Report Date: 03/04/15
Collection Date: 02/10/15 14:40
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:43 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 15:29 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 15:29 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 15:29 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 15:29 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 15:29 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-059
Client Sample ID: FB143-021015

Report Date: 03/04/15
Collection Date: 02/10/15 17:05
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:45 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 15:34 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 15:34 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 15:34 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 15:34 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 15:34 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15020251-060
Client Sample ID: FB144-021115

Report Date: 03/04/15
Collection Date: 02/11/15 10:40
DateReceived: 02/17/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.10		A4500-H B	02/18/15 14:48 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/27/15 15:38 / dck
Cadmium	ND	mg/L		0.001		E200.8	02/27/15 15:38 / dck
Copper	ND	mg/L		0.005		E200.8	02/27/15 15:38 / dck
Lead	ND	mg/L		0.001		E200.8	02/27/15 15:38 / dck
Zinc	ND	mg/L		0.01		E200.8	02/27/15 15:38 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B									Analytical Run: PHSC_101-H_150218A	
Lab ID: pH 7		Initial Calibration Verification Standard							02/18/15 09:02	
pH		7.0	s.u.	0.10	100	98	102			
Lab ID: CCV - pH 7		Continuing Calibration Verification Standard							02/18/15 12:33	
pH		7.0	s.u.	0.10	100	98	102			
Lab ID: CCV - pH 7		Continuing Calibration Verification Standard							02/18/15 13:44	
pH		7.0	s.u.	0.10	100	98	102			
Method: A4500-H B										Batch: R104196
Lab ID: H15020251-001BDUP		Sample Duplicate				Run: PHSC_101-H_150218A			02/18/15 11:35	
pH		5.4	s.u.	0.10				0.7	3	
Lab ID: H15020251-020BDUP		Sample Duplicate				Run: PHSC_101-H_150218A			02/18/15 12:31	
pH		5.4	s.u.	0.10				0.6	3	
Lab ID: H15020251-021BDUP		Sample Duplicate				Run: PHSC_101-H_150218A			02/18/15 12:45	
pH		5.4	s.u.	0.10				0.2	3	
Lab ID: H15020251-040BDUP		Sample Duplicate				Run: PHSC_101-H_150218A			02/18/15 13:41	
pH		5.4	s.u.	0.10				0.6	3	
Lab ID: H15020251-041BDUP		Sample Duplicate				Run: PHSC_101-H_150218A			02/18/15 13:56	
pH		5.4	s.u.	0.10				0.7	3	
Lab ID: H15020251-060BDUP		Sample Duplicate				Run: PHSC_101-H_150218A			02/18/15 14:51	
pH		5.4	s.u.	0.10				0.2	3	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**										Batch: 28095
Lab ID:	**LCS-28095**	5	Laboratory Control Sample				Run: ICPMS204-B_150224A			02/24/15 18:56	
Arsenic			0.494	mg/L	0.0010	99	85	115			
Cadmium			0.259	mg/L	0.0010	104	85	115			
Copper			0.491	mg/L	0.0050	98	85	115			
Lead			0.504	mg/L	0.0010	101	85	115			
Zinc			0.501	mg/L	0.010	100	85	115			
Lab ID:	**H15020230-001AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_150224A			02/24/15 19:09	
Arsenic			0.491	mg/L	0.0010	98	70	130			
Cadmium			0.258	mg/L	0.0010	101	70	130			
Copper			0.698	mg/L	0.0050	97	70	130			
Lead			0.497	mg/L	0.0010	96	70	130			
Zinc			0.684	mg/L	0.010	100	70	130			
Lab ID:	**H15020230-001AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150224A			02/24/15 19:14	
Arsenic			0.489	mg/L	0.0010	97	70	130	0.3	20	
Cadmium			0.262	mg/L	0.0010	103	70	130	1.7	20	
Copper			0.690	mg/L	0.0050	95	70	130	1.2	20	
Lead			0.498	mg/L	0.0010	96	70	130	0.2	20	
Zinc			0.672	mg/L	0.010	98	70	130	1.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150227A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							02/26/15 17:45	
Arsenic			0.0582	mg/L	0.0050	97	90	110			
Cadmium			0.0305	mg/L	0.0010	102	90	110			
Copper			0.0591	mg/L	0.010	98	90	110			
Lead			0.0573	mg/L	0.010	96	90	110			
Zinc			0.0591	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/26/15 17:49	
Arsenic			7.50E-05	mg/L	0.0050						
Cadmium			0.000784	mg/L	0.0010						
Copper			0.00103	mg/L	0.010						
Lead			0.000226	mg/L	0.010						
Zinc			0.00110	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/26/15 17:54	
Arsenic			0.0103	mg/L	0.0050	103	70	130			
Cadmium			0.0104	mg/L	0.0010	104	70	130			
Copper			0.0198	mg/L	0.010	99	70	130			
Lead			0.000234	mg/L	0.010		0	0			
Zinc			0.0108	mg/L	0.010	107	70	130			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/27/15 03:16	
Arsenic			0.0464	mg/L	0.0050	93	90	110			
Cadmium			0.0458	mg/L	0.0010	92	90	110			
Copper			0.0468	mg/L	0.010	94	90	110			
Lead			0.0467	mg/L	0.010	93	90	110			
Zinc			0.0457	mg/L	0.010	91	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/27/15 03:25	
Arsenic			-7.20E-06	mg/L	0.0050						
Cadmium			ND	mg/L	0.0010						
Copper			-1.89E-05	mg/L	0.010						
Lead			-3.00E-07	mg/L	0.010						
Zinc			2.76E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/27/15 04:21	
Arsenic			0.0471	mg/L	0.0050	94	90	110			
Cadmium			0.0473	mg/L	0.0010	95	90	110			
Copper			0.0479	mg/L	0.010	96	90	110			
Lead			0.0466	mg/L	0.010	93	90	110			
Zinc			0.0474	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/27/15 04:30	
Arsenic			3.00E-06	mg/L	0.0050						
Cadmium			3.00E-07	mg/L	0.0010						
Copper			-1.27E-05	mg/L	0.010						
Lead			-1.10E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150227A		
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 04:30
Zinc			6.75E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 05:25
Arsenic			0.0482	mg/L	0.0050	96	90	110			
Cadmium			0.0478	mg/L	0.0010	96	90	110			
Copper			0.0489	mg/L	0.010	98	90	110			
Lead			0.0474	mg/L	0.010	95	90	110			
Zinc			0.0483	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 05:34
Arsenic			-5.00E-06	mg/L	0.0050						
Cadmium			1.70E-06	mg/L	0.0010						
Copper			-1.39E-05	mg/L	0.010						
Lead			-5.00E-07	mg/L	0.010						
Zinc			3.72E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 06:47
Arsenic			0.0475	mg/L	0.0050	95	90	110			
Cadmium			0.0475	mg/L	0.0010	95	90	110			
Copper			0.0474	mg/L	0.010	95	90	110			
Lead			0.0474	mg/L	0.010	95	90	110			
Zinc			0.0469	mg/L	0.010	94	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 06:57
Arsenic			1.17E-05	mg/L	0.0050						
Cadmium			7.00E-07	mg/L	0.0010						
Copper			-1.84E-05	mg/L	0.010						
Lead			1.10E-06	mg/L	0.010						
Zinc			8.90E-06	mg/L	0.010						
Lab ID:	**ICSA**	5	Interference Check Sample A								02/27/15 08:06
Arsenic			8.70E-05	mg/L	0.0050						
Cadmium			0.000596	mg/L	0.0010						
Copper			0.000962	mg/L	0.010						
Lead			0.000205	mg/L	0.010						
Zinc			0.00113	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/27/15 08:11
Arsenic			0.0101	mg/L	0.0050	101	70	130			
Cadmium			0.00990	mg/L	0.0010	99	70	130			
Copper			0.0195	mg/L	0.010	98	70	130			
Lead			0.000215	mg/L	0.010		0	0			
Zinc			0.0107	mg/L	0.010	107	70	130			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 08:20
Arsenic			0.0478	mg/L	0.0050	96	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150227A		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 08:20
Cadmium			0.0460	mg/L	0.0010	92	90	110			
Copper			0.0476	mg/L	0.010	95	90	110			
Lead			0.0468	mg/L	0.010	94	90	110			
Zinc			0.0474	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 08:29
Arsenic			-1.07E-05	mg/L	0.0050						
Cadmium			3.00E-07	mg/L	0.0010						
Copper			-1.63E-05	mg/L	0.010						
Lead			-8.00E-07	mg/L	0.010						
Zinc			3.37E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 09:39
Arsenic			0.0482	mg/L	0.0050	96	90	110			
Cadmium			0.0465	mg/L	0.0010	93	90	110			
Copper			0.0486	mg/L	0.010	97	90	110			
Lead			0.0465	mg/L	0.010	93	90	110			
Zinc			0.0485	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 09:48
Arsenic			1.28E-05	mg/L	0.0050						
Cadmium			3.70E-06	mg/L	0.0010						
Copper			-1.65E-05	mg/L	0.010						
Lead			6.70E-06	mg/L	0.010						
Zinc			-3.60E-06	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 10:46
Arsenic			0.0477	mg/L	0.0050	95	90	110			
Cadmium			0.0465	mg/L	0.0010	93	90	110			
Copper			0.0484	mg/L	0.010	97	90	110			
Lead			0.0470	mg/L	0.010	94	90	110			
Zinc			0.0476	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 10:55
Arsenic			1.16E-05	mg/L	0.0050						
Cadmium			1.20E-06	mg/L	0.0010						
Copper			-1.92E-05	mg/L	0.010						
Lead			-1.30E-06	mg/L	0.010						
Zinc			6.95E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 12:13
Arsenic			0.0488	mg/L	0.0050	98	90	110			
Cadmium			0.0465	mg/L	0.0010	93	90	110			
Copper			0.0487	mg/L	0.010	97	90	110			
Lead			0.0460	mg/L	0.010	92	90	110			
Zinc			0.0490	mg/L	0.010	98	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**									Analytical Run: ICPMS204-B_150227A	
Lab ID: **CCB**	5	Continuing Calibration Blank							02/27/15 12:22	
Arsenic		1.02E-05	mg/L	0.0050						
Cadmium		1.20E-06	mg/L	0.0010						
Copper		-2.02E-05	mg/L	0.010						
Lead		-1.50E-06	mg/L	0.010						
Zinc		-1.70E-06	mg/L	0.010						
Lab ID: **CCV**	5	Continuing Calibration Verification Standard							02/27/15 13:25	
Arsenic		0.0483	mg/L	0.0050	97	90	110			
Cadmium		0.0464	mg/L	0.0010	93	90	110			
Copper		0.0474	mg/L	0.010	95	90	110			
Lead		0.0468	mg/L	0.010	94	90	110			
Zinc		0.0473	mg/L	0.010	95	90	110			
Lab ID: **CCB**	5	Continuing Calibration Blank							02/27/15 13:34	
Arsenic		-1.10E-06	mg/L	0.0050						
Cadmium		1.10E-06	mg/L	0.0010						
Copper		-2.19E-05	mg/L	0.010						
Lead		-1.50E-06	mg/L	0.010						
Zinc		1.13E-05	mg/L	0.010						
Lab ID: **CCV**	5	Continuing Calibration Verification Standard							02/27/15 14:29	
Arsenic		0.0477	mg/L	0.0050	95	90	110			
Cadmium		0.0465	mg/L	0.0010	93	90	110			
Copper		0.0475	mg/L	0.010	95	90	110			
Lead		0.0468	mg/L	0.010	94	90	110			
Zinc		0.0482	mg/L	0.010	96	90	110			
Lab ID: **CCB**	5	Continuing Calibration Blank							02/27/15 14:39	
Arsenic		1.63E-05	mg/L	0.0050						
Cadmium		6.00E-06	mg/L	0.0010						
Copper		-1.84E-05	mg/L	0.010						
Lead		9.00E-06	mg/L	0.010						
Zinc		3.11E-05	mg/L	0.010						
Lab ID: **CCV**	5	Continuing Calibration Verification Standard							02/27/15 15:43	
Arsenic		0.0486	mg/L	0.0050	97	90	110			
Cadmium		0.0462	mg/L	0.0010	92	90	110			
Copper		0.0482	mg/L	0.010	97	90	110			
Lead		0.0461	mg/L	0.010	92	90	110			
Zinc		0.0482	mg/L	0.010	96	90	110			
Lab ID: **CCB**	5	Continuing Calibration Blank							02/27/15 15:52	
Arsenic		1.10E-06	mg/L	0.0050						
Cadmium		2.60E-06	mg/L	0.0010						
Copper		-2.06E-05	mg/L	0.010						
Lead		2.40E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150227A		
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/27/15 15:52	
Zinc			5.40E-06	mg/L	0.010						
Lab ID:	**ICSA**	5	Interference Check Sample A							02/27/15 16:43	
Arsenic			4.70E-05	mg/L	0.0050						
Cadmium			0.000622	mg/L	0.0010						
Copper			0.000940	mg/L	0.010						
Lead			0.000208	mg/L	0.010						
Zinc			0.00110	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/27/15 16:48	
Arsenic			0.0105	mg/L	0.0050	105	70	130			
Cadmium			0.00973	mg/L	0.0010	97	70	130			
Copper			0.0196	mg/L	0.010	98	70	130			
Lead			0.000212	mg/L	0.010		0	0			
Zinc			0.0106	mg/L	0.010	106	70	130			
Method:	**E200.8**									Batch: 28095	
Lab ID:	**MB-28095**	5	Method Blank				Run: ICPMS204-B_150227A			02/27/15 03:30	
Arsenic			0.0002	mg/L	6E-05						
Cadmium			ND	mg/L	3E-05						
Copper			ND	mg/L	0.0003						
Lead			3E-05	mg/L	3E-05						
Zinc			0.002	mg/L	0.001						
Lab ID:	**H15020251-007AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_150227A			02/27/15 04:39	
Arsenic			0.470	mg/L	0.0010	94	70	130			
Cadmium			0.239	mg/L	0.0010	96	70	130			
Copper			0.476	mg/L	0.0050	95	70	130			
Lead			0.487	mg/L	0.0010	97	70	130			
Zinc			0.467	mg/L	0.010	93	70	130			
Lab ID:	**H15020251-007AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150227A			02/27/15 04:44	
Arsenic			0.465	mg/L	0.0010	93	70	130	1.2	20	
Cadmium			0.241	mg/L	0.0010	96	70	130	0.5	20	
Copper			0.470	mg/L	0.0050	94	70	130	1.4	20	
Lead			0.485	mg/L	0.0010	97	70	130	0.5	20	
Zinc			0.459	mg/L	0.010	91	70	130	1.7	20	
Method:	**E200.8**									Batch: 28108	
Lab ID:	**MB-28108**	5	Method Blank				Run: ICPMS204-B_150227A			02/27/15 05:53	
Arsenic			0.0001	mg/L	6E-05						
Cadmium			3E-05	mg/L	3E-05						
Copper			ND	mg/L	0.0003						
Lead			ND	mg/L	3E-05						
Zinc			0.001	mg/L	0.001						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**										Batch: 28108
Lab ID:	**LCS-28108**	5	Laboratory Control Sample				Run: ICPMS204-B_150227A				02/27/15 05:57
Arsenic			0.471	mg/L	0.0010	94	85	115			
Cadmium			0.243	mg/L	0.0010	97	85	115			
Copper			0.467	mg/L	0.0050	93	85	115			
Lead			0.488	mg/L	0.0010	98	85	115			
Zinc			0.464	mg/L	0.010	92	85	115			
Lab ID:	**H15020251-017AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_150227A				02/27/15 06:11
Arsenic			0.467	mg/L	0.0010	93	70	130			
Cadmium			0.237	mg/L	0.0010	95	70	130			
Copper			0.468	mg/L	0.0050	93	70	130			
Lead			0.485	mg/L	0.0010	97	70	130			
Zinc			0.465	mg/L	0.010	93	70	130			
Lab ID:	**H15020251-017AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150227A				02/27/15 06:15
Arsenic			0.472	mg/L	0.0010	94	70	130	1.0	20	
Cadmium			0.239	mg/L	0.0010	96	70	130	0.9	20	
Copper			0.471	mg/L	0.0050	94	70	130	0.8	20	
Lead			0.482	mg/L	0.0010	96	70	130	0.8	20	
Zinc			0.467	mg/L	0.010	93	70	130	0.3	20	
Lab ID:	**H15020251-027AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_150227A				02/27/15 07:38
Arsenic			0.469	mg/L	0.0010	94	70	130			
Cadmium			0.238	mg/L	0.0010	95	70	130			
Copper			0.469	mg/L	0.0050	94	70	130			
Lead			0.487	mg/L	0.0010	97	70	130			
Zinc			0.459	mg/L	0.010	91	70	130			
Lab ID:	**H15020251-027AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150227A				02/27/15 07:43
Arsenic			0.465	mg/L	0.0010	93	70	130	0.8	20	
Cadmium			0.230	mg/L	0.0010	92	70	130	3.4	20	
Copper			0.469	mg/L	0.0050	94	70	130	0.1	20	
Lead			0.478	mg/L	0.0010	95	70	130	1.9	20	
Zinc			0.459	mg/L	0.010	91	70	130	0.0	20	
Method:	**E200.8**										Batch: 28109
Lab ID:	**MB-28109**	5	Method Blank				Run: ICPMS204-B_150227A				02/27/15 09:06
Arsenic			8E-05	mg/L	6E-05						
Cadmium			ND	mg/L	3E-05						
Copper			ND	mg/L	0.0003						
Lead			5E-05	mg/L	3E-05						
Zinc			0.002	mg/L	0.001						
Lab ID:	**LCS-28109**	5	Laboratory Control Sample				Run: ICPMS204-B_150227A				02/27/15 09:11
Arsenic			0.478	mg/L	0.0010	96	85	115			
Cadmium			0.239	mg/L	0.0010	96	85	115			
Copper			0.474	mg/L	0.0050	95	85	115			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**										Batch: 28109
Lab ID:	**LCS-28109**	5	Laboratory Control Sample				Run: ICPMS204-B_150227A				02/27/15 09:11
Lead			0.487	mg/L	0.0010	97	85	115			
Zinc			0.473	mg/L	0.010	94	85	115			
Lab ID:	**H15020251-037AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_150227A				02/27/15 09:25
Arsenic			0.458	mg/L	0.0010	92	70	130			
Cadmium			0.235	mg/L	0.0010	94	70	130			
Copper			0.458	mg/L	0.0050	92	70	130			
Lead			0.483	mg/L	0.0010	97	70	130			
Zinc			0.452	mg/L	0.010	90	70	130			
Lab ID:	**H15020251-037AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150227A				02/27/15 09:29
Arsenic			0.463	mg/L	0.0010	93	70	130	1.2	20	
Cadmium			0.231	mg/L	0.0010	92	70	130	1.9	20	
Copper			0.466	mg/L	0.0050	93	70	130	1.8	20	
Lead			0.478	mg/L	0.0010	96	70	130	1.0	20	
Zinc			0.458	mg/L	0.010	91	70	130	1.3	20	
Lab ID:	**H15020251-047AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_150227A				02/27/15 13:43
Arsenic			0.474	mg/L	0.0010	95	70	130			
Cadmium			0.233	mg/L	0.0010	93	70	130			
Copper			0.470	mg/L	0.0050	94	70	130			
Lead			0.479	mg/L	0.0010	96	70	130			
Zinc			0.461	mg/L	0.010	92	70	130			
Lab ID:	**H15020251-047AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150227A				02/27/15 13:47
Arsenic			0.478	mg/L	0.0010	95	70	130	0.8	20	
Cadmium			0.236	mg/L	0.0010	94	70	130	1.4	20	
Copper			0.472	mg/L	0.0050	94	70	130	0.4	20	
Lead			0.495	mg/L	0.0010	99	70	130	3.2	20	
Zinc			0.465	mg/L	0.010	93	70	130	0.9	20	
Method:	**E200.8**										Batch: 28110
Lab ID:	**MB-28110**	5	Method Blank				Run: ICPMS204-B_150227A				02/27/15 14:57
Arsenic			0.00010	mg/L	6E-05						
Cadmium			6E-05	mg/L	3E-05						
Copper			ND	mg/L	0.0003						
Lead			ND	mg/L	3E-05						
Zinc			0.002	mg/L	0.001						
Lab ID:	**LCS-28110**	5	Laboratory Control Sample				Run: ICPMS204-B_150227A				02/27/15 15:02
Arsenic			0.476	mg/L	0.0010	95	85	115			
Cadmium			0.239	mg/L	0.0010	96	85	115			
Copper			0.470	mg/L	0.0050	94	85	115			
Lead			0.490	mg/L	0.0010	98	85	115			
Zinc			0.467	mg/L	0.010	93	85	115			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: 28110
Lab ID: H15020251-057AMS3	5	Sample Matrix Spike				Run: ICPMS204-B_150227A			02/27/15 15:16	
Arsenic		0.484	mg/L	0.0010	97	70	130			
Cadmium		0.245	mg/L	0.0010	98	70	130			
Copper		0.479	mg/L	0.0050	96	70	130			
Lead		0.507	mg/L	0.0010	101	70	130			
Zinc		0.476	mg/L	0.010	95	70	130			
Lab ID: H15020251-057AMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150227A			02/27/15 15:20	
Arsenic		0.468	mg/L	0.0010	94	70	130	3.5	20	
Cadmium		0.234	mg/L	0.0010	93	70	130	4.8	20	
Copper		0.464	mg/L	0.0050	93	70	130	3.1	20	
Lead		0.482	mg/L	0.0010	96	70	130	4.9	20	
Zinc		0.460	mg/L	0.010	92	70	130	3.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150302A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard								03/02/15 12:32
Arsenic			0.0564	mg/L	0.0050	94	90	110			
Cadmium			0.0310	mg/L	0.0010	103	90	110			
Copper			0.0576	mg/L	0.010	96	90	110			
Lead			0.0585	mg/L	0.010	97	90	110			
Zinc			0.0586	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/02/15 12:37
Arsenic			6.20E-05	mg/L	0.0050						
Cadmium			0.000747	mg/L	0.0010						
Copper			0.000860	mg/L	0.010						
Lead			0.000227	mg/L	0.010						
Zinc			0.00104	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/02/15 12:42
Arsenic			0.0105	mg/L	0.0050	105	70	130			
Cadmium			0.0105	mg/L	0.0010	105	70	130			
Copper			0.0204	mg/L	0.010	102	70	130			
Lead			0.000234	mg/L	0.010		0	0			
Zinc			0.0105	mg/L	0.010	105	70	130			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/02/15 12:51
Arsenic			0.0476	mg/L	0.0050	95	90	110			
Cadmium			0.0492	mg/L	0.0010	98	90	110			
Copper			0.0477	mg/L	0.010	95	90	110			
Lead			0.0485	mg/L	0.010	97	90	110			
Zinc			0.0476	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/02/15 13:00
Arsenic			-4.30E-06	mg/L	0.0050						
Cadmium			-1.90E-06	mg/L	0.0010						
Copper			-7.36E-05	mg/L	0.010						
Lead			-3.60E-06	mg/L	0.010						
Zinc			-7.67E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/02/15 14:15
Arsenic			0.0490	mg/L	0.0050	98	90	110			
Cadmium			0.0491	mg/L	0.0010	98	90	110			
Copper			0.0493	mg/L	0.010	99	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Zinc			0.0488	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/02/15 14:24
Arsenic			-9.00E-06	mg/L	0.0050						
Cadmium			-3.30E-06	mg/L	0.0010						
Copper			-7.63E-05	mg/L	0.010						
Lead			-2.40E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/04/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020251

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150302A		
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/02/15 14:24	
Zinc			-6.91E-05	mg/L	0.010						
Method:	**E200.8**								Analytical Run: ICPMS204-B_150303A		
Lab ID:	**ICV STD**		Initial Calibration Verification Standard							03/03/15 18:56	
Lead			0.0583	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							03/03/15 19:01	
Lead			0.000231	mg/L	0.010						
Lab ID:	**ICSAB**		Interference Check Sample AB							03/03/15 19:05	
Lead			0.000230	mg/L	0.010		0	0			
Lab ID:	**CCV**		Continuing Calibration Verification Standard							03/03/15 19:15	
Lead			0.0496	mg/L	0.010	99	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							03/03/15 19:24	
Lead			-1.31E-05	mg/L	0.010						
Lab ID:	**CCV**		Continuing Calibration Verification Standard							03/03/15 20:19	
Lead			0.0487	mg/L	0.010	97	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							03/03/15 20:28	
Lead			-1.41E-05	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020251

Login completed by: Tracy L. Lorash
Date Received: 2/17/2015
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 2/19/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection time on COC for CCB42-011315 is 1731 - bottles have 1730. Logged in with time from COC.
Collection time on COC for CCB43-011415 is 1721 - bottles have 1720. Logged in with time from COC.
Collection time on COC for CCB44-011515 is 1731 - bottles have 1730. Logged in with time from COC.
Collection time on COC for CCB45-011615 is 1351 - bottles have 1350. Logged in with time from COC.
Collection time on COC for FB103-011415 is 1720 - metals bottle has 1725. Logged in with time from COC.
Sample ID on COC is FB104-011515 -ID on raw bottle is FB104-11515. Logged in with ID from COC.
Sample ID on COC is FB126-020215 -ID on raw bottle is FB-126 020215. Logged in with ID from COC.
Sample ID on COC is FB127-020215 -ID on metals bottle is FB-127-020215. Logged in with ID from COC.
Sample ID on COC is FB130-020415 -ID on bottles is FB-130-020415. Logged in with ID from COC.
CCB54-020415 raw bottle lid had come off in the sample bag and some sample was spilled.
FB102-011315 and FB128-020315 raw bottles and both bottles for FB103-011415 were received partially frozen.
Cooler 1 was received at 0.9°C, Cooler 2 at 0.4°C. Samples were received on wet ice. Tl 2/18/15

CDM Smith

Chain of Custody Record

A

Company Name:

MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020251

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
CCB42-011315	1731	1/13/15	Water	A	B	Cl	A = HNO3, B = Ice
CCB43-011415	1721	1/14/15	Water	A	B		A = HNO3, B = Ice
CCB44-011515	1731	1/15/15	Water	A	B		A = HNO3, B = Ice
CCB45-011615	1351	1/16/15	Water	A	B		A = HNO3, B = Ice
CCB46-012115	1720	1/21/15	Water	A	B		A = HNO3, B = Ice
CCB47-012215	1710	1/22/15	Water	A	B		A = HNO3, B = Ice
CCB48-012615	1710	1/26/15	Water	A	B		A = HNO3, B = Ice
CCB49-012715	1705	1/27/15	Water	A	B		A = HNO3, B = Ice
CCB50-012815	1701	1/28/15	Water	A	B		A = HNO3, B = Ice
CCB51-012915	1701	1/29/15	Water	A	B		A = HNO3, B = Ice
CCB52-020215	1705	2/2/15	Water	A	B		A = HNO3, B = Ice
CCB53-020315	1700	2/3/15	Water	A	B		A = HNO3, B = Ice
CCB54-020415	1721	2/4/15	Water	A	B		A = HNO3, B = Ice
CCB55-020515	1710	2/5/15	Water	A	B		A = HNO3, B = Ice
CCB56-020915	1710	2/9/15	Water	A	B		A = HNO3, B = Ice
CCB57-021015	1710	2/10/15	Water	A	B		A = HNO3, B = Ice
CCB58-021115	1045	2/11/15	Water	A	B		A = HNO3, B = Ice
FB102-011315	1730	1/13/15	Water	A	B		A = HNO3, B = Ice
FB103-011415	1720	1/14/15	Water	A	B		A = HNO3, B = Ice
FB104-011515	1730	1/15/15	Water	A	B		A = HNO3, B = Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/17/15 1630

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

Cl = 0.9
Cl2 = 0.4
On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: Hand del 2/17/15 16:30

COC 1_13_15 thru 2_11_15CCB-FB.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020251

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
FB105-011615	1350	1/16/15	Water	A	B	C1	A = HNO3, B = Ice
FB106-012115	1320	1/21/15	Water	A	B		A = HNO3, B = Ice
FB107-012115	1610	1/21/15	Water	A	B		A = HNO3, B = Ice
FB108-012115	1715	1/21/15	Water	A	B		A = HNO3, B = Ice
FB109-012215	940	1/22/15	Water	A	B		A = HNO3, B = Ice
FB110-012215	1210	1/22/15	Water	A	B		A = HNO3, B = Ice
FB111-012215	1520	1/22/15	Water	A	B		A = HNO3, B = Ice
FB112-012215	1705	1/22/15	Water	A	B	C2 mrv end	A = HNO3, B = Ice
FB113-012615	1010	1/26/15	Water	A	B		A = HNO3, B = Ice
FB114-012615	1230	1/26/15	Water	A	B		A = HNO3, B = Ice
FB115-012615	1440	1/26/15	Water	A	B		A = HNO3, B = Ice
FB116-012615	1705	1/26/15	Water	A	B		A = HNO3, B = Ice
FB117-012715	945	1/27/15	Water	A	B		A = HNO3, B = Ice
FB118-012715	1230	1/27/15	Water	A	B		A = HNO3, B = Ice
FB119-012715	1455	1/27/15	Water	A	B		A = HNO3, B = Ice
FB120-012715	1700	1/27/15	Water	A	B		A = HNO3, B = Ice
FB121-012815	1150	1/28/15	Water	A	B		A = HNO3, B = Ice
FB122-012815	1700	1/28/15	Water	A	B		A = HNO3, B = Ice
FB123-012915	1105	1/29/15	Water	A	B		A = HNO3, B = Ice
FB124-012915	1340	1/29/15	Water	A	B		A = HNO3, B = Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/17/15 1630

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 0.9
C2 = 0.4
On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: Hand del. 2/17/15 16:30

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020251

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
FB125-012915	1700	1/29/15	Water	A	B	C2	A = HNO3, B = Ice
FB126-020215	1100	2/2/15	Water	A	B		A = HNO3, B = Ice
FB127-020215	1255	2/2/15	Water	A	B		A = HNO3, B = Ice
FB128-020315	1100	2/3/15	Water	A	B		A = HNO3, B = Ice
FB129-020315	1655	2/3/15	Water	A	B		A = HNO3, B = Ice
FB130-020415	1255	2/4/15	Water	A	B		A = HNO3, B = Ice
FB131-020415	1720	2/4/15	Water	A	B		A = HNO3, B = Ice
FB132-020515	950	2/5/15	Water	A	B		A = HNO3, B = Ice
FB133-020515	1140	2/5/15	Water	A	B		A = HNO3, B = Ice
FB134-020515	1420	2/5/15	Water	A	B		A = HNO3, B = Ice
FB135-020515	1705	2/5/15	Water	A	B		A = HNO3, B = Ice
FB136-020915	1010	2/9/15	Water	A	B		A = HNO3, B = Ice
FB137-020915	1355	2/9/15	Water	A	B		A = HNO3, B = Ice
FB138-020915	1530	2/9/15	Water	A	B		A = HNO3, B = Ice
FB139-020915	1705	2/9/15	Water	A	B		A = HNO3, B = Ice
FB140-021015	1055	2/10/15	Water	A	B		A = HNO3, B = Ice
FB141-021015	1240	2/10/15	Water	A	B		A = HNO3, B = Ice
FB142-021015	1440	2/10/15	Water	A	B		A = HNO3, B = Ice
FB143-021015	1705	2/10/15	Water	A	B		A = HNO3, B = Ice
FB144-021115	1040	2/11/15	Water	A	B		A = HNO3, B = Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature] Date/Time: 2/17/15 1630

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) _____ Date/Time:

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 0.9
C2 = 0.4
On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: Hand del 2/17/15 16:30

COC 1_13_15 thru 2_11_15CCB-FB.xls

ANALYTICAL SUMMARY REPORT

March 10, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020207

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 56 samples for MT DEQ-Federal Superfund on 2/12/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020207-001	4-090-3036	02/04/15 13:37	02/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020207-002	4-090-3642	02/04/15 13:36	02/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020207-003	4-090-4248	02/04/15 13:35	02/12/15	Soil	Same As Above
H15020207-004	4-091-0612	02/04/15 15:06	02/12/15	Soil	Same As Above
H15020207-005	4-091-1218	02/04/15 15:05	02/12/15	Soil	Same As Above
H15020207-006	4-091-1824	02/04/15 15:04	02/12/15	Soil	Same As Above
H15020207-007	4-092-3642	02/04/15 15:21	02/12/15	Soil	Same As Above
H15020207-008	4-092-4248	02/04/15 15:20	02/12/15	Soil	Same As Above
H15020207-009	4-093-3036	02/04/15 15:47	02/12/15	Soil	Same As Above
H15020207-010	4-093-3642	02/04/15 15:46	02/12/15	Soil	Same As Above
H15020207-011	4-093-4248	02/04/15 15:45	02/12/15	Soil	Same As Above
H15020207-012	4-098-0612	02/04/15 12:51	02/12/15	Soil	Same As Above
H15020207-013	4-098-1218	02/04/15 12:50	02/12/15	Soil	Same As Above
H15020207-014	4-098-1824	02/04/15 12:49	02/12/15	Soil	Same As Above
H15020207-015	4-099-0006	02/04/15 14:07	02/12/15	Soil	Same As Above
H15020207-016	4-099-0612	02/04/15 14:06	02/12/15	Soil	Same As Above
H15020207-017	4-099-1218	02/04/15 14:05	02/12/15	Soil	Same As Above
H15020207-018	4-100-1824	02/04/15 14:44	02/12/15	Soil	Same As Above
H15020207-019	4-100-1824d	02/04/15 14:45	02/12/15	Soil	Same As Above
H15020207-020	4-100-2430	02/04/15 14:43	02/12/15	Soil	Same As Above
H15020207-021	4-100-3036	02/04/15 14:42	02/12/15	Soil	Same As Above
H15020207-022	4-104-0006	02/04/15 14:22	02/12/15	Soil	Same As Above
H15020207-023	4-104-0612	02/04/15 14:21	02/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020207-024	4-104-1218	02/04/15 14:20	02/12/15	Soil	Same As Above
H15020207-025	4-108-0006	02/04/15 12:03	02/12/15	Soil	Same As Above
H15020207-026	4-108-0612	02/04/15 12:02	02/12/15	Soil	Same As Above
H15020207-027	4-108-1218	02/04/15 12:01	02/12/15	Soil	Same As Above
H15020207-028	4-108-1824	02/04/15 11:59	02/12/15	Soil	Same As Above
H15020207-029	4-108-1824d	02/04/15 12:00	02/12/15	Soil	Same As Above
H15020207-030	4-109-0006	02/04/15 12:37	02/12/15	Soil	Same As Above
H15020207-031	4-109-0612	02/04/15 12:36	02/12/15	Soil	Same As Above
H15020207-032	4-111-4854	02/04/15 16:46	02/12/15	Soil	Same As Above
H15020207-033	4-111-5460	02/04/15 16:45	02/12/15	Soil	Same As Above
H15020207-034	4-115-2430	02/04/15 17:01	02/12/15	Soil	Same As Above
H15020207-035	4-115-3036	02/04/15 17:00	02/12/15	Soil	Same As Above
H15020207-036	4-141-0006	02/04/15 10:22	02/12/15	Soil	Same As Above
H15020207-037	4-141-0612	02/04/15 10:21	02/12/15	Soil	Same As Above
H15020207-038	4-143-2430	02/04/15 8:18	02/12/15	Soil	Same As Above
H15020207-039	4-143-3036	02/04/15 8:17	02/12/15	Soil	Same As Above
H15020207-040	4-143-3642	02/04/15 8:16	02/12/15	Soil	Same As Above
H15020207-041	4-152-2430	02/04/15 8:28	02/12/15	Soil	Same As Above
H15020207-042	4-152-3036	02/04/15 8:27	02/12/15	Soil	Same As Above
H15020207-043	4-153-3036	02/04/15 9:17	02/12/15	Soil	Same As Above
H15020207-044	4-153-3642	02/04/15 9:16	02/12/15	Soil	Same As Above
H15020207-045	4-153-4248	02/04/15 9:15	02/12/15	Soil	Same As Above
H15020207-046	4-154-2430	02/04/15 9:48	02/12/15	Soil	Same As Above
H15020207-047	4-154-3036	02/04/15 9:47	02/12/15	Soil	Same As Above
H15020207-048	4-154-3642	02/04/15 9:46	02/12/15	Soil	Same As Above
H15020207-049	4-155-0006	02/04/15 10:40	02/12/15	Soil	Same As Above
H15020207-050	4-155-0612	02/04/15 10:39	02/12/15	Soil	Same As Above
H15020207-051	4-160-2430	02/04/15 8:53	02/12/15	Soil	Same As Above
H15020207-052	4-160-3036	02/04/15 8:52	02/12/15	Soil	Same As Above
H15020207-053	4-160-3642	02/04/15 8:51	02/12/15	Soil	Same As Above
H15020207-054	4-101-3036	02/04/15 16:07	02/12/15	Soil	Same As Above
H15020207-055	4-101-3642	02/04/15 16:06	02/12/15	Soil	Same As Above
H15020207-056	4-101-4248	02/04/15 16:05	02/12/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

ANALYTICAL SUMMARY REPORT

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020207

Report Date: 03/10/15
Date Received: 02/12/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020207-001	4-090-3036		7.5	17	6	811	19	2480
H15020207-002	4-090-3642		7.6	8	< 1	59	14	122
H15020207-003	4-090-4248		7.0	11	< 1	37	12	61
H15020207-004	4-091-0612		7.2	889	3	2320	646	1380
H15020207-005	4-091-1218		7.5	21	< 1	200	36	149
H15020207-006	4-091-1824		7.4	5	< 1	28	11	64
H15020207-007	4-092-3642		6.7	11	7	171	17	2520
H15020207-008	4-092-4248		6.6	38	< 1	138	42	456
H15020207-009	4-093-3036		7.6	18	5	1280	12	1140
H15020207-010	4-093-3642		6.9	7	< 1	18	9	68
H15020207-011	4-093-4248		7.1	8	< 1	37	11	65
H15020207-012	4-098-0612		7.6	988	12	6700	665	3790
H15020207-013	4-098-1218		7.7	77	1	584	91	437
H15020207-014	4-098-1824		7.6	10	< 1	51	16	86
H15020207-015	4-099-0006		7.5	542	7	2870	409	2300
H15020207-016	4-099-0612		7.6	174	3	1210	171	908
H15020207-017	4-099-1218		7.6	40	< 1	169	36	180
H15020207-018	4-100-1824		6.9	1260	8	2520	625	2250
H15020207-019	4-100-1824d		6.9	1500	7	2290	736	2250
H15020207-020	4-100-2430		6.9	174	12	2280	322	2470
H15020207-021	4-100-3036		6.4	12	2	198	13	234
H15020207-022	4-104-0006		7.4	540	8	3480	416	2490
H15020207-023	4-104-0612		7.5	297	5	2290	249	1660
H15020207-024	4-104-1218		7.4	17	< 1	140	32	149
H15020207-025	4-108-0006		7.7	860	10	6620	782	2970
H15020207-026	4-108-0612		7.8	11	< 1	73	24	101
H15020207-027	4-108-1218		7.9	6	< 1	40	24	82
H15020207-028	4-108-1824		7.7	5	< 1	34	13	75
H15020207-029	4-108-1824d		7.8	5	< 1	41	13	75
H15020207-030	4-109-0006		7.5	23	< 1	114	29	113
H15020207-031	4-109-0612		7.5	95	2	760	73	506
H15020207-032	4-111-4854		7.1	1020	29	7640	712	6930
H15020207-033	4-111-5460		7.1	513	17	4080	764	4970
H15020207-034	4-115-2430		7.2	659	4	3580	326	1110
H15020207-035	4-115-3036		7.4	1100	7	5110	454	1820
H15020207-036	4-141-0006		7.5	126	2	840	102	720
H15020207-037	4-141-0612		7.3	7	< 1	58	7	49
H15020207-038	4-143-2430		7.4	70	7	11700	303	1420
H15020207-039	4-143-3036		6.8	3	< 1	27	9	58
H15020207-040	4-143-3642		7.5	3	< 1	21	7	42

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020207

Report Date: 03/10/15
Date Received: 02/12/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020207-041	4-152-2430	7.2	149	6	1310	171	1680
H15020207-042	4-152-3036	7.4	260	3	1850	153	1390
H15020207-043	4-153-3036	6.8	6	10	1940	12	1990
H15020207-044	4-153-3642	6.4	4	< 1	27	17	66
H15020207-045	4-153-4248	6.7	14	< 1	58	20	545
H15020207-046	4-154-2430	7.0	22	1	2830	38	686
H15020207-047	4-154-3036	7.3	57	1	2360	56	460
H15020207-048	4-154-3642	7.5	25	3	3310	38	1030
H15020207-049	4-155-0006	7.3	199	2	946	146	725
H15020207-050	4-155-0612	7.7	107	2	688	94	621
H15020207-051	4-160-2430	6.9	129	13	4210	638	3960
H15020207-052	4-160-3036	7.2	11	8	437	9	1270
H15020207-053	4-160-3642	7.0	18	< 1	69	19	96
H15020207-054	4-101-3036	7.0	14	13	9900	15	3360
H15020207-055	4-101-3642	7.4	4	< 1	277	8	445
H15020207-056	4-101-4248	5.8	3	< 1	28	8	48

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2							Analytical Run: SOIL PH METER_150304A			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 08:48
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 09:14
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 09:41
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 06:54
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 07:30
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 08:16
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 08:52
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150304_1		Continuing Calibration Verification Standard								03/05/15 06:42
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150304_1		Continuing Calibration Verification Standard								03/05/15 06:42
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard								03/05/15 06:43
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150304_1		Continuing Calibration Verification Standard								03/05/15 06:53
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150304_1		Continuing Calibration Verification Standard								03/05/15 07:08
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150304_1		Continuing Calibration Verification Standard								03/05/15 07:08
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard								03/05/15 07:09
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150304_1		Continuing Calibration Verification Standard								03/05/15 07:18
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150304_1		Continuing Calibration Verification Standard								03/05/15 07:37
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150304_1		Continuing Calibration Verification Standard								03/05/15 07:38
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2							Analytical Run: SOIL PH METER_150304A			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 07:39	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150304_1		Continuing Calibration Verification Standard							03/05/15 07:51	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 09:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 08:07	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 28282	
Lab ID: LCS-28282		Laboratory Control Sample				Run: SOIL PH METER_150304A			03/05/15 06:44	
pH, sat. paste		7.59	s.u.	0.10	101	95	105			
Lab ID: H15020207-010ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/05/15 06:52	
pH, sat. paste		6.88	s.u.	0.10				0.1	30	
Lab ID: H15020207-020ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/05/15 07:02	
pH, sat. paste		6.88	s.u.	0.10				0.1	30	
Method: ASAM10-3.2									Batch: 28283	
Lab ID: LCS-28283		Laboratory Control Sample				Run: SOIL PH METER_150304A			03/05/15 07:10	
pH, sat. paste		7.60	s.u.	0.10	102	95	105			
Lab ID: H15020207-030ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/05/15 07:18	
pH, sat. paste		7.49	s.u.	0.10				0.1	30	
Lab ID: H15020207-040ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/05/15 07:28	
pH, sat. paste		7.51	s.u.	0.10				0.1	30	
Method: ASAM10-3.2									Batch: 28284	
Lab ID: LCS-28284		Laboratory Control Sample				Run: SOIL PH METER_150304A			03/05/15 07:40	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H15020207-050ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/05/15 07:50	
pH, sat. paste		7.66	s.u.	0.10				0.0	30	
Lab ID: H15020207-056ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/05/15 07:55	
pH, sat. paste		5.75	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150303A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								03/03/15 10:50
Arsenic			0.768	mg/L	0.0085	96	90	110			
Cadmium			0.380	mg/L	0.0010	95	90	110			
Copper			0.792	mg/L	0.010	99	90	110			
Lead			0.772	mg/L	0.010	97	90	110			
Zinc			0.784	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/03/15 11:04
Arsenic			0.00590	mg/L	0.0085		0	0			
Cadmium			0.000930	mg/L	0.0010		0	0			
Copper			-0.000640	mg/L	0.010		0	0			
Lead			-0.00763	mg/L	0.010		0	0			
Zinc			0.00244	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/03/15 11:09
Arsenic			0.957	mg/L	0.0085	96	80	120			
Cadmium			0.876	mg/L	0.0010	88	80	120			
Copper			0.513	mg/L	0.010	103	80	120			
Lead			0.890	mg/L	0.010	89	80	120			
Zinc			0.966	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/03/15 19:17
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.45	mg/L	0.010	98	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/03/15 19:21
Arsenic			0.00987	mg/L	0.0085						
Cadmium			0.000150	mg/L	0.0010						
Copper			-0.00249	mg/L	0.010						
Lead			-0.00161	mg/L	0.010						
Zinc			0.000580	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/03/15 20:01
Arsenic			2.56	mg/L	0.0085	103	90	110			
Cadmium			2.55	mg/L	0.0010	102	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.55	mg/L	0.010	102	90	110			
Zinc			2.54	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/03/15 20:05
Arsenic			0.00494	mg/L	0.0085						
Cadmium			0.000560	mg/L	0.0010						
Copper			-0.00308	mg/L	0.010						
Lead			0.0115	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150303A	
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/03/15 20:05
Zinc			0.000470	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/03/15 20:45
Arsenic			2.53	mg/L	0.0085	101	90	110			
Cadmium			2.51	mg/L	0.0010	100	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/03/15 20:49
Arsenic			0.00928	mg/L	0.0085						
Cadmium			0.000500	mg/L	0.0010						
Copper			-0.00646	mg/L	0.010						
Lead			0.00217	mg/L	0.010						
Zinc			0.00200	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/03/15 21:30
Arsenic			2.60	mg/L	0.0085	104	90	110			
Cadmium			2.58	mg/L	0.0010	103	90	110			
Copper			2.57	mg/L	0.010	103	90	110			
Lead			2.61	mg/L	0.010	105	90	110			
Zinc			2.56	mg/L	0.010	103	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/03/15 21:33
Arsenic			0.000910	mg/L	0.0085						
Cadmium			0.000600	mg/L	0.0010						
Copper			-0.00685	mg/L	0.010						
Lead			-0.000830	mg/L	0.010						
Zinc			0.00196	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/03/15 22:14
Arsenic			2.63	mg/L	0.0085	105	90	110			
Cadmium			2.64	mg/L	0.0010	105	90	110			
Copper			2.60	mg/L	0.010	104	90	110			
Lead			2.63	mg/L	0.010	105	90	110			
Zinc			2.60	mg/L	0.010	104	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/03/15 22:18
Arsenic			0.0116	mg/L	0.0085						
Cadmium			0.000830	mg/L	0.0010						
Copper			-0.00415	mg/L	0.010						
Lead			-0.00365	mg/L	0.010						
Zinc			0.00115	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/03/15 22:58
Arsenic			2.62	mg/L	0.0085	105	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150303A		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/03/15 22:58	
Cadmium			2.64	mg/L	0.0010	105	90	110			
Copper			2.56	mg/L	0.010	102	90	110			
Lead			2.66	mg/L	0.010	106	90	110			
Zinc			2.59	mg/L	0.010	104	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/03/15 23:02	
Arsenic			0.00562	mg/L	0.0085						
Cadmium			0.000910	mg/L	0.0010						
Copper			-0.00270	mg/L	0.010						
Lead			0.00634	mg/L	0.010						
Zinc			0.00221	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/03/15 23:25	
Arsenic			2.49	mg/L	0.0085	99	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.46	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/03/15 23:28	
Arsenic			-1.00E-05	mg/L	0.0085						
Cadmium			0.000800	mg/L	0.0010						
Copper			0.00206	mg/L	0.010						
Lead			-0.00812	mg/L	0.010						
Zinc			0.000580	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/04/15 00:09	
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.51	mg/L	0.0010	100	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/04/15 00:12	
Arsenic			0.00455	mg/L	0.0085						
Cadmium			0.000330	mg/L	0.0010						
Copper			0.00319	mg/L	0.010						
Lead			0.000680	mg/L	0.010						
Zinc			0.00121	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/04/15 00:53	
Arsenic			2.51	mg/L	0.0085	100	90	110			
Cadmium			2.51	mg/L	0.0010	100	90	110			
Copper			2.54	mg/L	0.010	101	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150303A	
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/04/15 00:53	
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/04/15 00:57	
Arsenic			-0.00151	mg/L	0.0085						
Cadmium			0.000450	mg/L	0.0010						
Copper			0.00322	mg/L	0.010						
Lead			0.00376	mg/L	0.010						
Zinc			0.00233	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/04/15 01:15	
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.51	mg/L	0.0010	100	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/04/15 01:19	
Arsenic			0.0112	mg/L	0.0085						
Cadmium			0.000530	mg/L	0.0010						
Copper			0.00352	mg/L	0.010						
Lead			0.00813	mg/L	0.010						
Zinc			0.000640	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150304B	
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							03/04/15 15:20	
Copper			0.807	mg/L	0.010	101	90	110			
Zinc			0.785	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							03/04/15 15:35	
Copper			-0.000500	mg/L	0.010		0	0			
Zinc			0.00377	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	2	Interference Check Sample AB							03/04/15 15:39	
Copper			0.515	mg/L	0.010	103	80	120			
Zinc			0.993	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/04/15 19:37	
Copper			2.51	mg/L	0.010	101	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/04/15 19:41	
Copper			0.00249	mg/L	0.010						
Zinc			0.000710	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/04/15 20:21	
Copper			2.53	mg/L	0.010	101	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/04/15 20:25	
Copper			0.000430	mg/L	0.010						
Zinc			0.000810	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/04/15 21:05	
Copper			2.49	mg/L	0.010	100	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/04/15 21:09	
Copper			0.00326	mg/L	0.010						
Zinc			0.00208	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150303C		
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard							03/04/15 05:09	
Arsenic			0.0492	mg/L	0.0050	98	90	110			
Cadmium			0.0480	mg/L	0.0010	96	90	110			
Copper			0.0511	mg/L	0.010	102	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank							03/04/15 05:18	
Arsenic			-1.86E-05	mg/L	0.0050						
Cadmium			-1.13E-05	mg/L	0.0010						
Copper			-1.82E-05	mg/L	0.010						
Lead			-5.80E-06	mg/L	0.010						
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard							03/04/15 06:28	
Arsenic			0.0487	mg/L	0.0050	97	90	110			
Cadmium			0.0482	mg/L	0.0010	96	90	110			
Copper			0.0504	mg/L	0.010	101	90	110			
Lead			0.0483	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank							03/04/15 06:38	
Arsenic			-2.40E-06	mg/L	0.0050						
Cadmium			-1.12E-05	mg/L	0.0010						
Copper			-8.10E-06	mg/L	0.010						
Lead			-8.20E-06	mg/L	0.010						
Method:	**E200.8**								Analytical Run: ICPMS204-B_150304B		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/05/15 06:03	
Arsenic			0.0519	mg/L	0.0050	104	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/05/15 06:12	
Arsenic			1.23E-05	mg/L	0.0050						
Lead			8.50E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/05/15 06:58	
Arsenic			0.0520	mg/L	0.0050	104	90	110			
Lead			0.0482	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/05/15 07:07	
Arsenic			4.50E-05	mg/L	0.0050						
Lead			1.90E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/09/15 17:39	
Arsenic			0.0499	mg/L	0.0050	100	90	110			
Cadmium			0.0494	mg/L	0.0010	99	90	110			
Lead			0.0503	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/09/15 17:47	
Arsenic			-9.00E-07	mg/L	0.0050						
Cadmium			1.70E-06	mg/L	0.0010						
Lead			6.00E-07	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/09/15 18:35	
Arsenic			0.0504	mg/L	0.0050	101	90	110			
Cadmium			0.0491	mg/L	0.0010	98	90	110			
Lead			0.0492	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/09/15 18:44	
Arsenic			-9.40E-06	mg/L	0.0050						
Cadmium			-3.00E-07	mg/L	0.0010						
Lead			-3.80E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/09/15 19:41	
Arsenic			0.0505	mg/L	0.0050	101	90	110			
Cadmium			0.0485	mg/L	0.0010	97	90	110			
Lead			0.0492	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/09/15 19:49	
Arsenic			-6.00E-07	mg/L	0.0050						
Cadmium			2.40E-06	mg/L	0.0010						
Lead			-9.00E-07	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/09/15 20:28	
Arsenic			0.0511	mg/L	0.0050	102	90	110			
Cadmium			0.0492	mg/L	0.0010	98	90	110			
Lead			0.0504	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/09/15 20:37	
Arsenic			1.85E-05	mg/L	0.0050						
Cadmium			2.10E-06	mg/L	0.0010						
Lead			1.20E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28230
Lab ID:	**MB-28230**	5	Method Blank				Run: ICP2-HE_150303A				03/03/15 18:36
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.9	mg/kg	0.09						
Lab ID:	**LFB-28230**	5	Laboratory Fortified Blank				Run: ICP2-HE_150303A				03/03/15 18:40
Arsenic			47.7	mg/kg	1.0	95	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			49.1	mg/kg	1.0	98	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			49.5	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-28230**	5	Laboratory Control Sample				Run: ICP2-HE_150303A				03/03/15 18:44
Arsenic			287	mg/kg	3.4	84	72.3	106.4			
Cadmium			120	mg/kg	1.0	87	73	105.1			
Copper			263	mg/kg	2.1	94	77.5	109.6			
Lead			174	mg/kg	6.0	93	75.9	108.6			
Zinc			192	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H15020207-010APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150303A				03/03/15 20:57
Arsenic			236	mg/kg	1.8	93	75	125			
Cadmium			111	mg/kg	1.0	91	75	125			
Copper			248	mg/kg	1.1	94	75	125			
Lead			242	mg/kg	3.1	93	75	125			
Zinc			297	mg/kg	1.0	93	75	125			
Lab ID:	**H15020207-010AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150303A				03/03/15 21:00
Arsenic			52.4	mg/kg	1.7	92	75	125			
Cadmium			22.5	mg/kg	1.0	94	75	125			
Copper			64.1	mg/kg	1.1	95	75	125			
Lead			62.2	mg/kg	3.1	102	75	125			
Zinc			113	mg/kg	1.0	94	75	125			
Lab ID:	**H15020207-010AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150303A				03/03/15 21:04
Arsenic			51.9	mg/kg	1.7	91	75	125	1.0	20	
Cadmium			22.0	mg/kg	1.0	92	75	125	2.1	20	
Copper			64.3	mg/kg	1.1	95	75	125	0.2	20	
Lead			59.5	mg/kg	3.1	96	75	125	4.3	20	
Zinc			112	mg/kg	1.0	92	75	125	1.0	20	
Method:	**SW6010B**										Batch: 28231
Lab ID:	**MB-28231**	5	Method Blank				Run: ICP2-HE_150303A				03/03/15 21:08
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28231
Lab ID:	**MB-28231**	5	Method Blank				Run: ICP2-HE_150303A				03/03/15 21:08
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-28231**	5	Laboratory Fortified Blank				Run: ICP2-HE_150303A				03/03/15 21:12
Arsenic			49.9	mg/kg	1.0	100	80	120			
Cadmium			24.3	mg/kg	1.0	97	80	120			
Copper			49.0	mg/kg	1.0	98	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Zinc			49.5	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-28231**	5	Laboratory Control Sample				Run: ICP2-HE_150303A				03/03/15 21:15
Arsenic			317	mg/kg	3.8	93	72.3	106.4			
Cadmium			132	mg/kg	1.0	96	73	105.1			
Copper			264	mg/kg	2.3	94	77.5	109.6			
Lead			195	mg/kg	6.6	104	75.9	108.6			
Zinc			210	mg/kg	1.0	98	74.2	109.9			
Lab ID:	**H15020207-028APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150303A				03/03/15 22:44
Arsenic			255	mg/kg	1.9	92	75	125			
Cadmium			120	mg/kg	1.0	90	75	125			
Copper			276	mg/kg	1.2	90	75	125			
Lead			260	mg/kg	3.4	90	75	125			
Zinc			321	mg/kg	1.0	92	75	125			
Lab ID:	**H15020207-028AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150303A				03/03/15 22:47
Arsenic			56.8	mg/kg	1.9	93	75	125			
Cadmium			24.1	mg/kg	1.0	92	75	125			
Copper			85.5	mg/kg	1.2	97	75	125			
Lead			67.0	mg/kg	3.4	92	75	125			
Zinc			128	mg/kg	1.0	102	75	125			
Lab ID:	**H15020207-028AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150303A				03/03/15 22:51
Arsenic			55.5	mg/kg	1.9	93	75	125	2.3	20	
Cadmium			23.3	mg/kg	1.0	91	75	125	3.3	20	
Copper			82.3	mg/kg	1.1	93	75	125	3.8	20	
Lead			64.7	mg/kg	3.3	89	75	125	3.5	20	
Zinc			126	mg/kg	1.0	99	75	125	2.1	20	
Method:	**SW6010B**										Batch: 28232
Lab ID:	**MB-28232**	5	Method Blank				Run: ICP2-HE_150303A				03/03/15 22:55
Arsenic			0.8	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28232
Lab ID:	**LFB-28232**	5	Laboratory Fortified Blank				Run: ICP2-HE_150303A			03/03/15 23:32	
Arsenic			47.1	mg/kg	1.0	93	80	120			
Cadmium			23.1	mg/kg	1.0	92	80	120			
Copper			48.5	mg/kg	1.0	96	80	120			
Lead			45.2	mg/kg	1.0	90	80	120			
Zinc			47.5	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-28232**	5	Laboratory Control Sample				Run: ICP2-HE_150303A			03/03/15 23:36	
Arsenic			279	mg/kg	1.7	81	72.3	106.4			
Cadmium			118	mg/kg	1.0	86	73	105.1			
Copper			246	mg/kg	1.1	88	77.5	109.6			
Lead			172	mg/kg	3.1	92	75.9	108.6			
Zinc			189	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H15020207-046APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150303A			03/04/15 01:04	
Arsenic			250	mg/kg	1.8	90	75	125			
Cadmium			112	mg/kg	1.0	88	75	125			
Copper			3060	mg/kg	1.1		75	125			A
Lead			260	mg/kg	3.2	88	75	125			
Zinc			910	mg/kg	1.0	89	75	125			
Lab ID:	**H15020207-046AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150303A			03/04/15 01:08	
Arsenic			68.2	mg/kg	1.8	94	75	125			
Cadmium			23.5	mg/kg	1.0	90	75	125			
Copper			2830	mg/kg	1.1		75	125			A
Lead			82.9	mg/kg	3.1	92	75	125			
Zinc			714	mg/kg	1.0		75	125			A
Lab ID:	**H15020207-046AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150303A			03/04/15 01:11	
Arsenic			68.0	mg/kg	1.8	93	75	125	0.4	20	
Cadmium			23.3	mg/kg	1.0	89	75	125	0.8	20	
Copper			2890	mg/kg	1.1		75	125	1.8	20	A
Lead			76.5	mg/kg	3.1	79	75	125	8.0	20	
Zinc			731	mg/kg	1.0		75	125	2.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28233
Lab ID:	**MB-28233**	2	Method Blank				Run: ICP2-HE_150304B				03/04/15 19:44
Copper			0.3	mg/kg	0.2						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28233**	2	Laboratory Fortified Blank				Run: ICP2-HE_150304B				03/04/15 19:48
Copper			49.4	mg/kg	1.0	98	80	120			
Zinc			48.2	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28233**	2	Laboratory Control Sample				Run: ICP2-HE_150304B				03/04/15 19:52
Copper			257	mg/kg	1.1	92	77.5	109.6			
Zinc			191	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H15020207-056APDS**	2	Post Digestion/Distillation Spike				Run: ICP2-HE_150304B				03/04/15 21:16
Copper			262	mg/kg	1.1	90	75	125			
Zinc			282	mg/kg	1.0	91	75	125			
Lab ID:	**H15020207-056AMS**	2	Sample Matrix Spike				Run: ICP2-HE_150304B				03/04/15 21:20
Copper			69.7	mg/kg	1.1	82	75	125			
Zinc			99.3	mg/kg	1.0	102	75	125			
Lab ID:	**H15020207-056AMSD**	2	Sample Matrix Spike Duplicate				Run: ICP2-HE_150304B				03/04/15 21:23
Copper			71.3	mg/kg	1.1	85	75	125	2.3	20	
Zinc			99.9	mg/kg	1.0	103	75	125	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150303C		
Lab ID:	**ICV STD**	4	Initial Calibration Verification Standard								03/03/15 18:56
Arsenic			0.0592	mg/L	0.0010	99	90	110			
Cadmium			0.0309	mg/L	0.0010	103	90	110			
Copper			0.0603	mg/L	0.0010	100	90	110			
Lead			0.0583	mg/L	0.0010	97	90	110			
Lab ID:	**ICSA**	4	Interference Check Sample A								03/03/15 19:01
Arsenic			7.30E-05	mg/L	0.0010						
Cadmium			0.000779	mg/L	0.0010						
Copper			0.000928	mg/L	0.0010						
Lead			0.000231	mg/L	0.0010						
Lab ID:	**ICSAB**	4	Interference Check Sample AB								03/03/15 19:05
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Cadmium			0.0106	mg/L	0.0010	106	70	130			
Copper			0.0205	mg/L	0.0010	102	70	130			
Lead			0.000230	mg/L	0.0010		0	0			
Method:	**SW6020**										Batch: 28233
Lab ID:	**MB-28233**	4	Method Blank				Run: ICPMS204-B_150303C				03/04/15 04:17
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28233**	4	Laboratory Control Sample				Run: ICPMS204-B_150303C				03/04/15 04:22
Arsenic			305	mg/kg	1.0	89	72.3	106.4			
Cadmium			121	mg/kg	1.0	88	73	105.1			
Copper			284	mg/kg	1.0	101	77.5	109.6			
Lead			181	mg/kg	1.0	97	75.9	108.6			
Lab ID:	**LFB-28233**	4	Laboratory Fortified Blank				Run: ICPMS204-B_150303C				03/04/15 04:27
Arsenic			47.6	mg/kg	1.0	95	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			
Copper			51.1	mg/kg	1.0	102	80	120			
Lead			46.2	mg/kg	1.0	92	80	120			
Lab ID:	**H15020205-054APDS**	4	Post Digestion/Distillation Spike				Run: ICPMS204-B_150303C				03/04/15 04:55
Arsenic			2340	mg/kg	1.0	92	75	125			
Cadmium			1110	mg/kg	1.0	88	75	125			
Copper			2510	mg/kg	1.0	95	75	125			
Lead			2420	mg/kg	1.0	95	75	125			
Lab ID:	**H15020205-054AMS**	4	Sample Matrix Spike				Run: ICPMS204-B_150303C				03/04/15 04:59
Arsenic			64.9	mg/kg	1.0	95	75	125			
Cadmium			23.3	mg/kg	1.0	90	75	125			
Copper			163	mg/kg	1.0	97	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28233
Lab ID:	**H15020205-054AMS**	4	Sample Matrix Spike				Run: ICPMS204-B_150303C			03/04/15 04:59	
Lead			71.5	mg/kg	1.0	92	75	125			
Lab ID:	**H15020205-054AMSD**	4	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150303C			03/04/15 05:04	
Arsenic			63.0	mg/kg	1.0	91	75	125	3.1	20	
Cadmium			22.9	mg/kg	1.0	88	75	125	2.0	20	
Copper			162	mg/kg	1.0	95	75	125	0.6	20	
Lead			71.0	mg/kg	1.0	91	75	125	0.8	20	
Lab ID:	**H15020207-056APDS**	4	Post Digestion/Distillation Spike				Run: ICPMS204-B_150303C			03/04/15 06:14	
Arsenic			2330	mg/kg	1.0	93	75	125			
Cadmium			1180	mg/kg	1.0	95	75	125			
Copper			2440	mg/kg	1.0	96	75	125			
Lead			2420	mg/kg	1.0	96	75	125			
Lab ID:	**H15020207-056AMS**	4	Sample Matrix Spike				Run: ICPMS204-B_150303C			03/04/15 06:19	
Arsenic			50.6	mg/kg	1.0	96	75	125			
Cadmium			23.4	mg/kg	1.0	94	75	125			
Copper			72.6	mg/kg	1.0	88	75	125			
Lead			54.4	mg/kg	1.0	93	75	125			
Lab ID:	**H15020207-056AMSD**	4	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150303C			03/04/15 06:23	
Arsenic			49.0	mg/kg	1.0	92	75	125	3.3	20	
Cadmium			23.1	mg/kg	1.0	92	75	125	1.5	20	
Copper			72.8	mg/kg	1.0	89	75	125	0.2	20	
Lead			53.9	mg/kg	1.0	92	75	125	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150304B		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard								03/04/15 18:16
Arsenic			0.0600	mg/L	0.0010	100	90	110			
Lead			0.0561	mg/L	0.0010	93	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A								03/04/15 18:20
Arsenic			0.000100	mg/L	0.0010						
Lead			0.000220	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB								03/04/15 18:25
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Lead			0.000221	mg/L	0.0010		0	0			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard								03/05/15 07:53
Arsenic			0.0519	mg/L	0.0010	104	90	110			
Lead			0.0484	mg/L	0.0010	97	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank								03/05/15 08:02
Arsenic			1.93E-05	mg/L	0.0010						
Lead			1.00E-06	mg/L	0.0010						
Method:	**SW6020**										Batch: 28230
Lab ID:	**MB-28230**	2	Method Blank				Run: ICPMS204-B_150304B				03/05/15 06:17
Arsenic			0.7	mg/kg	0.3						
Lead			2	mg/kg	0.2						
Lab ID:	**LCS-28230**	2	Laboratory Control Sample				Run: ICPMS204-B_150304B				03/05/15 06:21
Arsenic			301	mg/kg	1.0	88	72.3	106.4			
Lead			169	mg/kg	1.0	89	75.9	108.6			
Lab ID:	**LFB-28230**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150304B				03/05/15 06:26
Arsenic			49.1	mg/kg	1.0	97	80	120			
Lead			46.3	mg/kg	1.0	89	80	120			
Lab ID:	**H15020207-010APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150304B				03/05/15 07:40
Arsenic			2320	mg/kg	1.0	97	75	125			
Lead			2260	mg/kg	1.0	95	75	125			
Lab ID:	**H15020207-010AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150304B				03/05/15 07:44
Arsenic			52.5	mg/kg	1.0	95	75	125			
Lead			51.4	mg/kg	1.0	89	75	125			
Lab ID:	**H15020207-010AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150304B				03/05/15 07:49
Arsenic			52.8	mg/kg	1.0	96	75	125	0.7	20	
Lead			53.4	mg/kg	1.0	93	75	125	3.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							03/09/15 11:29	
Arsenic			0.0631	mg/L	0.0010	105	90	110			
Cadmium			0.0327	mg/L	0.0010	109	90	110			
Lead			0.0618	mg/L	0.0010	103	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							03/09/15 11:34	
Arsenic			6.20E-05	mg/L	0.0010						
Cadmium			0.000924	mg/L	0.0010						
Lead			0.000244	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							03/09/15 11:38	
Arsenic			0.0112	mg/L	0.0010	112	70	130			
Cadmium			0.0111	mg/L	0.0010	111	70	130			
Lead			0.000245	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 28231	
Lab ID:	**MB-28231**	3	Method Blank				Run: ICPMS204-B_150309A			03/09/15 17:52	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28231**	3	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/09/15 17:56	
Arsenic			307	mg/kg	1.0	90	72.3	106.4			
Cadmium			128	mg/kg	1.0	93	73	105.1			
Lead			186	mg/kg	1.0	99	75.9	108.6			
Lab ID:	**LFB-28231**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/09/15 18:00	
Arsenic			48.0	mg/kg	1.0	96	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Lead			46.3	mg/kg	1.0	93	80	120			
Lab ID:	**H15020207-028APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/09/15 18:57	
Arsenic			2570	mg/kg	1.0	99	75	125			
Cadmium			1210	mg/kg	1.0	93	75	125			
Lead			2550	mg/kg	1.0	97	75	125			
Lab ID:	**H15020207-028AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/09/15 19:01	
Arsenic			53.7	mg/kg	1.0	92	75	125			
Cadmium			23.6	mg/kg	1.0	89	75	125			
Lead			60.3	mg/kg	1.0	90	75	125			
Lab ID:	**H15020207-028AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/09/15 19:05	
Arsenic			53.2	mg/kg	1.0	93	75	125	0.8	20	
Cadmium			22.8	mg/kg	1.0	87	75	125	3.5	20	
Lead			58.8	mg/kg	1.0	89	75	125	2.4	20	
Method:	**SW6020**									Batch: 28232	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020207

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28232
Lab ID:	**MB-28232**	2	Method Blank				Run: ICPMS204-B_150309A			03/09/15 19:14	
Arsenic			0.4	mg/kg	0.3						
Lead			0.4	mg/kg	0.2						
Lab ID:	**LCS-28232**	2	Laboratory Control Sample				Run: ICPMS204-B_150309A			03/09/15 19:19	
Arsenic			277	mg/kg	1.0	81	72.3	106.4			
Lead			169	mg/kg	1.0	90	75.9	108.6			
Lab ID:	**LFB-28232**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150309A			03/09/15 19:23	
Arsenic			46.1	mg/kg	1.0	91	80	120			
Lead			44.6	mg/kg	1.0	89	80	120			
Lab ID:	**H15020207-046APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/09/15 20:15	
Arsenic			2430	mg/kg	1.0	98	75	125			
Lead			2360	mg/kg	1.0	95	75	125			
Lab ID:	**H15020207-046AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/09/15 20:19	
Arsenic			70.2	mg/kg	1.0	97	75	125			
Lead			76.2	mg/kg	1.0	91	75	125			
Lab ID:	**H15020207-046AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/09/15 20:24	
Arsenic			69.2	mg/kg	1.0	95	75	125	1.4	20	
Lead			77.8	mg/kg	1.0	95	75	125	2.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020207

Login completed by: Tracy L. Lorash
Date Received: 2/12/2015
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 2/16/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at -0.4°C, Cooler 2 at 0.3°C. Samples were received on wet ice. TI 2/12/15

CDM Smith

Chain of Custody Record

B

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15020207

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-090-3036	1337	2/4/15	Soil	A	B		1
4-090-3642	1336	2/4/15	Soil	A	B		1
4-090-4248	1335	2/4/15	Soil	A	B		1
4-091-0612	1506	2/4/15	Soil	A	B		1
4-091-1218	1505	2/4/15	Soil	A	B		1
4-091-1824	1504	2/4/15	Soil	A	B		1
4-092-3642	1521	2/4/15	Soil	A	B		1
4-092-4248	1520	2/4/15	Soil	A	B		1
4-093-3036	1547	2/4/15	Soil	A	B		1
4-093-3642	1546	2/4/15	Soil	A	B		1
4-093-4248	1545	2/4/15	Soil	A	B		1
4-098-0612	1251	2/4/15	Soil	A	B		1
4-098-1218	1250	2/4/15	Soil	A	B		1
4-098-1824	1249	2/4/15	Soil	A	B		1
4-099-0006	1407	2/4/15	Soil	A	B		1
4-099-0612	1406	2/4/15	Soil	A	B		1
4-099-1218	1405	2/4/15	Soil	A	B		1
4-100-1824	1444	2/4/15	Soil	A	B		1
4-100-1824d	1445	2/4/15	Soil	A	B		1
4-100-2430	1443	2/4/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) Erin M Ford	(1)	(2)	(2)
Date/Time: 2/12/15 1110	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):		Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	Tracy Lovell	On Ice: (Y) N Temp Blank: (Y) N	C1 = -0.4 Hand del. C2 = -0.3 2/12/15 11:10

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020207

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-100-3036	1442	2/4/15	Soil	A	B		1
4-104-0006	1422	2/4/15	Soil	A	B		1
4-104-0612	1421	2/4/15	Soil	A	B		1
4-104-1218	1420	2/4/15	Soil	A	B		1
4-108-0006	1203	2/4/15	Soil	A	B		1
4-108-0612	1202	2/4/15	Soil	A	B		1
4-108-1218	1201	2/4/15	Soil	A	B		1
4-108-1824	1159	2/4/15	Soil	A	B		1
4-108-1824d	1200	2/4/15	Soil	A	B		1
4-109-0006	1237	2/4/15	Soil	A	B		1
4-109-0612	1236	2/4/15	Soil	A	B		1
4-111-4854	1646	2/4/15	Soil	A	B		1
4-111-5460	1645	2/4/15	Soil	A	B		1
4-115-2430	1701	2/4/15	Soil	A	B		1
4-115-3036	1700	2/4/15	Soil	A	B		1
4-141-0006	1022	2/4/15	Soil	A	B		1
4-141-0612	1021	2/4/15	Soil	A	B		1
4-143-2430	818	2/4/15	Soil	A	B		1
4-143-3036	817	2/4/15	Soil	A	B		1
4-143-3642	816	2/4/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):
(1) [signature]
Date/Time: 2/12/15 1110

Received By (sign):
(1) _____
Date/Time:

Relinquished By (sign):
(2) _____
Date/Time:

Received By (sign):
(2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

On Ice: Y N
Temp Blank: Y N

Date/Time: C1 = -0.4 C2 = -0.3 2/12/15 11:10

Hand del.

COC02_04_15 EL.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020207

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
4-152-2430	828	2/4/15	Soil	A	B		1
4-152-3036	827	2/4/15	Soil	A	B		1
4-153-3036	917	2/4/15	Soil	A	B		1
4-153-3642	916	2/4/15	Soil	A	B		1
4-153-4248	915	2/4/15	Soil	A	B		1
4-154-2430	948	2/4/15	Soil	A	B		1
4-154-3036	947	2/4/15	Soil	A	B		1
4-154-3642	946	2/4/15	Soil	A	B		1
4-155-0006	1040	2/4/15	Soil	A	B		1
4-155-0612	1039	2/4/15	Soil	A	B		1
4-160-2430	853	2/4/15	Soil	A	B		1
4-160-3036	852	2/4/15	Soil	A	B		1
4-160-3642	851	2/4/15	Soil	A	B		1
4-101-3036	1607	2/4/15	Soil	A	B		1
4-101-3642	1606	2/4/15	Soil	A	B		1
4-101-4248	1605	2/4/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) Erin M Ford
Date/Time: 2/12/15 1110

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): Tracy Drost

On Ice: (Y) N
Temp Blank: (Y) N

Date/Time:
C1 = -0.4
C2 = -0.3
2/12/15 11:10
Hand del.

COC02_04_15 EL.xls

ANALYTICAL SUMMARY REPORT

March 10, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020206

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 73 samples for MT DEQ-Federal Superfund on 2/12/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020206-001	4-052-0006	02/03/15 9:52	02/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020206-002	4-052-0612	02/03/15 9:51	02/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020206-003	4-052-1218	02/03/15 9:50	02/12/15	Soil	Same As Above
H15020206-004	4-059-0612	02/03/15 9:06	02/12/15	Soil	Same As Above
H15020206-005	4-059-0612D	02/03/15 9:07	02/12/15	Soil	Same As Above
H15020206-006	4-059-1218	02/03/15 9:05	02/12/15	Soil	Same As Above
H15020206-007	4-059-1824	02/03/15 9:04	02/12/15	Soil	Same As Above
H15020206-008	4-059-2430	02/03/15 9:03	02/12/15	Soil	Same As Above
H15020206-009	4-059E-0006	02/03/15 11:05	02/12/15	Soil	Same As Above
H15020206-010	4-059E-0612	02/03/15 11:04	02/12/15	Soil	Same As Above
H15020206-011	4-059E-1218	02/03/15 11:03	02/12/15	Soil	Same As Above
H15020206-012	4-059W-0612	02/03/15 10:51	02/12/15	Soil	Same As Above
H15020206-013	4-059W-1218	02/03/15 10:50	02/12/15	Soil	Same As Above
H15020206-014	4-059W-1824	02/03/15 10:49	02/12/15	Soil	Same As Above
H15020206-015	4-067-3642	02/03/15 8:51	02/12/15	Soil	Same As Above
H15020206-016	4-067-4248	02/03/15 8:50	02/12/15	Soil	Same As Above
H15020206-017	4-067-4854	02/03/15 9:16	02/12/15	Soil	Same As Above
H15020206-018	4-067E-0006	02/03/15 10:28	02/12/15	Soil	Same As Above
H15020206-019	4-067E-0612	02/03/15 10:27	02/12/15	Soil	Same As Above
H15020206-020	4-067E-1218	02/03/15 10:25	02/12/15	Soil	Same As Above
H15020206-021	4-067E-1218D	02/03/15 10:26	02/12/15	Soil	Same As Above
H15020206-022	4-067W-0006	02/03/15 11:51	02/12/15	Soil	Same As Above
H15020206-023	4-067W-0612	02/03/15 11:50	02/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020206-024	4-067W-1218	02/03/15 11:48	02/12/15	Soil	Same As Above
H15020206-025	4-067W-1218D	02/03/15 11:49	02/12/15	Soil	Same As Above
H15020206-026	4-079-3036	02/03/15 8:37	02/12/15	Soil	Same As Above
H15020206-027	4-079-3642	02/03/15 8:36	02/12/15	Soil	Same As Above
H15020206-028	4-079-4248	02/03/15 8:35	02/12/15	Soil	Same As Above
H15020206-029	4-079E-0006	02/03/15 10:12	02/12/15	Soil	Same As Above
H15020206-030	4-079E-0612	02/03/15 10:11	02/12/15	Soil	Same As Above
H15020206-031	4-095-0006	02/03/15 8:32	02/12/15	Soil	Same As Above
H15020206-032	4-095-0612	02/03/15 8:31	02/12/15	Soil	Same As Above
H15020206-033	4-116-0612	02/03/15 13:06	02/12/15	Soil	Same As Above
H15020206-034	4-116-1218	02/03/15 13:05	02/12/15	Soil	Same As Above
H15020206-035	4-116-1824	02/03/15 13:04	02/12/15	Soil	Same As Above
H15020206-036	4-117-0612	02/03/15 13:17	02/12/15	Soil	Same As Above
H15020206-037	4-117-1218	02/03/15 13:15	02/12/15	Soil	Same As Above
H15020206-038	4-117-1218D	02/03/15 13:16	02/12/15	Soil	Same As Above
H15020206-039	4-117-1824	02/03/15 13:14	02/12/15	Soil	Same As Above
H15020206-040	4-118-0612	02/03/15 13:46	02/12/15	Soil	Same As Above
H15020206-041	4-118-1218	02/03/15 13:45	02/12/15	Soil	Same As Above
H15020206-042	4-118-1824	02/03/15 13:44	02/12/15	Soil	Same As Above
H15020206-043	4-124E-0006	02/03/15 7:55	02/12/15	Soil	Same As Above
H15020206-044	4-124E-0612	02/03/15 7:54	02/12/15	Soil	Same As Above
H15020206-045	4-124E-1218	02/03/15 7:53	02/12/15	Soil	Same As Above
H15020206-046	4-125-0612	02/03/15 12:26	02/12/15	Soil	Same As Above
H15020206-047	4-125-1218	02/03/15 12:25	02/12/15	Soil	Same As Above
H15020206-048	4-125-1824	02/03/15 12:24	02/12/15	Soil	Same As Above
H15020206-049	4-127-0612	02/03/15 14:11	02/12/15	Soil	Same As Above
H15020206-050	4-127-1218	02/03/15 14:10	02/12/15	Soil	Same As Above
H15020206-051	4-127-1824	02/03/15 14:09	02/12/15	Soil	Same As Above
H15020206-052	4-128-1824	02/03/15 15:54	02/12/15	Soil	Same As Above
H15020206-053	4-128-2430	02/03/15 15:53	02/12/15	Soil	Same As Above
H15020206-054	4-128-3036	02/03/15 15:52	02/12/15	Soil	Same As Above
H15020206-055	4-136-0612	02/03/15 14:22	02/12/15	Soil	Same As Above
H15020206-056	4-136-1218	02/03/15 14:21	02/12/15	Soil	Same As Above
H15020206-057	4-136-1824	02/03/15 14:20	02/12/15	Soil	Same As Above
H15020206-058	4-137-3036	02/03/15 15:07	02/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020206-059	4-137-3642	02/03/15 15:06	02/12/15	Soil	Same As Above
H15020206-060	4-137-4248	02/03/15 15:05	02/12/15	Soil	Same As Above
H15020206-061	4-138-2430	02/03/15 15:43	02/12/15	Soil	Same As Above
H15020206-062	4-138-3036	02/03/15 15:42	02/12/15	Soil	Same As Above
H15020206-063	4-138-3642	02/03/15 15:41	02/12/15	Soil	Same As Above
H15020206-064	4-140-3642	02/03/15 16:06	02/12/15	Soil	Same As Above
H15020206-065	4-140-4248	02/03/15 16:05	02/12/15	Soil	Same As Above
H15020206-066	4-144-0612	02/03/15 15:29	02/12/15	Soil	Same As Above
H15020206-067	4-144-1218	02/03/15 15:28	02/12/15	Soil	Same As Above
H15020206-068	4-144-1824	02/03/15 15:27	02/12/15	Soil	Same As Above
H15020206-069	4-145-1824	02/03/15 16:24	02/12/15	Soil	Same As Above
H15020206-070	4-145-2430	02/03/15 16:23	02/12/15	Soil	Same As Above
H15020206-071	4-145-3036	02/03/15 16:22	02/12/15	Soil	Same As Above
H15020206-072	4-151-0006	02/03/15 16:41	02/12/15	Soil	Same As Above
H15020206-073	4-151-0612	02/03/15 16:40	02/12/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020206

Report Date: 03/10/15
Date Received: 02/12/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020206-001	4-052-0006	5.4	211	6	1160	165	1260
H15020206-002	4-052-0612	6.1	132	5	1380	213	990
H15020206-003	4-052-1218	6.3	134	4	1630	240	878
H15020206-004	4-059-0612	5.2	141	4	1200	194	720
H15020206-005	4-059-0612D	5.3	330	8	2640	375	2100
H15020206-006	4-059-1218	6.2	356	8	2640	375	2200
H15020206-007	4-059-1824	6.7	111	1	492	74	280
H15020206-008	4-059-2430	5.8	110	1	502	119	262
H15020206-009	4-059E-0006	7.8	186	7	2290	200	976
H15020206-010	4-059E-0612	7.6	53	< 1	222	27	125
H15020206-011	4-059E-1218	7.6	30	< 1	49	11	64
H15020206-012	4-059W-0612	5.7	668	13	3580	662	2810
H15020206-013	4-059W-1218	7.0	112	1	426	80	223
H15020206-014	4-059W-1824	7.2	12	< 1	43	13	65
H15020206-015	4-067-3642	7.0	130	2	972	148	384
H15020206-016	4-067-4248	7.2	39	< 1	220	101	143
H15020206-017	4-067-4854	7.2	28	< 1	93	17	91
H15020206-018	4-067E-0006	7.4	251	8	347	119	1070
H15020206-019	4-067E-0612	7.7	24	< 1	68	11	66
H15020206-020	4-067E-1218	7.7	16	< 1	50	11	61
H15020206-021	4-067E-1218D	7.6	17	< 1	52	12	66
H15020206-022	4-067W-0006	7.6	376	9	2170	346	1550
H15020206-023	4-067W-0612	7.8	44	< 1	63	13	77
H15020206-024	4-067W-1218	7.6	9	< 1	36	15	76
H15020206-025	4-067W-1218D	7.6	11	< 1	64	26	93
H15020206-026	4-079-3036	6.7	698	12	5830	1710	2040
H15020206-027	4-079-3642	6.4	13	< 1	38	14	69
H15020206-028	4-079-4248	7.2	14	< 1	18	8	46
H15020206-029	4-079E-0006	7.2	347	8	984	207	1020
H15020206-030	4-079E-0612	7.4	46	< 1	223	47	142
H15020206-031	4-095-0006	7.8	256	9	816	172	913
H15020206-032	4-095-0612	7.2	17	< 1	50	16	80
H15020206-033	4-116-0612	8.0	409	5	1700	337	1790
H15020206-034	4-116-1218	7.8	43	1	275	56	346
H15020206-035	4-116-1824	7.7	25	< 1	118	30	125
H15020206-036	4-117-0612	7.8	717	5	3310	501	1730
H15020206-037	4-117-1218	7.8	23	1	167	31	243
H15020206-038	4-117-1218D	7.7	13	< 1	65	14	94
H15020206-039	4-117-1824	7.7	19	< 1	110	19	102
H15020206-040	4-118-0612	7.5	1270	12	10400	919	3410

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020206

Report Date: 03/10/15
Date Received: 02/12/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020206-041	4-118-1218	7.8	59	1	451	63	386
H15020206-042	4-118-1824	7.6	18	< 1	162	29	128
H15020206-043	4-124E-0006	7.3	250	6	788	105	826
H15020206-044	4-124E-0612	7.4	249	5	578	95	666
H15020206-045	4-124E-1218	7.5	360	6	2700	349	939
H15020206-046	4-125-0612	8.0	483	9	2680	331	2700
H15020206-047	4-125-1218	7.7	190	8	2420	272	1720
H15020206-048	4-125-1824	7.7	25	< 1	208	27	177
H15020206-049	4-127-0612	7.6	46	19	8120	36	4880
H15020206-050	4-127-1218	7.8	13	< 1	226	16	230
H15020206-051	4-127-1824	7.7	29	< 1	600	42	296
H15020206-052	4-128-1824	7.5	10	9	6550	18	1710
H15020206-053	4-128-2430	7.3	5	< 1	52	11	563
H15020206-054	4-128-3036	6.9	6	< 1	25	12	61
H15020206-055	4-136-0612	7.6	10	< 1	176	15	248
H15020206-056	4-136-1218	8.0	9	< 1	193	15	115
H15020206-057	4-136-1824	8.1	11	< 1	154	10	132
H15020206-058	4-137-3036	6.5	7	3	111	13	1390
H15020206-059	4-137-3642	5.9	6	3	76	14	826
H15020206-060	4-137-4248	6.4	7	< 1	30	13	616
H15020206-061	4-138-2430	6.9	24	5	1350	56	947
H15020206-062	4-138-3036	6.7	8	< 1	45	20	1200
H15020206-063	4-138-3642	6.8	6	< 1	35	19	873
H15020206-064	4-140-3642	6.3	7	2	3400	16	463
H15020206-065	4-140-4248	6.3	61	< 1	3030	56	245
H15020206-066	4-144-0612	6.9	192	2	4840	797	985
H15020206-067	4-144-1218	7.3	5	1	667	20	275
H15020206-068	4-144-1824	7.1	5	2	947	9	343
H15020206-069	4-145-1824	7.4	16	16	2750	19	3300
H15020206-070	4-145-2430	7.6	4	< 1	26	9	112
H15020206-071	4-145-3036	6.8	4	< 1	15	8	84
H15020206-072	4-151-0006	7.5	94	2	551	82	561
H15020206-073	4-151-0612	7.4	91	2	531	75	561

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2							Analytical Run: SOIL PH METER_150304A			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 08:48
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 09:14
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 09:41
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150303_1		Continuing Calibration Verification Standard								03/04/15 06:53
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150303_1		Continuing Calibration Verification Standard								03/04/15 06:53
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 06:54
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150303_1		Continuing Calibration Verification Standard								03/04/15 07:05
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150303_1		Continuing Calibration Verification Standard								03/04/15 07:29
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150303_1		Continuing Calibration Verification Standard								03/04/15 07:29
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 07:30
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150303_1		Continuing Calibration Verification Standard								03/04/15 07:42
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150303_1		Continuing Calibration Verification Standard								03/04/15 08:14
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150303_1		Continuing Calibration Verification Standard								03/04/15 08:15
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 08:16
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150303_1		Continuing Calibration Verification Standard								03/04/15 08:32
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150303_1		Continuing Calibration Verification Standard								03/04/15 08:51
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150303_1		Continuing Calibration Verification Standard								03/04/15 08:52
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150304A		
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 08:52	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150303_1		Continuing Calibration Verification Standard							03/04/15 09:06	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 06:43	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 07:09	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 07:39	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard							03/04/15 09:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1		Initial Calibration Verification Standard							03/05/15 08:07	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 28262	
Lab ID: LCS-28262		Laboratory Control Sample				Run: SOIL PH METER_150304A			03/04/15 06:55	
pH, sat. paste		7.58	s.u.	0.10	101	95	105			
Lab ID: H15020206-010ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/04/15 07:04	
pH, sat. paste		7.62	s.u.	0.10				0.1	30	
Lab ID: H15020206-020ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/04/15 07:18	
pH, sat. paste		7.72	s.u.	0.10				0.1	30	
Method: ASAM10-3.2									Batch: 28263	
Lab ID: LCS-28263		Laboratory Control Sample				Run: SOIL PH METER_150304A			03/04/15 07:31	
pH, sat. paste		7.59	s.u.	0.10	101	95	105			
Lab ID: H15020206-030ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/04/15 07:41	
pH, sat. paste		7.41	s.u.	0.10				0.0	30	
Lab ID: H15020206-040ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/04/15 07:54	
pH, sat. paste		7.55	s.u.	0.10				0.1	30	
Method: ASAM10-3.2									Batch: 28264	
Lab ID: LCS-28264		Laboratory Control Sample				Run: SOIL PH METER_150304A			03/04/15 08:16	
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H15020206-050ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/04/15 08:31	
pH, sat. paste		7.75	s.u.	0.10				0.1	30	
Lab ID: H15020206-060ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/04/15 08:44	
pH, sat. paste		6.43	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28264
Lab ID: H15020206-060ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/04/15 08:44	
Method: ASAM10-3.2										Batch: 28265
Lab ID: LCS-28265		Laboratory Control Sample				Run: SOIL PH METER_150304A			03/04/15 08:54	
pH, sat. paste		7.60	s.u.	0.10	102	95	105			
Lab ID: H15020206-070ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/04/15 09:06	
pH, sat. paste		7.55	s.u.	0.10				0.1	30	
Lab ID: H15020206-073ADUP		Sample Duplicate				Run: SOIL PH METER_150304A			03/04/15 09:11	
pH, sat. paste		7.40	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150302A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								03/02/15 11:13
Arsenic			0.819	mg/L	0.0085	102	90	110			
Cadmium			0.394	mg/L	0.0010	99	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.769	mg/L	0.010	96	90	110			
Zinc			0.813	mg/L	0.010	102	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/02/15 11:28
Arsenic			0.0169	mg/L	0.0085		0	0			
Cadmium			0.00587	mg/L	0.0010		0	0			
Copper			-0.000550	mg/L	0.010		0	0			
Lead			-0.0214	mg/L	0.010		0	0			
Zinc			0.00406	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/02/15 11:32
Arsenic			1.01	mg/L	0.0085	101	80	120			
Cadmium			0.927	mg/L	0.0010	93	80	120			
Copper			0.509	mg/L	0.010	102	80	120			
Lead			0.921	mg/L	0.010	92	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/02/15 15:25
Arsenic			2.45	mg/L	0.0085	98	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.41	mg/L	0.010	96	90	110			
Zinc			2.44	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/02/15 15:29
Arsenic			0.000300	mg/L	0.0085						
Cadmium			0.000740	mg/L	0.0010						
Copper			-0.000370	mg/L	0.010						
Lead			0.00174	mg/L	0.010						
Zinc			-0.000200	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/02/15 16:09
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/02/15 16:13
Arsenic			0.00858	mg/L	0.0085						
Cadmium			0.00102	mg/L	0.0010						
Copper			0.00237	mg/L	0.010						
Lead			-0.00268	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150302A	
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/02/15 16:13
Zinc			3.00E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/02/15 16:53
Arsenic			2.60	mg/L	0.0085	104	90	110			
Cadmium			2.54	mg/L	0.0010	102	90	110			
Copper			2.61	mg/L	0.010	104	90	110			
Lead			2.60	mg/L	0.010	104	90	110			
Zinc			2.55	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/02/15 16:57
Arsenic			0.00420	mg/L	0.0085						
Cadmium			0.000180	mg/L	0.0010						
Copper			0.00389	mg/L	0.010						
Lead			0.00894	mg/L	0.010						
Zinc			0.000580	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/02/15 17:38
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.38	mg/L	0.0010	95	90	110			
Copper			2.56	mg/L	0.010	103	90	110			
Lead			2.43	mg/L	0.010	97	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/02/15 17:42
Arsenic			0.0111	mg/L	0.0085						
Cadmium			0.000800	mg/L	0.0010						
Copper			0.00333	mg/L	0.010						
Lead			0.0111	mg/L	0.010						
Zinc			0.00100	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/02/15 18:22
Arsenic			2.55	mg/L	0.0085	102	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.60	mg/L	0.010	104	90	110			
Lead			2.49	mg/L	0.010	99	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/02/15 18:26
Arsenic			0.00472	mg/L	0.0085						
Cadmium			0.000820	mg/L	0.0010						
Copper			0.00208	mg/L	0.010						
Lead			0.00363	mg/L	0.010						
Zinc			0.000760	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/02/15 19:06
Arsenic			2.59	mg/L	0.0085	103	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150302A		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/02/15 19:06	
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.60	mg/L	0.010	104	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/02/15 19:10	
Arsenic			0.00636	mg/L	0.0085						
Cadmium			0.000620	mg/L	0.0010						
Copper			0.00190	mg/L	0.010						
Lead			0.0114	mg/L	0.010						
Zinc			0.000930	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150303A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								03/03/15 10:50
Arsenic			0.768	mg/L	0.0085	96	90	110			
Cadmium			0.380	mg/L	0.0010	95	90	110			
Copper			0.792	mg/L	0.010	99	90	110			
Lead			0.772	mg/L	0.010	97	90	110			
Zinc			0.784	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/03/15 11:04
Arsenic			0.00590	mg/L	0.0085		0	0			
Cadmium			0.000930	mg/L	0.0010		0	0			
Copper			-0.000640	mg/L	0.010		0	0			
Lead			-0.00763	mg/L	0.010		0	0			
Zinc			0.00244	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/03/15 11:09
Arsenic			0.957	mg/L	0.0085	96	80	120			
Cadmium			0.876	mg/L	0.0010	88	80	120			
Copper			0.513	mg/L	0.010	103	80	120			
Lead			0.890	mg/L	0.010	89	80	120			
Zinc			0.966	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/03/15 16:39
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.51	mg/L	0.0010	100	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/03/15 16:42
Arsenic			0.00395	mg/L	0.0085						
Cadmium			0.00115	mg/L	0.0010						
Copper			0.00251	mg/L	0.010						
Lead			-0.000310	mg/L	0.010						
Zinc			0.00105	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/03/15 17:23
Arsenic			2.54	mg/L	0.0085	102	90	110			
Cadmium			2.53	mg/L	0.0010	101	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/03/15 17:26
Arsenic			-0.00562	mg/L	0.0085						
Cadmium			0.000470	mg/L	0.0010						
Copper			0.00157	mg/L	0.010						
Lead			0.0122	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150303A	
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/03/15 17:26	
Zinc			0.00187	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/03/15 18:07	
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.51	mg/L	0.010	101	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/03/15 18:10	
Arsenic			0.000830	mg/L	0.0085						
Cadmium			0.000960	mg/L	0.0010						
Copper			0.00289	mg/L	0.010						
Lead			-0.00407	mg/L	0.010						
Zinc			0.000520	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/03/15 18:51	
Arsenic			2.51	mg/L	0.0085	100	90	110			
Cadmium			2.50	mg/L	0.0010	100	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/03/15 18:54	
Arsenic			-0.00221	mg/L	0.0085						
Cadmium			0.000630	mg/L	0.0010						
Copper			0.000810	mg/L	0.010						
Lead			-0.0170	mg/L	0.010						
Zinc			0.000350	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150306A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								03/06/15 09:21
Arsenic			0.800	mg/L	0.0085	100	90	110			
Cadmium			0.388	mg/L	0.0010	97	90	110			
Copper			0.805	mg/L	0.010	101	90	110			
Lead			0.816	mg/L	0.010	102	90	110			
Zinc			0.798	mg/L	0.010	100	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/06/15 09:36
Arsenic			0.0119	mg/L	0.0085		0	0			
Cadmium			-2.00E-05	mg/L	0.0010		0	0			
Copper			0.00303	mg/L	0.010		0	0			
Lead			-0.0399	mg/L	0.010		0	0			
Zinc			0.00225	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/06/15 09:40
Arsenic			1.01	mg/L	0.0085	101	80	120			
Cadmium			0.936	mg/L	0.0010	94	80	120			
Copper			0.516	mg/L	0.010	103	80	120			
Lead			0.915	mg/L	0.010	91	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/06/15 14:16
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.51	mg/L	0.010	100	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/06/15 14:20
Arsenic			0.00752	mg/L	0.0085						
Cadmium			0.00114	mg/L	0.0010						
Copper			0.00463	mg/L	0.010						
Lead			-0.00802	mg/L	0.010						
Zinc			2.00E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/06/15 15:00
Arsenic			2.47	mg/L	0.0085	99	90	110			
Cadmium			2.44	mg/L	0.0010	98	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.46	mg/L	0.010	99	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/06/15 15:04
Arsenic			-0.000690	mg/L	0.0085						
Cadmium			0.000980	mg/L	0.0010						
Copper			0.00291	mg/L	0.010						
Lead			-0.0128	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150306A	
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/06/15 15:04	
Zinc			0.000330	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/06/15 15:30	
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/06/15 15:33	
Arsenic			0.00584	mg/L	0.0085						
Cadmium			0.000750	mg/L	0.0010						
Copper			0.00539	mg/L	0.010						
Lead			-0.0310	mg/L	0.010						
Zinc			0.000460	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150304B		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/04/15 22:29	
Arsenic			0.0504	mg/L	0.0050	101	90	110			
Cadmium			0.0508	mg/L	0.0010	102	90	110			
Lead			0.0485	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/04/15 22:38	
Arsenic			1.55E-05	mg/L	0.0050						
Cadmium			1.90E-06	mg/L	0.0010						
Lead			3.40E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/04/15 23:33	
Arsenic			0.0510	mg/L	0.0050	102	90	110			
Cadmium			0.0507	mg/L	0.0010	101	90	110			
Lead			0.0485	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/04/15 23:43	
Arsenic			1.94E-05	mg/L	0.0050						
Cadmium			-1.70E-06	mg/L	0.0010						
Lead			5.00E-07	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/05/15 00:42	
Arsenic			0.0512	mg/L	0.0050	102	90	110			
Cadmium			0.0502	mg/L	0.0010	100	90	110			
Lead			0.0480	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/05/15 00:51	
Arsenic			3.48E-05	mg/L	0.0050						
Cadmium			-1.30E-06	mg/L	0.0010						
Lead			-7.00E-07	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/05/15 01:50	
Arsenic			0.0517	mg/L	0.0050	103	90	110			
Cadmium			0.0507	mg/L	0.0010	101	90	110			
Lead			0.0481	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/05/15 02:00	
Arsenic			5.08E-05	mg/L	0.0050						
Cadmium			4.00E-07	mg/L	0.0010						
Lead			8.00E-07	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/05/15 02:55	
Arsenic			0.0509	mg/L	0.0050	102	90	110			
Cadmium			0.0503	mg/L	0.0010	101	90	110			
Lead			0.0483	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/05/15 03:04	
Arsenic			1.58E-05	mg/L	0.0050						
Cadmium			-1.20E-06	mg/L	0.0010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150304B		
Lab ID:	**CCB**	3	Continuing Calibration Blank								03/05/15 03:04
Lead			-2.80E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								03/05/15 04:04
Arsenic			0.0522	mg/L	0.0050	104	90	110			
Cadmium			0.0506	mg/L	0.0010	101	90	110			
Lead			0.0487	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								03/05/15 04:13
Arsenic			2.50E-05	mg/L	0.0050						
Cadmium			-1.00E-07	mg/L	0.0010						
Lead			-2.90E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								03/05/15 05:03
Arsenic			0.0513	mg/L	0.0050	103	90	110			
Cadmium			0.0502	mg/L	0.0010	100	90	110			
Lead			0.0481	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								03/05/15 05:13
Arsenic			1.96E-05	mg/L	0.0050						
Cadmium			-2.20E-06	mg/L	0.0010						
Lead			-3.60E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								03/05/15 06:03
Arsenic			0.0519	mg/L	0.0050	104	90	110			
Cadmium			0.0506	mg/L	0.0010	101	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								03/05/15 06:12
Arsenic			1.23E-05	mg/L	0.0050						
Cadmium			4.00E-07	mg/L	0.0010						
Lead			8.50E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 15:41	
Arsenic			0.0502	mg/L	0.0050	100	90	110			
Cadmium			0.0492	mg/L	0.0010	98	90	110			
Copper			0.0502	mg/L	0.010	100	90	110			
Lead			0.0494	mg/L	0.010	99	90	110			
Zinc			0.0480	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 15:49	
Arsenic			-1.07E-05	mg/L	0.0050						
Cadmium			1.10E-06	mg/L	0.0010						
Copper			-4.36E-05	mg/L	0.010						
Lead			4.00E-07	mg/L	0.010						
Zinc			-2.09E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 16:47	
Arsenic			0.0503	mg/L	0.0050	101	90	110			
Cadmium			0.0495	mg/L	0.0010	99	90	110			
Copper			0.0506	mg/L	0.010	101	90	110			
Lead			0.0498	mg/L	0.010	100	90	110			
Zinc			0.0481	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 16:56	
Arsenic			-1.00E-07	mg/L	0.0050						
Cadmium			1.60E-06	mg/L	0.0010						
Copper			-3.90E-05	mg/L	0.010						
Lead			-7.00E-07	mg/L	0.010						
Zinc			1.60E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/09/15 17:39	
Arsenic			0.0499	mg/L	0.0050	100	90	110			
Cadmium			0.0494	mg/L	0.0010	99	90	110			
Copper			0.0500	mg/L	0.010	100	90	110			
Lead			0.0503	mg/L	0.010	101	90	110			
Zinc			0.0484	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/09/15 17:47	
Arsenic			-9.00E-07	mg/L	0.0050						
Cadmium			1.70E-06	mg/L	0.0010						
Copper			-3.71E-05	mg/L	0.010						
Lead			6.00E-07	mg/L	0.010						
Zinc			4.40E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28202
Lab ID:	**MB-28202**	5	Method Blank				Run: ICP2-HE_150302A				03/02/15 15:36
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-28202**	5	Laboratory Fortified Blank				Run: ICP2-HE_150302A				03/02/15 15:40
Arsenic			48.3	mg/kg	1.0	96	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			50.1	mg/kg	1.0	100	80	120			
Lead			48.0	mg/kg	1.0	96	80	120			
Zinc			49.4	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-28202**	5	Laboratory Control Sample				Run: ICP2-HE_150302A				03/02/15 15:44
Arsenic			297	mg/kg	3.3	87	72.3	106.4			
Cadmium			123	mg/kg	1.0	89	73	105.1			
Copper			275	mg/kg	2.0	98	77.5	109.6			
Lead			180	mg/kg	5.8	96	75.9	108.6			
Zinc			198	mg/kg	1.0	93	74.2	109.9			
Lab ID:	**H15020206-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150302A				03/02/15 17:12
Arsenic			506	mg/kg	1.8	100	75	125			
Cadmium			121	mg/kg	1.0	89	75	125			
Copper			601	mg/kg	1.1	100	75	125			
Lead			354	mg/kg	3.2	92	75	125			
Zinc			1320	mg/kg	1.0		75	125			A
Lab ID:	**H15020206-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150302A				03/02/15 17:16
Arsenic			291	mg/kg	1.8		75	125			A
Cadmium			28.5	mg/kg	1.0	83	75	125			
Copper			412	mg/kg	1.1		75	125			A
Lead			152	mg/kg	3.2	68	75	125			S
Zinc			1080	mg/kg	1.0		75	125			A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Lab ID:	**H15020206-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150302A				03/02/15 17:19
Arsenic			291	mg/kg	1.8		75	125	0.0	20	A
Cadmium			28.4	mg/kg	1.0	83	75	125	0.3	20	
Copper			415	mg/kg	1.1		75	125	0.6	20	A
Lead			155	mg/kg	3.2	74	75	125	1.8	20	S
Zinc			1080	mg/kg	1.0		75	125	0.0	20	A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Method:	**SW6010B**										Batch: 28206
Lab ID:	**MB-28206**	5	Method Blank				Run: ICP2-HE_150302A				03/02/15 13:02
Arsenic			ND	mg/kg	0.4						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28206
Lab ID:	**MB-28206**	5	Method Blank				Run: ICP2-HE_150302A			03/02/15 13:02	
Cadmium			0.03	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-28206**	5	Laboratory Fortified Blank				Run: ICP2-HE_150302A			03/02/15 13:06	
Arsenic			49.0	mg/kg	1.0	98	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			
Copper			51.1	mg/kg	1.0	102	80	120			
Lead			48.5	mg/kg	1.0	97	80	120			
Zinc			50.2	mg/kg	1.0	100	80	120			
Lab ID:	**LCS-28206**	5	Laboratory Control Sample				Run: ICP2-HE_150302A			03/02/15 13:09	
Arsenic			314	mg/kg	3.5	92	72.3	106.4			
Cadmium			129	mg/kg	1.0	94	73	105.1			
Copper			289	mg/kg	2.2	103	77.5	109.6			
Lead			192	mg/kg	6.2	103	75.9	108.6			
Zinc			212	mg/kg	1.0	99	74.2	109.9			
Lab ID:	**H15020121-055APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150302A			03/02/15 13:20	
Arsenic			2050	mg/kg	1.8		75	125			A
Cadmium			109	mg/kg	1.0	82	75	125			
Copper			6530	mg/kg	1.1		75	125			A
Lead			1970	mg/kg	3.2		75	125			A
Zinc			2280	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-055AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150302A			03/02/15 13:24	
Arsenic			1800	mg/kg	1.8		75	125			A
Cadmium			25.2	mg/kg	1.0	84	75	125			
Copper			6270	mg/kg	1.1		75	125			A
Lead			1750	mg/kg	3.2		75	125			A
Zinc			2040	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-055AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150302A			03/02/15 13:27	
Arsenic			1830	mg/kg	1.8		75	125	1.5	20	A
Cadmium			25.5	mg/kg	1.0	87	75	125	1.5	20	
Copper			6350	mg/kg	1.1		75	125	1.3	20	A
Lead			1790	mg/kg	3.1		75	125	2.0	20	A
Zinc			2070	mg/kg	1.0		75	125	1.3	20	A
Lab ID:	**H15020206-030APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150302A			03/02/15 14:52	
Arsenic			271	mg/kg	1.8	90	75	125			
Cadmium			105	mg/kg	1.0	83	75	125			
Copper			450	mg/kg	1.1	91	75	125			
Lead			254	mg/kg	3.2	83	75	125			
Zinc			364	mg/kg	1.0	89	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28206
Lab ID:	**H15020206-030APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150302A			03/02/15 14:52	
Lab ID:	**H15020206-030AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150302A			03/02/15 14:55	
Arsenic			92.2	mg/kg	1.7	95	75	125			
Cadmium			21.6	mg/kg	1.0	85	75	125			
Copper			264	mg/kg	1.1		75	125			A
Lead			88.7	mg/kg	3.1	87	75	125			
Zinc			190	mg/kg	1.0	98	75	125			
Lab ID:	**H15020206-030AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150302A			03/02/15 15:33	
Arsenic			85.9	mg/kg	1.7	82	75	125	7.1	20	
Cadmium			21.0	mg/kg	1.0	82	75	125	2.9	20	
Copper			266	mg/kg	1.1		75	125	0.5	20	A
Lead			81.7	mg/kg	3.1	72	75	125	8.3	20	S
Zinc			182	mg/kg	1.0	82	75	125	4.1	20	

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28207
Lab ID:	**MB-28207**	5	Method Blank				Run: ICP2-HE_150302A			03/02/15 17:23	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28207**	5	Laboratory Fortified Blank				Run: ICP2-HE_150302A			03/02/15 17:27	
Arsenic			50.5	mg/kg	1.0	101	80	120			
Cadmium			23.3	mg/kg	1.0	93	80	120			
Copper			51.1	mg/kg	1.0	102	80	120			
Lead			46.9	mg/kg	1.0	94	80	120			
Zinc			48.7	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-28207**	5	Laboratory Control Sample				Run: ICP2-HE_150302A			03/02/15 17:31	
Arsenic			315	mg/kg	3.6	92	72.3	106.4			
Cadmium			126	mg/kg	1.0	92	73	105.1			
Copper			281	mg/kg	2.2	100	77.5	109.6			
Lead			197	mg/kg	6.4	105	75.9	108.6			
Zinc			205	mg/kg	1.0	96	74.2	109.9			
Lab ID:	**H15020206-048APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150302A			03/02/15 18:59	
Arsenic			229	mg/kg	1.8	82	75	125			
Cadmium			93.5	mg/kg	1.0	75	75	125			
Copper			412	mg/kg	1.1	82	75	125			
Lead			222	mg/kg	3.2	79	75	125			
Zinc			376	mg/kg	1.0	80	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28207
Lab ID:	**H15020206-048AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150302A			03/02/15 19:02	
Arsenic			64.2	mg/kg	1.7	81	75	125			
Cadmium			19.6	mg/kg	1.0	78	75	125			
Copper			251	mg/kg	1.1		75	125			A
Lead			70.5	mg/kg	3.1	91	75	125			
Zinc			220	mg/kg	1.0	89	75	125			
Lab ID:	**H15020206-048AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150302A			03/02/15 19:40	
Arsenic			63.4	mg/kg	1.7	79	75	125	1.3	20	
Cadmium			19.8	mg/kg	1.0	79	75	125	0.8	20	
Copper			243	mg/kg	1.1		75	125	3.2	20	A
Lead			65.9	mg/kg	3.1	81	75	125	6.8	20	
Zinc			218	mg/kg	1.0	84	75	125	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28208
Lab ID:	**MB-28208**	5	Method Blank				Run: ICP2-HE_150303A				03/03/15 16:50
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-28208**	5	Laboratory Fortified Blank				Run: ICP2-HE_150303A				03/03/15 16:54
Arsenic			47.6	mg/kg	1.0	95	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			48.7	mg/kg	1.0	97	80	120			
Lead			47.5	mg/kg	1.0	95	80	120			
Zinc			48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28208**	5	Laboratory Control Sample				Run: ICP2-HE_150303A				03/03/15 16:57
Arsenic			312	mg/kg	3.4	91	72.3	106.4			
Cadmium			131	mg/kg	1.0	96	73	105.1			
Copper			279	mg/kg	2.1	100	77.5	109.6			
Lead			200	mg/kg	6.0	107	75.9	108.6			
Zinc			210	mg/kg	1.0	98	74.2	109.9			
Lab ID:	**H15020206-066APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150303A				03/03/15 18:25
Arsenic			412	mg/kg	1.9	85	75	125			
Cadmium			110	mg/kg	1.0	84	75	125			
Copper			5090	mg/kg	1.1		75	125			A
Lead			1000	mg/kg	3.3	79	75	125			
Zinc			1200	mg/kg	1.0	82	75	125			
Lab ID:	**H15020206-066AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150303A				03/03/15 18:29
Arsenic			224	mg/kg	1.8	64	75	125			S
Cadmium			22.7	mg/kg	1.0	84	75	125			
Copper			4810	mg/kg	1.1		75	125			A
Lead			789	mg/kg	3.2		75	125			A
Zinc			977	mg/kg	1.0		75	125			A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Lab ID:	**H15020206-066AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150303A				03/03/15 18:32
Arsenic			226	mg/kg	1.8	68	75	125	1.0	20	S
Cadmium			22.6	mg/kg	1.0	84	75	125	0.2	20	
Copper			4670	mg/kg	1.1		75	125	2.9	20	A
Lead			801	mg/kg	3.2		75	125	1.5	20	A
Zinc			984	mg/kg	1.0		75	125	0.7	20	A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28305
Lab ID:	**MB-28305**	5	Method Blank				Run: ICP2-HE_150306A				03/06/15 14:01
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.8	mg/kg	0.09						
Lab ID:	**LFB-28305**	5	Laboratory Fortified Blank				Run: ICP2-HE_150306A				03/06/15 14:05
Arsenic			46.4	mg/kg	1.0	93	80	120			
Cadmium			23.0	mg/kg	1.0	92	80	120			
Copper			47.9	mg/kg	1.0	95	80	120			
Lead			46.6	mg/kg	1.0	93	80	120			
Zinc			48.6	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28305**	5	Laboratory Control Sample				Run: ICP2-HE_150306A				03/06/15 14:09
Arsenic			267	mg/kg	1.8	78	72.3	106.4			
Cadmium			112	mg/kg	1.0	82	73	105.1			
Copper			240	mg/kg	1.1	86	77.5	109.6			
Lead			163	mg/kg	3.2	87	75.9	108.6			
Zinc			184	mg/kg	1.0	86	74.2	109.9			
Lab ID:	**H15020204-058APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150306A				03/06/15 14:31
Arsenic			275	mg/kg	1.8	87	75	125			
Cadmium			104	mg/kg	1.0	83	75	125			
Copper			279	mg/kg	1.1	89	75	125			
Lead			225	mg/kg	3.2	85	75	125			
Zinc			321	mg/kg	1.0	86	75	125			
Lab ID:	**H15020204-058AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150306A				03/06/15 14:35
Arsenic			106	mg/kg	1.7	100	75	125			
Cadmium			21.0	mg/kg	1.0	85	75	125			
Copper			103	mg/kg	1.1	96	75	125			
Lead			56.4	mg/kg	3.1	90	75	125			
Zinc			154	mg/kg	1.0	101	75	125			
Lab ID:	**H15020204-058AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150306A				03/06/15 14:38
Arsenic			102	mg/kg	1.7	93	75	125	3.2	20	
Cadmium			20.7	mg/kg	1.0	84	75	125	1.7	20	
Copper			104	mg/kg	1.1	98	75	125	0.9	20	
Lead			51.7	mg/kg	3.1	80	75	125	8.7	20	
Zinc			152	mg/kg	1.0	96	75	125	1.4	20	
Lab ID:	**H15020206-073APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150306A				03/06/15 15:19
Arsenic			319	mg/kg	1.8	90	75	125			
Cadmium			114	mg/kg	1.0	89	75	125			
Copper			765	mg/kg	1.1	93	75	125			
Lead			304	mg/kg	3.2	91	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28305
Lab ID:	**H15020206-073APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150306A			03/06/15 15:19	
Zinc			802	mg/kg	1.0	95	75	125			
Lab ID:	**H15020206-073AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150306A			03/06/15 15:22	
Arsenic			137	mg/kg	1.8	94	75	125			
Cadmium			24.1	mg/kg	1.0	90	75	125			
Copper			567	mg/kg	1.1		75	125			A
Lead			123	mg/kg	3.1	99	75	125			
Zinc			623	mg/kg	1.0		75	125			A
Lab ID:	**H15020206-073AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150306A			03/06/15 15:26	
Arsenic			147	mg/kg	1.9	105	75	125	7.3	20	
Cadmium			26.4	mg/kg	1.0	91	75	125	9.0	20	
Copper			630	mg/kg	1.2		75	125	11	20	A
Lead			135	mg/kg	3.4	114	75	125	9.9	20	
Zinc			686	mg/kg	1.0		75	125	9.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150304B		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							03/04/15 18:16	
Arsenic			0.0600	mg/L	0.0010	100	90	110			
Cadmium			0.0303	mg/L	0.0010	101	90	110			
Lead			0.0561	mg/L	0.0010	93	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							03/04/15 18:20	
Arsenic			0.000100	mg/L	0.0010						
Cadmium			0.000716	mg/L	0.0010						
Lead			0.000220	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							03/04/15 18:25	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Cadmium			0.00996	mg/L	0.0010	100	70	130			
Lead			0.000221	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 28202	
Lab ID:	**MB-28202**	3	Method Blank				Run: ICPMS204-B_150304B			03/04/15 22:43	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28202**	3	Laboratory Control Sample				Run: ICPMS204-B_150304B			03/04/15 22:47	
Arsenic			326	mg/kg	1.0	95	72.3	106.4			
Cadmium			132	mg/kg	1.0	96	73	105.1			
Lead			188	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-28202**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150304B			03/04/15 22:52	
Arsenic			50.2	mg/kg	1.0	100	80	120			
Cadmium			25.3	mg/kg	1.0	101	80	120			
Lead			46.5	mg/kg	1.0	93	80	120			
Lab ID:	**H15020206-018AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150304B			03/05/15 00:00	
Arsenic			291	mg/kg	1.0	503	75	125			S
Cadmium			30.5	mg/kg	1.0	117	75	125			
Lead			152	mg/kg	1.0	268	75	125			S
Lab ID:	**H15020206-018AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150304B			03/05/15 00:05	
Arsenic			288	mg/kg	1.0	498	75	125	0.9	20	S
Cadmium			30.7	mg/kg	1.0	118	75	125	0.7	20	
Lead			152	mg/kg	1.0	267	75	125	0.1	20	S
Method:	**SW6020**									Batch: 28206	
Lab ID:	**MB-28206**	3	Method Blank				Run: ICPMS204-B_150304B			03/05/15 00:14	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28206
Lab ID:	**LCS-28206**	3	Laboratory Control Sample				Run: ICPMS204-B_150304B				03/05/15 00:19
Arsenic			341	mg/kg	1.0	100	72.3	106.4			
Cadmium			136	mg/kg	1.0	99	73	105.1			
Lead			193	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-28206**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150304B				03/05/15 00:24
Arsenic			49.2	mg/kg	1.0	98	80	120			
Cadmium			24.8	mg/kg	1.0	99	80	120			
Lead			46.0	mg/kg	1.0	92	80	120			
Lab ID:	**H15020206-030APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150304B				03/05/15 01:37
Arsenic			2370	mg/kg	1.0	96	75	125			
Cadmium			1150	mg/kg	1.0	94	75	125			
Lead			2370	mg/kg	1.0	96	75	125			
Lab ID:	**H15020206-030AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150304B				03/05/15 01:41
Arsenic			95.6	mg/kg	1.0	92	75	125			
Cadmium			23.1	mg/kg	1.0	92	75	125			
Lead			85.0	mg/kg	1.0	85	75	125			
Lab ID:	**H15020206-030AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150304B				03/05/15 01:46
Arsenic			94.6	mg/kg	1.0	90	75	125	1.0	20	
Cadmium			23.4	mg/kg	1.0	93	75	125	1.2	20	
Lead			85.6	mg/kg	1.0	86	75	125	0.7	20	
Method:	**SW6020**										Batch: 28207
Lab ID:	**MB-28207**	3	Method Blank				Run: ICPMS204-B_150304B				03/05/15 02:04
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28207**	3	Laboratory Control Sample				Run: ICPMS204-B_150304B				03/05/15 02:09
Arsenic			337	mg/kg	1.0	98	72.3	106.4			
Cadmium			136	mg/kg	1.0	100	73	105.1			
Lead			193	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-28207**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150304B				03/05/15 02:14
Arsenic			49.7	mg/kg	1.0	99	80	120			
Cadmium			25.0	mg/kg	1.0	100	80	120			
Lead			46.1	mg/kg	1.0	92	80	120			
Lab ID:	**H15020206-048APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150304B				03/05/15 03:18
Arsenic			2370	mg/kg	1.0	97	75	125			
Cadmium			1090	mg/kg	1.0	91	75	125			
Lead			2270	mg/kg	1.0	93	75	125			
Lab ID:	**H15020206-048AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150304B				03/05/15 03:22
Arsenic			75.5	mg/kg	1.0	98	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 28207	
Lab ID:	**H15020206-048AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150304B			03/05/15 03:22	
Cadmium			22.5	mg/kg	1.0	90	75	125			
Lead			72.4	mg/kg	1.0	91	75	125			
Lab ID:	**H15020206-048AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150304B			03/05/15 03:27	
Arsenic			76.1	mg/kg	1.0	99	75	125	0.8	20	
Cadmium			22.1	mg/kg	1.0	89	75	125	1.9	20	
Lead			71.1	mg/kg	1.0	88	75	125	1.8	20	
Method:	**SW6020**									Batch: 28208	
Lab ID:	**MB-28208**	3	Method Blank				Run: ICPMS204-B_150304B			03/05/15 03:36	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28208**	3	Laboratory Control Sample				Run: ICPMS204-B_150304B			03/05/15 03:40	
Arsenic			328	mg/kg	1.0	96	72.3	106.4			
Cadmium			131	mg/kg	1.0	96	73	105.1			
Lead			189	mg/kg	1.0	101	75.9	108.6			
Lab ID:	**LFB-28208**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150304B			03/05/15 03:45	
Arsenic			50.0	mg/kg	1.0	100	80	120			
Cadmium			25.0	mg/kg	1.0	100	80	120			
Lead			46.4	mg/kg	1.0	93	80	120			
Lab ID:	**H15020206-066APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150304B			03/05/15 05:49	
Arsenic			2600	mg/kg	1.0	96	75	125			
Cadmium			1200	mg/kg	1.0	96	75	125			
Lead			3200	mg/kg	1.0	95	75	125			
Lab ID:	**H15020206-066AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150304B			03/05/15 05:54	
Arsenic			245	mg/kg	1.0		75	125			A
Cadmium			24.8	mg/kg	1.0	90	75	125			
Lead			833	mg/kg	1.0		75	125			A
Lab ID:	**H15020206-066AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150304B			03/05/15 05:58	
Arsenic			253	mg/kg	1.0		75	125	3.2	20	A
Cadmium			24.7	mg/kg	1.0	89	75	125	0.4	20	
Lead			842	mg/kg	1.0		75	125	1.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard								03/09/15 11:29
Arsenic			0.0631	mg/L	0.0010	105	90	110			
Cadmium			0.0327	mg/L	0.0010	109	90	110			
Copper			0.0644	mg/L	0.0010	107	90	110			
Lead			0.0618	mg/L	0.0010	103	90	110			
Zinc			0.0626	mg/L	0.0010	104	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/09/15 11:34
Arsenic			6.20E-05	mg/L	0.0010						
Cadmium			0.000924	mg/L	0.0010						
Copper			0.000916	mg/L	0.0010						
Lead			0.000244	mg/L	0.0010						
Zinc			0.00122	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/09/15 11:38
Arsenic			0.0112	mg/L	0.0010	112	70	130			
Cadmium			0.0111	mg/L	0.0010	111	70	130			
Copper			0.0218	mg/L	0.0010	109	70	130			
Lead			0.000245	mg/L	0.0010		0	0			
Zinc			0.0116	mg/L	0.0010	116	70	130			
Method:	**SW6020**										Batch: 28315
Lab ID:	**MB-28315**	5	Method Blank				Run: ICPMS204-B_150309A				03/09/15 15:54
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			0.9	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			4	mg/kg	4						
Lab ID:	**LCS-28315**	5	Laboratory Control Sample				Run: ICPMS204-B_150309A				03/09/15 15:58
Arsenic			302	mg/kg	1.0	88	72.3	106.4			
Cadmium			120	mg/kg	1.0	88	73	105.1			
Copper			274	mg/kg	1.0	98	77.5	109.6			
Lead			181	mg/kg	1.0	97	75.9	108.6			
Zinc			202	mg/kg	3.4	93	74.2	109.9			
Lab ID:	**LFB-28315**	5	Laboratory Fortified Blank				Run: ICPMS204-B_150309A				03/09/15 16:02
Arsenic			49.4	mg/kg	1.0	99	80	120			
Cadmium			24.6	mg/kg	1.0	99	80	120			
Copper			51.1	mg/kg	1.0	100	80	120			
Lead			47.9	mg/kg	1.0	96	80	120			
Zinc			50.0	mg/kg	3.5	93	80	120			
Lab ID:	**H15020206-029APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A				03/09/15 16:20
Arsenic			2910	mg/kg	1.0	97	75	125			
Cadmium			1210	mg/kg	1.0	91	75	125			
Copper			3310	mg/kg	1.0	88	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/10/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020206

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28315
Lab ID:	**H15020206-029APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/09/15 16:20	
Lead			2680	mg/kg	1.0	93	75	125			
Zinc			3330	mg/kg	3.7	87	75	125			
Lab ID:	**H15020206-029AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/09/15 16:24	
Arsenic			409	mg/kg	1.0		75	125			A
Cadmium			33.5	mg/kg	1.0	95	75	125			
Copper			1060	mg/kg	1.0		75	125			A
Lead			266	mg/kg	1.0	110	75	125			
Zinc			1080	mg/kg	3.8		75	125			A
Lab ID:	**H15020206-029AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/09/15 16:28	
Arsenic			403	mg/kg	1.0		75	125	1.4	20	A
Cadmium			32.3	mg/kg	1.0	91	75	125	3.8	20	
Copper			1040	mg/kg	1.0		75	125	1.8	20	A
Lead			260	mg/kg	1.0	101	75	125	2.2	20	
Zinc			1070	mg/kg	3.7		75	125	1.4	20	A
Lab ID:	**H15020206-073APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A			03/09/15 17:26	
Arsenic			2470	mg/kg	1.0	97	75	125			
Cadmium			1130	mg/kg	1.0	92	75	125			
Copper			2720	mg/kg	1.0	88	75	125			
Lead			2390	mg/kg	1.0	94	75	125			
Zinc			2730	mg/kg	3.4	88	75	125			
Lab ID:	**H15020206-073AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_150309A			03/09/15 17:30	
Arsenic			157	mg/kg	1.0	117	75	125			
Cadmium			28.0	mg/kg	1.0	96	75	125			
Copper			660	mg/kg	1.0		75	125			A
Lead			137	mg/kg	1.0	114	75	125			
Zinc			682	mg/kg	3.8		75	125			A
Lab ID:	**H15020206-073AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/09/15 17:34	
Arsenic			160	mg/kg	1.0	123	75	125	2.1	20	
Cadmium			27.3	mg/kg	1.0	93	75	125	2.4	20	
Copper			685	mg/kg	1.0		75	125	3.6	20	A
Lead			135	mg/kg	1.0	112	75	125	0.9	20	
Zinc			706	mg/kg	3.8		75	125	3.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020206

Login completed by: Austin H. Nearpass
Date Received: 2/12/2015
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 2/16/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	Comments°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 0.8 °C, Cooler 2 at 0.6 °C.
Time on bag 4-059-1218 is smeared. Used COC at login. An 2/12/15

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-052-0006	952	2/3/15	Soil	A	B		1
4-052-0612	951	2/3/15	Soil	A	B		1
4-052-1218	950	2/3/15	Soil	A	B		1
4-059-0612	906	2/3/15	Soil	A	B		1
4-059-0612D	907	2/3/15	Soil	A	B		1
4-059-1218	905	2/3/15	Soil	A	B		1
4-059-1824	904	2/3/15	Soil	A	B		1
4-059-2430	903	2/3/15	Soil	A	B		1
4-059E-0006	1105	2/3/15	Soil	A	B		1
4-059E-0612	1104	2/3/15	Soil	A	B		1
4-059E-1218	1103	2/3/15	Soil	A	B		1
4-059W-0612	1051	2/3/15	Soil	A	B		1
4-059W-1218	1050	2/3/15	Soil	A	B		1
4-059W-1824	1049	2/3/15	Soil	A	B		1
4-067-3642	851	2/3/15	Soil	A	B		1
4-067-4248	850	2/3/15	Soil	A	B		1
4-067-4854	916	2/3/15	Soil	A	B		1
4-067E-0006	1028	2/3/15	Soil	A	B		1
4-067E-0612	1027	2/3/15	Soil	A	B		1
4-067E-1218	1025	2/3/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15020206

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/12/15 1110

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: C1 = 0.8 C2 = 0.6 2/12/15 11:10

Hand del.

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-067E-1218D	1026	2/3/15	Soil	A	B		1
4-067W-0006	1151	2/3/15	Soil	A	B		1
4-067W-0612	1150	2/3/15	Soil	A	B		1
4-067W-1218	1148	2/3/15	Soil	A	B		1
4-067W-1218D	1149	2/3/15	Soil	A	B		1
4-079-3036	837	2/3/15	Soil	A	B		1
4-079-3642	836	2/3/15	Soil	A	B		1
4-079-4248	835	2/3/15	Soil	A	B		1
4-079E-0006	1012	2/3/15	Soil	A	B		1
4-079E-0612	1011	2/3/15	Soil	A	B		1
4-095-0006	832	2/3/15	Soil	A	B		1
4-095-0612	831	2/3/15	Soil	A	B		1
4-116-0612	1306	2/3/15	Soil	A	B		1
4-116-1218	1305	2/3/15	Soil	A	B		1
4-116-1824	1304	2/3/15	Soil	A	B		1
4-117-0612	1317	2/3/15	Soil	A	B		1
4-117-1218	1315	2/3/15	Soil	A	B		1
4-117-1218D	1316	2/3/15	Soil	A	B		1
4-117-1824	1314	2/3/15	Soil	A	B		1
4-118-0612	1346	2/3/15	Soil	A	B		1

H15020206

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 2/12/15 1110

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: C1 = 0.8 C2 = 0.4 2/12/15 11:10

Hand del.

CDM Smith

Company Name:
DEQ - Remediation Division

Report Mail Address:
0 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-118-1218	1345	2/3/15	Soil	A	B		1
4-118-1824	1344	2/3/15	Soil	A	B		1
4-124E-0006	755	2/3/15	Soil	A	B		1
4-124E-0612	754	2/3/15	Soil	A	B		1
4-124E-1218	753	2/3/15	Soil	A	B		1
4-125-0612	1226	2/3/15	Soil	A	B		1
4-125-1218	1225	2/3/15	Soil	A	B		1
4-125-1824	1224	2/3/15	Soil	A	B		1
4-127-0612	1411	2/3/15	Soil	A	B		1
4-127-1218	1410	2/3/15	Soil	A	B		1
4-127-1824	1409	2/3/15	Soil	A	B		1
4-128-1824	1554	2/3/15	Soil	A	B		1
4-128-2430	1553	2/3/15	Soil	A	B		1
4-128-3036	1552	2/3/15	Soil	A	B		1
4-136-0612	1422	2/3/15	Soil	A	B		1
4-136-1218	1421	2/3/15	Soil	A	B		1
4-136-1824	1420	2/3/15	Soil	A	B		1
4-137-3036	1507	2/3/15	Soil	A	B		1
4-137-3642	1506	2/3/15	Soil	A	B		1
4-137-4248	1505	2/3/15	Soil	A	B		1

H15020206

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 2/12/15 1110

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

On Ice: (Y) N
Temp Blank (Y) N

Date/Time: C1 = 0.8 C2 = 0.6 Hand del. 2/12/15 1110

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-138-2430	1543	2/3/15	Soil	A	B		1
4-138-3036	1542	2/3/15	Soil	A	B		1
4-138-3642	1541	2/3/15	Soil	A	B		1
4-140-3642	1606	2/3/15	Soil	A	B		1
4-140-4248	1605	2/3/15	Soil	A	B		1
4-144-0612	1529	2/3/15	Soil	A	B		1
4-144-1218	1528	2/3/15	Soil	A	B		1
4-144-1824	1527	2/3/15	Soil	A	B		1
4-145-1824	1624	2/3/15	Soil	A	B		1
4-145-2430	1623	2/3/15	Soil	A	B		1
4-145-3036	1622	2/3/15	Soil	A	B		1
4-151-0006	1641	2/3/15	Soil	A	B		1
4-151-0612	1640	2/3/15	Soil	A	B		1
		2/3/15	Soil	A	B		1
		2/3/15	Soil	A	B		1
		2/3/15	Soil	A	B		1
		2/3/15	Soil	A	B		1
		2/3/15	Soil	A	B		1
		2/3/15	Soil	A	B		1
		2/3/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

#15020206

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/12/15 1:10

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: C1 = 0.8 C2 = 0.6 2/12/15 11:10

Hand del.

ANALYTICAL SUMMARY REPORT

March 05, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020205

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 61 samples for MT DEQ-Federal Superfund on 2/12/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020205-001	4-105-0612	02/02/15 16:41	02/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020205-002	4-105-1218	02/02/15 16:40	02/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020205-003	4-105-1824	02/02/15 16:39	02/12/15	Soil	Same As Above
H15020205-004	4-114-0612	02/02/15 16:26	02/12/15	Soil	Same As Above
H15020205-005	4-114-1218	02/02/15 16:25	02/12/15	Soil	Same As Above
H15020205-006	4-114-1824	02/02/15 16:24	02/12/15	Soil	Same As Above
H15020205-007	4-124-1824	02/02/15 16:09	02/12/15	Soil	Same As Above
H15020205-008	4-124-2430	02/02/15 16:08	02/12/15	Soil	Same As Above
H15020205-009	4-124-3036	02/02/15 16:07	02/12/15	Soil	Same As Above
H15020205-010	4-500-1218	02/02/15 10:35	02/12/15	Soil	Same As Above
H15020205-011	4-500-1824	02/02/15 10:34	02/12/15	Soil	Same As Above
H15020205-012	4-500-2430	02/02/15 10:33	02/12/15	Soil	Same As Above
H15020205-013	4-500E-0006	02/02/15 11:45	02/12/15	Soil	Same As Above
H15020205-014	4-500E-0612	02/02/15 11:44	02/12/15	Soil	Same As Above
H15020205-015	4-500N-0006	02/02/15 11:35	02/12/15	Soil	Same As Above
H15020205-016	4-500N-0612	02/02/15 11:34	02/12/15	Soil	Same As Above
H15020205-017	4-500N-1218	02/02/15 11:33	02/12/15	Soil	Same As Above
H15020205-018	4-501-1824	02/02/15 10:04	02/12/15	Soil	Same As Above
H15020205-019	4-501-2430	02/02/15 10:03	02/12/15	Soil	Same As Above
H15020205-020	4-501-3036	02/02/15 10:02	02/12/15	Soil	Same As Above
H15020205-021	4-502-1824	02/02/15 9:34	02/12/15	Soil	Same As Above
H15020205-022	4-502-2430	02/02/15 9:33	02/12/15	Soil	Same As Above
H15020205-023	4-502-3036	02/02/15 9:32	02/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020205-024	4-502S-1218	02/02/15 13:33	02/12/15	Soil	Same As Above
H15020205-025	4-502S-1824	02/02/15 13:32	02/12/15	Soil	Same As Above
H15020205-026	4-502S-2430	02/02/15 13:31	02/12/15	Soil	Same As Above
H15020205-027	4-502W-1218	02/02/15 14:35	02/12/15	Soil	Same As Above
H15020205-028	4-502W-1824	02/02/15 14:34	02/12/15	Soil	Same As Above
H15020205-029	4-502W-2430	02/02/15 14:33	02/12/15	Soil	Same As Above
H15020205-030	4-503-1824	02/02/15 8:44	02/12/15	Soil	Same As Above
H15020205-031	4-503-1824D	02/02/15 8:45	02/12/15	Soil	Same As Above
H15020205-032	4-503-2430	02/02/15 8:43	02/12/15	Soil	Same As Above
H15020205-033	4-503-3036	02/02/15 8:42	02/12/15	Soil	Same As Above
H15020205-034	4-503E-0612	02/02/15 12:04	02/12/15	Soil	Same As Above
H15020205-035	4-503E-1218	02/02/15 12:03	02/12/15	Soil	Same As Above
H15020205-036	4-503E-1824	02/02/15 12:02	02/12/15	Soil	Same As Above
H15020205-037	4-503N-0006	02/02/15 11:16	02/12/15	Soil	Same As Above
H15020205-038	4-503N-0612	02/02/15 11:15	02/12/15	Soil	Same As Above
H15020205-039	4-503N-1218	02/02/15 11:13	02/12/15	Soil	Same As Above
H15020205-040	4-504-0612	02/02/15 8:26	02/12/15	Soil	Same As Above
H15020205-041	4-503N-1218D	02/02/15 11:14	02/12/15	Soil	Same As Above
H15020205-042	4-504-1218	02/02/15 8:25	02/12/15	Soil	Same As Above
H15020205-043	4-504-1824	02/02/15 8:24	02/12/15	Soil	Same As Above
H15020205-044	4-504E-0612	02/02/15 12:24	02/12/15	Soil	Same As Above
H15020205-045	4-504E-1218	02/02/15 12:23	02/12/15	Soil	Same As Above
H15020205-046	4-504E-1824	02/02/15 12:22	02/12/15	Soil	Same As Above
H15020205-047	4-504S-0006	02/02/15 12:45	02/12/15	Soil	Same As Above
H15020205-048	4-504S-0612	02/02/15 12:44	02/12/15	Soil	Same As Above
H15020205-049	4-505-0612	02/02/15 9:11	02/12/15	Soil	Same As Above
H15020205-050	4-505-1218	02/02/15 9:10	02/12/15	Soil	Same As Above
H15020205-051	4-505-1824	02/02/15 9:09	02/12/15	Soil	Same As Above
H15020205-052	4-506-3036	02/02/15 14:07	02/12/15	Soil	Same As Above
H15020205-053	4-506-3642	02/02/15 14:06	02/12/15	Soil	Same As Above
H15020205-054	4-506-4248	02/02/15 14:05	02/12/15	Soil	Same As Above
H15020205-055	4-506N-1218	02/02/15 15:05	02/12/15	Soil	Same As Above
H15020205-056	4-506N-1824	02/02/15 15:04	02/12/15	Soil	Same As Above
H15020205-057	4-506N-2430	02/02/15 15:03	02/12/15	Soil	Same As Above
H15020205-058	4-506W-0006	02/02/15 15:18	02/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020205-059	4-506W-0612	02/02/15 15:17	02/12/15	Soil	Same As Above
H15020205-060	4-506W-1218	02/02/15 15:15	02/12/15	Soil	Same As Above
H15020205-061	4-506W-1218D	02/02/15 15:16	02/12/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020205

Report Date: 03/05/15
Date Received: 02/12/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020205-001	4-105-0612	4.5	66	4	774	74	631
H15020205-002	4-105-1218	5.9	17	< 1	117	15	161
H15020205-003	4-105-1824	6.5	150	2	673	165	362
H15020205-004	4-114-0612	7.3	656	8	4340	726	1830
H15020205-005	4-114-1218	7.4	285	4	2020	326	1060
H15020205-006	4-114-1824	7.4	26	< 1	40	13	102
H15020205-007	4-124-1824	6.6	484	7	3670	610	1600
H15020205-008	4-124-2430	6.5	21	< 1	21	9	48
H15020205-009	4-124-3036	7.2	27	< 1	22	11	52
H15020205-010	4-500-1218	7.2	826	25	9590	923	6760
H15020205-011	4-500-1824	7.4	591	7	6810	758	1560
H15020205-012	4-500-2430	7.4	10	< 1	60	15	63
H15020205-013	4-500E-0006	7.3	123	6	689	151	960
H15020205-014	4-500E-0612	7.7	87	2	610	101	462
H15020205-015	4-500N-0006	7.7	429	9	2670	394	2170
H15020205-016	4-500N-0612	7.8	16	< 1	84	23	113
H15020205-017	4-500N-1218	7.7	5	< 1	22	12	53
H15020205-018	4-501-1824	6.3	643	11	3530	450	2540
H15020205-019	4-501-2430	6.4	234	3	1540	244	718
H15020205-020	4-501-3036	7.3	7	< 1	35	14	90
H15020205-021	4-502-1824	6.4	290	1	172	46	435
H15020205-022	4-502-2430	6.7	21	< 1	48	17	82
H15020205-023	4-502-3036	7.6	8	< 1	48	21	85
H15020205-024	4-502S-1218	7.8	784	9	5480	653	2630
H15020205-025	4-502S-1824	7.4	12	< 1	77	16	87
H15020205-026	4-502S-2430	7.6	5	< 1	24	8	47
H15020205-027	4-502W-1218	7.9	720	9	4570	670	2140
H15020205-028	4-502W-1824	7.7	91	2	524	84	568
H15020205-029	4-502W-2430	7.5	11	< 1	71	18	96
H15020205-030	4-503-1824	7.2	846	18	10400	859	4340
H15020205-031	4-503-1824D	7.3	678	10	8700	1060	2340
H15020205-032	4-503-2430	7.3	5	< 1	35	13	58
H15020205-033	4-503-3036	7.5	4	< 1	27	13	60
H15020205-034	4-503E-0612	8.0	709	8	3710	676	2420
H15020205-035	4-503E-1218	7.6	28	< 1	59	14	80
H15020205-036	4-503E-1824	7.4	10	< 1	35	12	73
H15020205-037	4-503N-0006	7.8	289	13	1750	303	2010
H15020205-038	4-503N-0612	7.9	23	< 1	80	14	80
H15020205-039	4-503N-1218	7.9	23	< 1	78	16	86
H15020205-040	4-504-0612	7.7	428	14	5900	536	3110

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020205

Report Date: 03/05/15
Date Received: 02/12/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020205-041	4-503N-1218D	7.8	28	< 1	118	20	107
H15020205-042	4-504-1218	7.5	21	< 1	47	12	85
H15020205-043	4-504-1824	7.3	12	< 1	73	18	95
H15020205-044	4-504E-0612	7.8	995	10	4140	1000	2640
H15020205-045	4-504E-1218	7.7	33	< 1	56	15	76
H15020205-046	4-504E-1824	7.7	13	< 1	37	14	69
H15020205-047	4-504S-0006	8.0	115	3	282	78	316
H15020205-048	4-504S-0612	8.0	17	< 1	53	14	70
H15020205-049	4-505-0612	7.7	436	7	3030	378	1870
H15020205-050	4-505-1218	7.7	150	2	1140	137	574
H15020205-051	4-505-1824	7.6	14	< 1	78	18	74
H15020205-052	4-506-3036	7.0	1710	21	13900	1060	4930
H15020205-053	4-506-3642	6.8	38	1	182	25	248
H15020205-054	4-506-4248	7.4	17	< 1	114	25	169
H15020205-055	4-506N-1218	7.8	493	6	3170	429	1820
H15020205-056	4-506N-1824	7.8	4	< 1	33	13	57
H15020205-057	4-506N-2430	7.7	5	< 1	23	10	50
H15020205-058	4-506W-0006	7.7	217	6	1360	229	1140
H15020205-059	4-506W-0612	7.8	19	< 1	78	15	89
H15020205-060	4-506W-1218	7.8	15	< 1	51	12	74
H15020205-061	4-506W-1218D	7.8	9	< 1	31	11	66

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150304A		
Lab ID: CCV_1_150302_1		Continuing Calibration Verification Standard								03/03/15 08:47
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150302_1		Continuing Calibration Verification Standard								03/03/15 08:48
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 08:48
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150302_1		Continuing Calibration Verification Standard								03/03/15 08:58
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150302_1		Continuing Calibration Verification Standard								03/03/15 09:12
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150302_1		Continuing Calibration Verification Standard								03/03/15 09:13
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 09:14
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150302_1		Continuing Calibration Verification Standard								03/03/15 09:23
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150302_1		Continuing Calibration Verification Standard								03/03/15 09:40
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150302_1		Continuing Calibration Verification Standard								03/03/15 09:41
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150302_1		Initial Calibration Verification Standard								03/03/15 09:41
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150302_1		Continuing Calibration Verification Standard								03/03/15 09:52
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150302_1		Continuing Calibration Verification Standard								03/03/15 10:01
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 06:54
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 07:30
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 08:16
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1		Initial Calibration Verification Standard								03/04/15 08:52
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150304A		
Lab ID: ICV_1_150304_1	Initial Calibration Verification Standard								03/05/15 06:43	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1	Initial Calibration Verification Standard								03/05/15 07:09	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1	Initial Calibration Verification Standard								03/05/15 07:39	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150303_1	Initial Calibration Verification Standard								03/04/15 09:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150304_1	Initial Calibration Verification Standard								03/05/15 08:07	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 28242
Lab ID: LCS-28242	Laboratory Control Sample					Run: SOIL PH METER_150304A			03/03/15 08:50	
pH, sat. paste		7.59	s.u.	0.10	101	95	105			
Lab ID: H15020205-010ADUP	Sample Duplicate					Run: SOIL PH METER_150304A			03/03/15 08:58	
pH, sat. paste		7.18	s.u.	0.10				0.3	30	
Lab ID: H15020205-020ADUP	Sample Duplicate					Run: SOIL PH METER_150304A			03/03/15 09:07	
pH, sat. paste		7.29	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 28243
Lab ID: LCS-28243	Laboratory Control Sample					Run: SOIL PH METER_150304A			03/03/15 09:15	
pH, sat. paste		7.58	s.u.	0.10	101	95	105			
Lab ID: H15020205-030ADUP	Sample Duplicate					Run: SOIL PH METER_150304A			03/03/15 09:22	
pH, sat. paste		7.20	s.u.	0.10				0.1	30	
Lab ID: H15020205-040ADUP	Sample Duplicate					Run: SOIL PH METER_150304A			03/03/15 09:32	
pH, sat. paste		7.71	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 28244
Lab ID: LCS-28244	Laboratory Control Sample					Run: SOIL PH METER_150304A			03/03/15 09:42	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15020205-050ADUP	Sample Duplicate					Run: SOIL PH METER_150304A			03/03/15 09:51	
pH, sat. paste		7.73	s.u.	0.10				0.0	30	
Lab ID: H15020205-060ADUP	Sample Duplicate					Run: SOIL PH METER_150304A			03/03/15 10:00	
pH, sat. paste		7.83	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150227A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/27/15 09:36
Arsenic			0.789	mg/L	0.0085	99	90	110			
Cadmium			0.391	mg/L	0.0010	98	90	110			
Copper			0.797	mg/L	0.010	100	90	110			
Lead			0.768	mg/L	0.010	96	90	110			
Zinc			0.799	mg/L	0.010	100	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/27/15 09:50
Arsenic			0.0144	mg/L	0.0085		0	0			
Cadmium			0.00558	mg/L	0.0010		0	0			
Copper			-0.00122	mg/L	0.010		0	0			
Lead			-0.0226	mg/L	0.010		0	0			
Zinc			0.00443	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/27/15 09:54
Arsenic			0.973	mg/L	0.0085	97	80	120			
Cadmium			0.906	mg/L	0.0010	91	80	120			
Copper			0.505	mg/L	0.010	101	80	120			
Lead			0.920	mg/L	0.010	92	80	120			
Zinc			0.989	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 15:15
Arsenic			2.55	mg/L	0.0085	102	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.59	mg/L	0.010	104	90	110			
Lead			2.48	mg/L	0.010	99	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 15:19
Arsenic			0.0131	mg/L	0.0085						
Cadmium			0.000940	mg/L	0.0010						
Copper			-0.000480	mg/L	0.010						
Lead			-0.0126	mg/L	0.010						
Zinc			0.000400	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 15:59
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.48	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 16:03
Arsenic			-0.000490	mg/L	0.0085						
Cadmium			0.00105	mg/L	0.0010						
Copper			-0.00144	mg/L	0.010						
Lead			-0.0262	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150227A	
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 16:03
Zinc			0.000790	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 16:43
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.44	mg/L	0.0010	98	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.44	mg/L	0.010	98	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 16:47
Arsenic			0.00270	mg/L	0.0085						
Cadmium			0.00101	mg/L	0.0010						
Copper			0.000910	mg/L	0.010						
Lead			-0.00230	mg/L	0.010						
Zinc			0.000630	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 17:27
Arsenic			2.58	mg/L	0.0085	103	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 17:31
Arsenic			0.00382	mg/L	0.0085						
Cadmium			0.00134	mg/L	0.0010						
Copper			-0.00196	mg/L	0.010						
Lead			-0.0107	mg/L	0.010						
Zinc			0.00134	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 17:53
Arsenic			2.38	mg/L	0.0085	95	90	110			
Cadmium			2.40	mg/L	0.0010	96	90	110			
Copper			2.49	mg/L	0.010	99	90	110			
Lead			2.38	mg/L	0.010	95	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 17:57
Arsenic			0.0136	mg/L	0.0085						
Cadmium			0.000380	mg/L	0.0010						
Copper			0.00139	mg/L	0.010						
Lead			-0.00133	mg/L	0.010						
Zinc			0.000240	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 18:38
Arsenic			2.37	mg/L	0.0085	95	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150227A	
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 18:38
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.30	mg/L	0.010	92	90	110			
Zinc			2.44	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 18:41
Arsenic			-0.000390	mg/L	0.0085						
Cadmium			0.000600	mg/L	0.0010						
Copper			0.00339	mg/L	0.010						
Lead			-0.00619	mg/L	0.010						
Zinc			0.000610	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 19:22
Arsenic			2.38	mg/L	0.0085	95	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.35	mg/L	0.010	94	90	110			
Zinc			2.46	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 19:26
Arsenic			0.0109	mg/L	0.0085						
Cadmium			0.000250	mg/L	0.0010						
Copper			-0.000610	mg/L	0.010						
Lead			-0.0273	mg/L	0.010						
Zinc			0.000560	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 20:06
Arsenic			2.39	mg/L	0.0085	96	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.46	mg/L	0.010	98	90	110			
Lead			2.39	mg/L	0.010	96	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 20:10
Arsenic			0.00437	mg/L	0.0085						
Cadmium			0.000740	mg/L	0.0010						
Copper			0.00595	mg/L	0.010						
Lead			-0.00488	mg/L	0.010						
Zinc			-0.000200	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 20:51
Arsenic			2.37	mg/L	0.0085	95	90	110			
Cadmium			2.46	mg/L	0.0010	99	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.37	mg/L	0.010	95	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150227A	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/27/15 20:54	
Arsenic			0.00853	mg/L	0.0085						
Cadmium			0.000540	mg/L	0.0010						
Copper			0.00256	mg/L	0.010						
Lead			-0.00781	mg/L	0.010						
Zinc			0.000620	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/27/15 21:35	
Arsenic			2.38	mg/L	0.0085	95	90	110			
Cadmium			2.49	mg/L	0.0010	100	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.40	mg/L	0.010	96	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/27/15 21:38	
Arsenic			0.00995	mg/L	0.0085						
Cadmium			0.000510	mg/L	0.0010						
Copper			0.000270	mg/L	0.010						
Lead			-0.00881	mg/L	0.010						
Zinc			0.000960	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150302B		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/03/15 09:49	
Arsenic			0.0506	mg/L	0.0050	101	90	110			
Cadmium			0.0494	mg/L	0.0010	99	90	110			
Lead			0.0487	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/03/15 09:59	
Arsenic			2.90E-05	mg/L	0.0050						
Cadmium			2.90E-06	mg/L	0.0010						
Lead			6.00E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/03/15 10:41	
Arsenic			0.0507	mg/L	0.0050	101	90	110			
Cadmium			0.0494	mg/L	0.0010	99	90	110			
Lead			0.0485	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/03/15 10:50	
Arsenic			1.69E-05	mg/L	0.0050						
Cadmium			3.40E-06	mg/L	0.0010						
Lead			9.60E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150303C		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/03/15 23:37
Arsenic			0.0482	mg/L	0.0050	96	90	110			
Cadmium			0.0477	mg/L	0.0010	95	90	110			
Copper			0.0503	mg/L	0.010	101	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Zinc			0.0490	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/03/15 23:46
Arsenic			-1.25E-05	mg/L	0.0050						
Cadmium			-1.26E-05	mg/L	0.0010						
Copper			-3.33E-05	mg/L	0.010						
Lead			-1.40E-05	mg/L	0.010						
Zinc			-3.25E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/04/15 00:47
Arsenic			0.0483	mg/L	0.0050	97	90	110			
Cadmium			0.0485	mg/L	0.0010	97	90	110			
Copper			0.0502	mg/L	0.010	100	90	110			
Lead			0.0488	mg/L	0.010	98	90	110			
Zinc			0.0491	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/04/15 00:56
Arsenic			-2.91E-05	mg/L	0.0050						
Cadmium			-1.11E-05	mg/L	0.0010						
Copper			-3.83E-05	mg/L	0.010						
Lead			-1.32E-05	mg/L	0.010						
Zinc			-2.81E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/04/15 01:48
Arsenic			0.0488	mg/L	0.0050	98	90	110			
Cadmium			0.0483	mg/L	0.0010	97	90	110			
Copper			0.0505	mg/L	0.010	101	90	110			
Lead			0.0488	mg/L	0.010	98	90	110			
Zinc			0.0481	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/04/15 01:57
Arsenic			-1.40E-05	mg/L	0.0050						
Cadmium			-1.16E-05	mg/L	0.0010						
Copper			-3.97E-05	mg/L	0.010						
Lead			-1.51E-05	mg/L	0.010						
Zinc			-4.53E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/04/15 02:48
Arsenic			0.0486	mg/L	0.0050	97	90	110			
Cadmium			0.0479	mg/L	0.0010	96	90	110			
Copper			0.0499	mg/L	0.010	100	90	110			
Lead			0.0481	mg/L	0.010	96	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150303C		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/04/15 02:48	
Zinc			0.0485	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/04/15 02:58	
Arsenic			-1.37E-05	mg/L	0.0050						
Cadmium			-1.16E-05	mg/L	0.0010						
Copper			-1.39E-05	mg/L	0.010						
Lead			-7.00E-06	mg/L	0.010						
Zinc			-2.78E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/04/15 04:03	
Arsenic			0.0495	mg/L	0.0050	99	90	110			
Cadmium			0.0479	mg/L	0.0010	96	90	110			
Copper			0.0519	mg/L	0.010	104	90	110			
Lead			0.0482	mg/L	0.010	96	90	110			
Zinc			0.0492	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/04/15 04:13	
Arsenic			-1.03E-05	mg/L	0.0050						
Cadmium			-1.03E-05	mg/L	0.0010						
Copper			-3.00E-05	mg/L	0.010						
Lead			-1.07E-05	mg/L	0.010						
Zinc			-3.46E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/04/15 05:09	
Arsenic			0.0492	mg/L	0.0050	98	90	110			
Cadmium			0.0480	mg/L	0.0010	96	90	110			
Copper			0.0511	mg/L	0.010	102	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Zinc			0.0504	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/04/15 05:18	
Arsenic			-1.86E-05	mg/L	0.0050						
Cadmium			-1.13E-05	mg/L	0.0010						
Copper			-1.82E-05	mg/L	0.010						
Lead			-5.80E-06	mg/L	0.010						
Zinc			-2.46E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/04/15 06:28	
Arsenic			0.0487	mg/L	0.0050	97	90	110			
Cadmium			0.0482	mg/L	0.0010	96	90	110			
Copper			0.0504	mg/L	0.010	101	90	110			
Lead			0.0483	mg/L	0.010	97	90	110			
Zinc			0.0485	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/04/15 06:38	
Arsenic			-2.40E-06	mg/L	0.0050						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS204-B_150303C	
Lab ID: CCB	5	Continuing Calibration Blank							03/04/15 06:38	
Cadmium		-1.12E-05	mg/L	0.0010						
Copper		-8.10E-06	mg/L	0.010						
Lead		-8.20E-06	mg/L	0.010						
Zinc		-1.12E-05	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28185
Lab ID:	**MB-28185**	5	Method Blank				Run: ICP2-HE_150227A				02/27/15 14:16
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28185**	5	Laboratory Fortified Blank				Run: ICP2-HE_150227A				02/27/15 14:20
Arsenic			47.4	mg/kg	1.0	95	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			49.5	mg/kg	1.0	99	80	120			
Lead			46.6	mg/kg	1.0	93	80	120			
Zinc			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28185**	5	Laboratory Control Sample				Run: ICP2-HE_150227A				02/27/15 14:24
Arsenic			285	mg/kg	3.6	83	72.3	106.4			
Cadmium			120	mg/kg	1.0	87	73	105.1			
Copper			253	mg/kg	2.2	90	77.5	109.6			
Lead			172	mg/kg	6.4	92	75.9	108.6			
Zinc			193	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H15020204-068APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150227A				02/27/15 15:08
Arsenic			257	mg/kg	1.8	84	75	125			
Cadmium			102	mg/kg	1.0	80	75	125			
Copper			316	mg/kg	1.1	87	75	125			
Lead			223	mg/kg	3.2	80	75	125			
Zinc			307	mg/kg	1.0	84	75	125			
Lab ID:	**H15020204-068AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150227A				02/27/15 15:11
Arsenic			92.5	mg/kg	1.8	98	75	125			
Cadmium			22.0	mg/kg	1.0	86	75	125			
Copper			146	mg/kg	1.1	101	75	125			
Lead			59.7	mg/kg	3.2	78	75	125			
Zinc			144	mg/kg	1.0	100	75	125			
Lab ID:	**H15020204-068AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150227A				02/27/15 15:22
Arsenic			93.1	mg/kg	1.8	98	75	125	0.6	20	
Cadmium			22.4	mg/kg	1.0	87	75	125	1.7	20	
Copper			149	mg/kg	1.1	107	75	125	2.6	20	
Lead			67.2	mg/kg	3.2	92	75	125	12	20	
Zinc			146	mg/kg	1.0	104	75	125	1.8	20	
Lab ID:	**H15020205-008APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150227A				02/27/15 16:06
Arsenic			257	mg/kg	1.9	91	75	125			
Cadmium			113	mg/kg	1.0	88	75	125			
Copper			260	mg/kg	1.1	93	75	125			
Lead			241	mg/kg	3.3	90	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28185
Lab ID:	**H15020205-008APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150227A				02/27/15 16:06
Zinc			280	mg/kg	1.0	90	75	125			
Lab ID:	**H15020205-008AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150227A				02/27/15 16:10
Arsenic			67.2	mg/kg	1.8	91	75	125			
Cadmium			23.3	mg/kg	1.0	94	75	125			
Copper			69.8	mg/kg	1.1	100	75	125			
Lead			55.5	mg/kg	3.1	94	75	125			
Zinc			93.5	mg/kg	1.0	93	75	125			
Lab ID:	**H15020205-008AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150227A				02/27/15 16:14
Arsenic			69.1	mg/kg	1.8	93	75	125	2.7	20	
Cadmium			24.0	mg/kg	1.0	96	75	125	3.1	20	
Copper			67.8	mg/kg	1.1	95	75	125	2.8	20	
Lead			57.6	mg/kg	3.2	97	75	125	3.8	20	
Zinc			97.7	mg/kg	1.0	101	75	125	4.4	20	
Method:	**SW6010B**										Batch: 28188
Lab ID:	**MB-28188**	5	Method Blank				Run: ICP2-HE_150227A				02/27/15 16:17
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28188**	5	Laboratory Fortified Blank				Run: ICP2-HE_150227A				02/27/15 16:21
Arsenic			49.7	mg/kg	1.0	99	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			51.1	mg/kg	1.0	102	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Zinc			49.5	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-28188**	5	Laboratory Control Sample				Run: ICP2-HE_150227A				02/27/15 16:25
Arsenic			327	mg/kg	3.3	95	72.3	106.4			
Cadmium			134	mg/kg	1.0	98	73	105.1			
Copper			286	mg/kg	2.0	102	77.5	109.6			
Lead			193	mg/kg	5.9	103	75.9	108.6			
Zinc			216	mg/kg	1.0	101	74.2	109.9			
Lab ID:	**H15020205-026APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150227A				02/27/15 18:19
Arsenic			223	mg/kg	1.8	84	75	125			
Cadmium			109	mg/kg	1.0	85	75	125			
Copper			254	mg/kg	1.1	90	75	125			
Lead			216	mg/kg	3.2	82	75	125			
Zinc			269	mg/kg	1.0	87	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28188
Lab ID:	**H15020205-026AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150227A				02/27/15 18:23
Arsenic			51.9	mg/kg	1.8	86	75	125			
Cadmium			23.3	mg/kg	1.0	94	75	125			
Copper			72.9	mg/kg	1.1	99	75	125			
Lead			56.2	mg/kg	3.2	96	75	125			
Zinc			96.1	mg/kg	1.0	100	75	125			
Lab ID:	**H15020205-026AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150227A				02/27/15 18:27
Arsenic			53.4	mg/kg	1.8	89	75	125	2.8	20	
Cadmium			23.3	mg/kg	1.0	94	75	125	0.3	20	
Copper			72.5	mg/kg	1.1	98	75	125	0.5	20	
Lead			59.7	mg/kg	3.2	104	75	125	6.1	20	
Zinc			96.0	mg/kg	1.0	99	75	125	0.1	20	
Method:	**SW6010B**										Batch: 28189
Lab ID:	**MB-28189**	5	Method Blank				Run: ICP2-HE_150227A				02/27/15 18:30
Arsenic			0.5	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28189**	5	Laboratory Fortified Blank				Run: ICP2-HE_150227A				02/27/15 18:34
Arsenic			46.4	mg/kg	1.0	92	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			48.9	mg/kg	1.0	97	80	120			
Lead			45.3	mg/kg	1.0	91	80	120			
Zinc			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28189**	5	Laboratory Control Sample				Run: ICP2-HE_150227A				02/27/15 18:45
Arsenic			294	mg/kg	3.6	86	72.3	106.4			
Cadmium			125	mg/kg	1.0	92	73	105.1			
Copper			265	mg/kg	2.2	94	77.5	109.6			
Lead			178	mg/kg	6.4	95	75.9	108.6			
Zinc			201	mg/kg	1.0	94	74.2	109.9			
Lab ID:	**H15020205-044APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150227A				02/27/15 19:59
Arsenic			1200	mg/kg	1.8		75	125			A
Cadmium			112	mg/kg	1.0	83	75	125			
Copper			4320	mg/kg	1.1		75	125			A
Lead			1210	mg/kg	3.1		75	125			A
Zinc			2870	mg/kg	1.0		75	125			A
Lab ID:	**H15020205-044AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150227A				02/27/15 20:03
Arsenic			1020	mg/kg	1.7		75	125			A
Cadmium			30.2	mg/kg	1.0	86	75	125			
Copper			4060	mg/kg	1.0		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28189	
Lab ID:	**H15020205-044AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150227A			02/27/15 20:03	
Lead			1040	mg/kg	3.0		75	125			A
Zinc			2660	mg/kg	1.0		75	125			A
Lab ID:	**H15020205-044AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150227A			02/27/15 20:14	
Arsenic			1020	mg/kg	1.7		75	125	0.3	20	A
Cadmium			29.8	mg/kg	1.0	84	75	125	1.6	20	
Copper			4060	mg/kg	1.0		75	125	0.1	20	A
Lead			1040	mg/kg	3.0		75	125	0.2	20	A
Zinc			2650	mg/kg	1.0		75	125	0.4	20	A
Method:	**SW6010B**									Batch: 28190	
Lab ID:	**MB-28190**	5	Method Blank				Run: ICP2-HE_150227A			02/27/15 20:17	
Arsenic			0.7	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28190**	5	Laboratory Fortified Blank				Run: ICP2-HE_150227A			02/27/15 20:21	
Arsenic			46.3	mg/kg	1.0	91	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			48.8	mg/kg	1.0	98	80	120			
Lead			46.5	mg/kg	1.0	93	80	120			
Zinc			48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28190**	5	Laboratory Control Sample				Run: ICP2-HE_150227A			02/27/15 20:25	
Arsenic			307	mg/kg	3.6	89	72.3	106.4			
Cadmium			131	mg/kg	1.0	95	73	105.1			
Copper			266	mg/kg	2.2	95	77.5	109.6			
Lead			193	mg/kg	6.4	103	75.9	108.6			
Zinc			209	mg/kg	1.0	98	74.2	109.9			
Lab ID:	**H15020205-061APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150227A			02/27/15 22:12	
Arsenic			230	mg/kg	1.8	86	75	125			
Cadmium			106	mg/kg	1.0	83	75	125			
Copper			254	mg/kg	1.1	87	75	125			
Lead			230	mg/kg	3.2	85	75	125			
Zinc			285	mg/kg	1.0	86	75	125			
Lab ID:	**H15020205-061AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150227A			02/27/15 22:16	
Arsenic			54.1	mg/kg	1.8	90	75	125			
Cadmium			21.7	mg/kg	1.0	87	75	125			
Copper			76.5	mg/kg	1.1	92	75	125			
Lead			59.0	mg/kg	3.1	91	75	125			
Zinc			109	mg/kg	1.0	89	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B										Batch: 28190
Lab ID: H15020205-061AMSD	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150227A			02/27/15 22:20	
Arsenic		54.3	mg/kg	1.8	90	75	125	0.3	20	
Cadmium		21.3	mg/kg	1.0	85	75	125	1.9	20	
Copper		74.8	mg/kg	1.1	89	75	125	2.3	20	
Lead		52.4	mg/kg	3.1	77	75	125	12	20	
Zinc		106	mg/kg	1.0	82	75	125	3.2	20	
Method: SW6010B										Batch: 28190
Lab ID: H15020205-054APDS	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150304B			03/04/15 20:10	
Arsenic		226	mg/kg	1.8	83	75	125			
Cadmium		103	mg/kg	1.0	82	75	125			
Copper		316	mg/kg	1.1	86	75	125			
Lead		230	mg/kg	3.2	83	75	125			
Zinc		361	mg/kg	1.0	85	75	125			
Lab ID: H15020205-054AMS	5	Sample Matrix Spike				Run: ICP2-HE_150304B			03/04/15 20:14	
Arsenic		62.3	mg/kg	1.8	89	75	125			
Cadmium		21.9	mg/kg	1.0	87	75	125			
Copper		146	mg/kg	1.1	91	75	125			
Lead		77.8	mg/kg	3.2	111	75	125			
Zinc		202	mg/kg	1.0	110	75	125			
Lab ID: H15020205-054AMSD	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150304B			03/04/15 20:18	
Arsenic		62.2	mg/kg	1.8	89	75	125	0.1	20	
Cadmium		22.0	mg/kg	1.0	87	75	125	0.4	20	
Copper		149	mg/kg	1.1	96	75	125	1.8	20	
Lead		70.2	mg/kg	3.2	96	75	125	10	20	
Zinc		201	mg/kg	1.0	109	75	125	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150302B		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							03/02/15 23:12	
Arsenic			0.0591	mg/L	0.0010	99	90	110			
Cadmium			0.0306	mg/L	0.0010	102	90	110			
Lead			0.0578	mg/L	0.0010	96	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							03/02/15 23:16	
Arsenic			0.000107	mg/L	0.0010						
Cadmium			0.000723	mg/L	0.0010						
Lead			0.000236	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							03/02/15 23:21	
Arsenic			0.0106	mg/L	0.0010	106	70	130			
Cadmium			0.0103	mg/L	0.0010	103	70	130			
Lead			0.000238	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 28185	
Lab ID:	**MB-28185**	3	Method Blank				Run: ICPMS204-B_150302B			03/03/15 08:44	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28185**	3	Laboratory Control Sample				Run: ICPMS204-B_150302B			03/03/15 08:48	
Arsenic			304	mg/kg	1.0	89	72.3	106.4			
Cadmium			125	mg/kg	1.0	91	73	105.1			
Lead			181	mg/kg	1.0	97	75.9	108.6			
Lab ID:	**LFB-28185**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150302B			03/03/15 08:53	
Arsenic			50.1	mg/kg	1.0	100	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Lead			47.7	mg/kg	1.0	95	80	120			
Lab ID:	**H15020204-068APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B			03/03/15 09:36	
Arsenic			2440	mg/kg	1.0	97	75	125			
Cadmium			1170	mg/kg	1.0	95	75	125			
Lead			2420	mg/kg	1.0	98	75	125			
Lab ID:	**H15020204-068AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150302B			03/03/15 09:40	
Arsenic			102	mg/kg	1.0	110	75	125			
Cadmium			24.6	mg/kg	1.0	97	75	125			
Lead			68.0	mg/kg	1.0	99	75	125			
Lab ID:	**H15020204-068AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150302B			03/03/15 09:45	
Arsenic			103	mg/kg	1.0	112	75	125	1.2	20	
Cadmium			24.7	mg/kg	1.0	97	75	125	0.2	20	
Lead			68.7	mg/kg	1.0	100	75	125	1.0	20	
Lab ID:	**H15020205-008APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B			03/03/15 10:27	
Arsenic			2480	mg/kg	1.0	99	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28185
Lab ID:	**H15020205-008APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B				03/03/15 10:27
Cadmium			1200	mg/kg	1.0	96	75	125			
Lead			2440	mg/kg	1.0	97	75	125			
Lab ID:	**H15020205-008AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150302B				03/03/15 10:31
Arsenic			69.0	mg/kg	1.0	97	75	125			
Cadmium			24.8	mg/kg	1.0	100	75	125			
Lead			55.1	mg/kg	1.0	95	75	125			
Lab ID:	**H15020205-008AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150302B				03/03/15 10:36
Arsenic			69.4	mg/kg	1.0	97	75	125	0.5	20	
Cadmium			24.5	mg/kg	1.0	99	75	125	1.0	20	
Lead			56.6	mg/kg	1.0	97	75	125	2.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150303C		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							03/03/15 18:56	
Arsenic			0.0592	mg/L	0.0010	99	90	110			
Cadmium			0.0309	mg/L	0.0010	103	90	110			
Copper			0.0603	mg/L	0.0010	100	90	110			
Lead			0.0583	mg/L	0.0010	97	90	110			
Zinc			0.0597	mg/L	0.0010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							03/03/15 19:01	
Arsenic			7.30E-05	mg/L	0.0010						
Cadmium			0.000779	mg/L	0.0010						
Copper			0.000928	mg/L	0.0010						
Lead			0.000231	mg/L	0.0010						
Zinc			0.00116	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							03/03/15 19:05	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Cadmium			0.0106	mg/L	0.0010	106	70	130			
Copper			0.0205	mg/L	0.0010	102	70	130			
Lead			0.000230	mg/L	0.0010		0	0			
Zinc			0.0108	mg/L	0.0010	108	70	130			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/03/15 22:32	
Arsenic			0.0488	mg/L	0.0010	98	90	110			
Cadmium			0.0478	mg/L	0.0010	96	90	110			
Copper			0.0502	mg/L	0.0010	100	90	110			
Lead			0.0486	mg/L	0.0010	97	90	110			
Zinc			0.0483	mg/L	0.0010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/03/15 22:41	
Arsenic			-1.80E-05	mg/L	0.0010						
Cadmium			-9.80E-06	mg/L	0.0010						
Copper			-3.95E-05	mg/L	0.0010						
Lead			-1.48E-05	mg/L	0.0010						
Zinc			-3.92E-05	mg/L	0.0010						
Method:	**SW6020**									Batch: 28188	
Lab ID:	**MB-28188**	2	Method Blank				Run: ICPMS204-B_150303C			03/03/15 22:45	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lab ID:	**LCS-28188**	2	Laboratory Control Sample				Run: ICPMS204-B_150303C			03/03/15 22:50	
Arsenic			336	mg/kg	1.0	98	72.3	106.4			
Cadmium			138	mg/kg	1.0	101	73	105.1			
Lab ID:	**LFB-28188**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150303C			03/03/15 22:55	
Arsenic			49.6	mg/kg	1.0	99	80	120			
Cadmium			24.1	mg/kg	1.0	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 28188	
Lab ID:	**H15020205-026APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150303C			03/04/15 00:14	
Arsenic			2310	mg/kg	1.0	93	75	125			
Cadmium			1090	mg/kg	1.0	88	75	125			
Lab ID:	**H15020205-026AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150303C			03/04/15 00:18	
Arsenic			52.5	mg/kg	1.0	96	75	125			
Cadmium			22.6	mg/kg	1.0	91	75	125			
Lab ID:	**H15020205-026AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150303C			03/04/15 00:23	
Arsenic			54.0	mg/kg	1.0	99	75	125	2.8	20	
Cadmium			22.6	mg/kg	1.0	91	75	125	0.1	20	
Method:	**SW6020**									Batch: 28189	
Lab ID:	**MB-28189**	2	Method Blank				Run: ICPMS204-B_150303C			03/04/15 00:32	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28189**	2	Laboratory Control Sample				Run: ICPMS204-B_150303C			03/04/15 00:37	
Arsenic			310	mg/kg	1.0	91	72.3	106.4			
Lead			187	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-28189**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150303C			03/04/15 00:42	
Arsenic			49.8	mg/kg	1.0	100	80	120			
Lead			47.5	mg/kg	1.0	95	80	120			
Lab ID:	**H15020205-044APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150303C			03/04/15 02:16	
Arsenic			3240	mg/kg	1.0	89	75	125			
Lead			3200	mg/kg	1.0	88	75	125			
Lab ID:	**H15020205-044AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150303C			03/04/15 02:20	
Arsenic			1160	mg/kg	1.0		75	125			A
Lead			1130	mg/kg	1.0		75	125			A
Lab ID:	**H15020205-044AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150303C			03/04/15 02:25	
Arsenic			1150	mg/kg	1.0		75	125	1.3	20	A
Lead			1130	mg/kg	1.0		75	125	0.5	20	A
Method:	**SW6020**									Batch: 28190	
Lab ID:	**MB-28190**	2	Method Blank				Run: ICPMS204-B_150303C			03/04/15 02:34	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28190**	2	Laboratory Control Sample				Run: ICPMS204-B_150303C			03/04/15 02:39	
Arsenic			309	mg/kg	1.0	90	72.3	106.4			
Lead			184	mg/kg	1.0	98	75.9	108.6			
Lab ID:	**LFB-28190**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150303C			03/04/15 02:44	
Arsenic			50.0	mg/kg	1.0	100	80	120			
Lead			47.0	mg/kg	1.0	94	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28190
Lab ID:	**LFB-28190**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150303C				03/04/15 02:44
Lab ID:	**H15020205-061APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150303C				03/04/15 03:50
Arsenic			2300	mg/kg	1.0	93	75	125			
Lead			2340	mg/kg	1.0	94	75	125			
Lab ID:	**H15020205-061AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150303C				03/04/15 03:54
Arsenic			53.6	mg/kg	1.0	91	75	125			
Lead			54.1	mg/kg	1.0	87	75	125			
Lab ID:	**H15020205-061AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150303C				03/04/15 03:59
Arsenic			54.0	mg/kg	1.0	92	75	125	0.9	20	
Lead			56.2	mg/kg	1.0	91	75	125	3.8	20	
Method:	**SW6020**										Batch: 28233
Lab ID:	**MB-28233**	5	Method Blank				Run: ICPMS204-B_150303C				03/04/15 04:17
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			ND	mg/kg	4						
Lab ID:	**LCS-28233**	5	Laboratory Control Sample				Run: ICPMS204-B_150303C				03/04/15 04:22
Arsenic			305	mg/kg	1.0	89	72.3	106.4			
Cadmium			121	mg/kg	1.0	88	73	105.1			
Copper			284	mg/kg	1.0	101	77.5	109.6			
Lead			181	mg/kg	1.0	97	75.9	108.6			
Zinc			214	mg/kg	3.5	100	74.2	109.9			
Lab ID:	**LFB-28233**	5	Laboratory Fortified Blank				Run: ICPMS204-B_150303C				03/04/15 04:27
Arsenic			47.6	mg/kg	1.0	95	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			
Copper			51.1	mg/kg	1.0	102	80	120			
Lead			46.2	mg/kg	1.0	92	80	120			
Zinc			51.8	mg/kg	3.5	104	80	120			
Lab ID:	**H15020205-054APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150303C				03/04/15 04:55
Arsenic			2340	mg/kg	1.0	92	75	125			
Cadmium			1110	mg/kg	1.0	88	75	125			
Copper			2510	mg/kg	1.0	95	75	125			
Lead			2420	mg/kg	1.0	95	75	125			
Zinc			2400	mg/kg	3.5	88	75	125			
Lab ID:	**H15020205-054AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_150303C				03/04/15 04:59
Arsenic			64.9	mg/kg	1.0	95	75	125			
Cadmium			23.3	mg/kg	1.0	90	75	125			
Copper			163	mg/kg	1.0	97	75	125			
Lead			71.5	mg/kg	1.0	92	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020205

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 28233
Lab ID: H15020205-054AMS	5	Sample Matrix Spike				Run: ICPMS204-B_150303C			03/04/15 04:59	
Zinc		223	mg/kg	3.5	108	75	125			
Lab ID: H15020205-054AMSD	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150303C			03/04/15 05:04	
Arsenic		63.0	mg/kg	1.0	91	75	125	3.1	20	
Cadmium		22.9	mg/kg	1.0	88	75	125	2.0	20	
Copper		162	mg/kg	1.0	95	75	125	0.6	20	
Lead		71.0	mg/kg	1.0	91	75	125	0.8	20	
Zinc		217	mg/kg	3.5	95	75	125	2.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020205

Login completed by: Tracy L. Lorash
Date Received: 2/12/2015
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 2/16/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 0.4°C, Cooler 2 at 0.7°C. Samples were received on wet ice. TI 2/12/15

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020205

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-105-0612	1641	2/2/15	Soil	A	B		1
4-105-1218	1640	2/2/15	Soil	A	B		1
4-105-1824	1639	2/2/15	Soil	A	B		1
4-114-0612	1626	2/2/15	Soil	A	B		1
4-114-1218	1625	2/2/15	Soil	A	B		1
4-114-1824	1624	2/2/15	Soil	A	B		1
4-124-1824	1609	2/2/15	Soil	A	B		1
4-124-2430	1608	2/2/15	Soil	A	B		1
4-124-3036	1607	2/2/15	Soil	A	B		1
4-500-1218	1035	2/2/15	Soil	A	B		1
4-500-1824	1034	2/2/15	Soil	A	B		1
4-500-2430	1033	2/2/15	Soil	A	B		1
4-500E-0006	1145	2/2/15	Soil	A	B		1
4-500E-0612	1144	2/2/15	Soil	A	B		1
4-500N-0006	1135	2/2/15	Soil	A	B		1
4-500N-0612	1134	2/2/15	Soil	A	B		1
4-500N-1218	1133	2/2/15	Soil	A	B		1
4-501-1824	1004	2/2/15	Soil	A	B		1
4-501-2430	1003	2/2/15	Soil	A	B		1
4-501-3036	1002	2/2/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/12/15 1110

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: C1 = 0.4 C2 = 0.7 2/12/15 11:10 Hand del.

COC02_02_15 EL.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15026205

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-502-1824	934	2/2/15	Soil	A	B		1
4-502-2430	933	2/2/15	Soil	A	B		1
4-502-3036	932	2/2/15	Soil	A	B		1
4-502S-1218	1333	2/2/15	Soil	A	B		1
4-502S-1824	1332	2/2/15	Soil	A	B		1
4-502S-2430	1331	2/2/15	Soil	A	B		1
4-502W-1218	1435	2/2/15	Soil	A	B		1
4-502W-1824	1434	2/2/15	Soil	A	B		1
4-502W-2430	1433	2/2/15	Soil	A	B		1
4-503-1824	844	2/2/15	Soil	A	B		1
4-503-1824D	845	2/2/15	Soil	A	B		1
4-503-2430	843	2/2/15	Soil	A	B		1
4-503-3036	842	2/2/15	Soil	A	B		1
4-503E-0612	1204	2/2/15	Soil	A	B		1
4-503E-1218	1203	2/2/15	Soil	A	B		1
4-503E-1824	1202	2/2/15	Soil	A	B		1
4-503N-0006	1116	2/2/15	Soil	A	B		1
4-503N-0612	1115	2/2/15	Soil	A	B		1
4-503N-1218	1113	2/2/15	Soil	A	B		1
4-504-0612	826	2/2/15	Soil	A	B		1
4-503N-1218D	1114	2/2/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/12/15 1110

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: C1 = 0.4 C2 = 0.7 2/12/15 11:10

Hand del.

COC02_02_15 EL.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020205

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-504-1218	825	2/2/15	Soil	A	B		1
4-504-1824	824	2/2/15	Soil	A	B		1
4-504E-0612	1224	2/2/15	Soil	A	B		1
4-504E-1218	1223	2/2/15	Soil	A	B		1
4-504E-1824	1222	2/2/15	Soil	A	B		1
4-504S-0006	1245	2/2/15	Soil	A	B		1
4-504S-0612	1244	2/2/15	Soil	A	B		1
4-505-0612	911	2/2/15	Soil	A	B		1
4-505-1218	910	2/2/15	Soil	A	B		1
4-505-1824	909	2/2/15	Soil	A	B		1
4-506-3036	1407	2/2/15	Soil	A	B		1
4-506-3642	1406	2/2/15	Soil	A	B		1
4-506-4248	1405	2/2/15	Soil	A	B		1
4-506N-1218	1505	2/2/15	Soil	A	B		1
4-506N-1824	1504	2/2/15	Soil	A	B		1
4-506N-2430	1503	2/2/15	Soil	A	B		1
4-506W-0006	1518	2/2/15	Soil	A	B		1
4-506W-0612	1517	2/2/15	Soil	A	B		1
4-506W-1218	1515	2/2/15	Soil	A	B		1
4-506W-1218D	1516	2/2/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) Erin M Jordan
Date/Time: 2/12/15 1110

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): Tracy Wood

On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: C1 = 0.4 C2 = 0.7 Hand del.
2/12/15 11:10

COC02_02_15 EL.xls

ANALYTICAL SUMMARY REPORT

March 09, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020204

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 68 samples for MT DEQ-Federal Superfund on 2/12/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020204-001	4-058-0006	02/05/15 10:52	02/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020204-002	4-058-0612	02/05/15 10:51	02/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020204-003	4-058-1218	02/05/15 10:50	02/12/15	Soil	Same As Above
H15020204-004	4-060-3036	02/05/15 10:22	02/12/15	Soil	Same As Above
H15020204-005	4-060-3642	02/05/15 10:21	02/12/15	Soil	Same As Above
H15020204-006	4-060-4248	02/05/15 10:20	02/12/15	Soil	Same As Above
H15020204-007	4-060E-1218	02/05/15 11:35	02/12/15	Soil	Same As Above
H15020204-008	4-060E-1824	02/05/15 11:34	02/12/15	Soil	Same As Above
H15020204-009	4-060E-2430	02/05/15 11:33	02/12/15	Soil	Same As Above
H15020204-010	4-060S-0006	02/05/15 11:07	02/12/15	Soil	Same As Above
H15020204-011	4-060S-0612	02/05/15 11:06	02/12/15	Soil	Same As Above
H15020204-012	4-070-0006	02/05/15 16:57	02/12/15	Soil	Same As Above
H15020204-013	4-070-0612	02/05/15 16:56	02/12/15	Soil	Same As Above
H15020204-014	4-070-1218	02/05/15 16:55	02/12/15	Soil	Same As Above
H15020204-015	4-072-0612	02/05/15 9:36	02/12/15	Soil	Same As Above
H15020204-016	4-072-1218	02/05/15 9:35	02/12/15	Soil	Same As Above
H15020204-017	4-072-1824	02/05/15 9:34	02/12/15	Soil	Same As Above
H15020204-018	4-080-0612	02/05/15 15:56	02/12/15	Soil	Same As Above
H15020204-019	4-080-1218	02/05/15 15:55	02/12/15	Soil	Same As Above
H15020204-020	4-080-1824	02/05/15 15:54	02/12/15	Soil	Same As Above
H15020204-021	4-081-0612	02/05/15 16:17	02/12/15	Soil	Same As Above
H15020204-022	4-081-1218	02/05/15 16:15	02/12/15	Soil	Same As Above
H15020204-023	4-081-1218D	02/05/15 16:16	02/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020204-024	4-081-1824	02/05/15 16:14	02/12/15	Soil	Same As Above
H15020204-025	4-082-0612	02/05/15 12:06	02/12/15	Soil	Same As Above
H15020204-026	4-082-1218	02/05/15 12:05	02/12/15	Soil	Same As Above
H15020204-027	4-082-1824	02/05/15 12:04	02/12/15	Soil	Same As Above
H15020204-028	4-083-0612	02/05/15 9:16	02/12/15	Soil	Same As Above
H15020204-029	4-083-1218	02/05/15 9:15	02/12/15	Soil	Same As Above
H15020204-030	4-083-1824	02/05/15 9:14	02/12/15	Soil	Same As Above
H15020204-031	4-087-1218	02/05/15 12:35	02/12/15	Soil	Same As Above
H15020204-032	4-087-1218D	02/05/15 12:36	02/12/15	Soil	Same As Above
H15020204-033	4-087-1824	02/05/15 12:34	02/12/15	Soil	Same As Above
H15020204-034	4-087-2430	02/05/15 12:33	02/12/15	Soil	Same As Above
H15020204-035	4-087E-0006	02/05/15 15:37	02/12/15	Soil	Same As Above
H15020204-036	4-087E-0612	02/05/15 15:36	02/12/15	Soil	Same As Above
H15020204-037	4-087E-1218	02/05/15 15:35	02/12/15	Soil	Same As Above
H15020204-038	4-088-1824	02/05/15 10:04	02/12/15	Soil	Same As Above
H15020204-039	4-088-2430	02/05/15 10:03	02/12/15	Soil	Same As Above
H15020204-040	4-088-3036	02/05/15 10:02	02/12/15	Soil	Same As Above
H15020204-041	4-089-1218	02/05/15 8:55	02/12/15	Soil	Same As Above
H15020204-042	4-089-1218D	02/05/15 8:56	02/12/15	Soil	Same As Above
H15020204-043	4-089-1824	02/05/15 8:54	02/12/15	Soil	Same As Above
H15020204-044	4-089-2430	02/05/15 8:53	02/12/15	Soil	Same As Above
H15020204-045	4-096-1218	02/05/15 13:45	02/12/15	Soil	Same As Above
H15020204-046	4-096-1824	02/05/15 13:44	02/12/15	Soil	Same As Above
H15020204-047	4-096-2430	02/05/15 13:43	02/12/15	Soil	Same As Above
H15020204-048	4-096E-0612	02/05/15 15:14	02/12/15	Soil	Same As Above
H15020204-049	4-096-1218	02/05/15 15:13	02/12/15	Soil	Same As Above
H15020204-050	4-096E-1824	02/05/15 15:12	02/12/15	Soil	Same As Above
H15020204-051	4-097-0006	02/05/15 14:27	02/12/15	Soil	Same As Above
H15020204-052	4-097-0612	02/05/15 14:26	02/12/15	Soil	Same As Above
H15020204-053	4-097-1218	02/05/15 14:25	02/12/15	Soil	Same As Above
H15020204-054	4-103-3642	02/05/15 7:56	02/12/15	Soil	Same As Above
H15020204-055	4-103-4248	02/05/15 7:55	02/12/15	Soil	Same As Above
H15020204-056	4-106-1218	02/05/15 14:45	02/12/15	Soil	Same As Above
H15020204-057	4-106-1824	02/05/15 14:44	02/12/15	Soil	Same As Above
H15020204-058	4-106-2430	02/05/15 14:43	02/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020204-059	4-106E-0006	02/05/15 16:35	02/12/15	Soil	Same As Above
H15020204-060	4-106E-0612	02/05/15 16:34	02/12/15	Soil	Same As Above
H15020204-061	4-106E-1218	02/05/15 16:33	02/12/15	Soil	Same As Above
H15020204-062	4-107-0006	02/05/15 14:12	02/12/15	Soil	Same As Above
H15020204-063	4-107-0612	02/05/15 14:11	02/12/15	Soil	Same As Above
H15020204-064	4-110-1824	02/05/15 8:14	02/12/15	Soil	Same As Above
H15020204-065	4-110-2430	02/05/15 8:13	02/12/15	Soil	Same As Above
H15020204-066	4-110-3036	02/05/15 8:12	02/12/15	Soil	Same As Above
H15020204-067	4-124W-0006	02/05/15 13:20	02/12/15	Soil	Same As Above
H15020204-068	4-124W-0612	02/05/15 13:19	02/12/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020204

Report Date: 03/09/15
Date Received: 02/12/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020204-001	4-058-0006	7.8	395	10	1890	290	1660
H15020204-002	4-058-0612	7.6	16	< 1	71	15	83
H15020204-003	4-058-1218	7.6	11	< 1	55	12	67
H15020204-004	4-060-3036	7.4	693	17	17500	1000	4080
H15020204-005	4-060-3642	6.7	56	< 1	206	82	311
H15020204-006	4-060-4248	7.2	10	< 1	78	25	137
H15020204-007	4-060E-1218	7.1	963	10	6760	1030	2680
H15020204-008	4-060E-1824	6.8	18	< 1	40	14	76
H15020204-009	4-060E-2430	7.0	6	< 1	26	11	69
H15020204-010	4-060S-0006	7.6	25	< 1	83	17	81
H15020204-011	4-060S-0612	7.5	22	< 1	43	10	57
H15020204-012	4-070-0006	7.5	236	3	1160	203	820
H15020204-013	4-070-0612	7.4	13	< 1	48	12	61
H15020204-014	4-070-1218	7.4	10	< 1	47	12	62
H15020204-015	4-072-0612	7.6	468	5	2590	373	1600
H15020204-016	4-072-1218	7.6	32	< 1	265	45	267
H15020204-017	4-072-1824	7.6	10	< 1	47	14	81
H15020204-018	4-080-0612	8.0	612	6	2350	471	1820
H15020204-019	4-080-1218	7.6	19	< 1	67	17	91
H15020204-020	4-080-1824	7.4	10	< 1	41	14	68
H15020204-021	4-081-0612	7.6	266	7	1040	214	2050
H15020204-022	4-081-1218	7.6	13	< 1	90	15	164
H15020204-023	4-081-1218D	7.6	11	< 1	52	15	128
H15020204-024	4-081-1824	7.2	9	< 1	50	19	96
H15020204-025	4-082-0612	8.0	584	7	2740	403	1970
H15020204-026	4-082-1218	8.1	12	< 1	43	14	80
H15020204-027	4-082-1824	8.0	9	< 1	40	13	73
H15020204-028	4-083-0612	7.6	468	7	3030	358	2790
H15020204-029	4-083-1218	7.7	33	2	318	38	318
H15020204-030	4-083-1824	7.8	17	< 1	58	17	88
H15020204-031	4-087-1218	7.6	1550	17	13700	989	4910
H15020204-032	4-087-1218D	7.5	1490	16	12600	947	4700
H15020204-033	4-087-1824	7.7	70	2	465	47	431
H15020204-034	4-087-2430	7.8	35	< 1	212	28	152
H15020204-035	4-087E-0006	7.8	388	7	3080	329	2040
H15020204-036	4-087E-0612	5.7	46	2	478	48	436
H15020204-037	4-087E-1218	7.7	20	< 1	78	16	87
H15020204-038	4-088-1824	7.6	946	12	8080	614	3090
H15020204-039	4-088-2430	7.8	101	2	758	80	512
H15020204-040	4-088-3036	7.6	28	< 1	214	32	175

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020204

Report Date: 03/09/15
Date Received: 02/12/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020204-041	4-089-1218	7.8	59	8	1140	58	2330
H15020204-042	4-089-1218D	7.9	21	< 1	139	24	353
H15020204-043	4-089-1824	7.8	21	< 1	105	17	320
H15020204-044	4-089-2430	7.9	8	< 1	28	10	63
H15020204-045	4-096-1218	7.7	107	2	962	89	622
H15020204-046	4-096-1824	7.7	18	< 1	140	20	155
H15020204-047	4-096-2430	7.5	8	< 1	44	19	164
H15020204-048	4-096E-0612	7.6	805	6	2970	469	2280
H15020204-049	4-096-1218	7.5	47	< 1	177	37	218
H15020204-050	4-096E-1824	6.6	10	< 1	66	22	105
H15020204-051	4-097-0006	7.4	325	9	1670	323	1820
H15020204-052	4-097-0612	7.7	11	< 1	61	16	85
H15020204-053	4-097-1218	7.7	8	< 1	54	19	85
H15020204-054	4-103-3642	7.1	23	3	805	32	814
H15020204-055	4-103-4248	6.9	36	4	2250	77	1050
H15020204-056	4-106-1218	7.3	394	16	6020	826	4810
H15020204-057	4-106-1824	7.5	141	2	1030	134	579
H15020204-058	4-106-2430	7.5	60	< 1	60	15	113
H15020204-059	4-106E-0006	8.0	499	7	2530	473	1780
H15020204-060	4-106E-0612	7.8	233	4	1660	260	737
H15020204-061	4-106E-1218	7.3	10	< 1	41	18	81
H15020204-062	4-107-0006	7.6	81	2	364	71	413
H15020204-063	4-107-0612	7.7	20	< 1	51	16	91
H15020204-064	4-110-1824	7.4	4	8	100	6	1870
H15020204-065	4-110-2430	6.9	4	2	17	9	916
H15020204-066	4-110-3036	6.8	5	< 1	16	9	62
H15020204-067	4-124W-0006	7.5	96	3	335	76	358
H15020204-068	4-124W-0612	7.8	44	< 1	96	19	94

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2							Analytical Run: SOIL PH METER_150217A			
Lab ID: ICV_1_150225_1		Initial Calibration Verification Standard								02/26/15 09:10
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150225_1		Initial Calibration Verification Standard								02/26/15 09:35
pH, sat. paste		9.98	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150225_1		Initial Calibration Verification Standard								02/26/15 10:00
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150226_1		Continuing Calibration Verification Standard								02/27/15 08:20
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150226_1		Continuing Calibration Verification Standard								02/27/15 08:20
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150226_1		Initial Calibration Verification Standard								02/27/15 08:21
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150226_1		Continuing Calibration Verification Standard								02/27/15 08:31
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150226_1		Continuing Calibration Verification Standard								02/27/15 08:45
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150226_1		Continuing Calibration Verification Standard								02/27/15 08:46
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150226_1		Initial Calibration Verification Standard								02/27/15 08:47
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150226_1		Continuing Calibration Verification Standard								02/27/15 08:56
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150226_1		Continuing Calibration Verification Standard								02/27/15 09:11
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150226_1		Continuing Calibration Verification Standard								02/27/15 09:12
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150226_1		Initial Calibration Verification Standard								02/27/15 09:12
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150226_1		Continuing Calibration Verification Standard								02/27/15 09:22
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150226_1		Continuing Calibration Verification Standard								02/27/15 09:30
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 28214

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28214
Lab ID: LCS-28214	Laboratory Control Sample					Run: SOIL PH METER_150217A				02/27/15 08:22
pH, sat. paste		7.59	s.u.	0.10	101	95	105			
Lab ID: H15020204-010ADUP	Sample Duplicate					Run: SOIL PH METER_150217A				02/27/15 08:31
pH, sat. paste		7.58	s.u.	0.10				0.3	30	
Lab ID: H15020204-020ADUP	Sample Duplicate					Run: SOIL PH METER_150217A				02/27/15 08:39
pH, sat. paste		7.35	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 28215
Lab ID: LCS-28215	Laboratory Control Sample					Run: SOIL PH METER_150217A				02/27/15 08:48
pH, sat. paste		7.61	s.u.	0.10	102	95	105			
Lab ID: H15020204-030ADUP	Sample Duplicate					Run: SOIL PH METER_150217A				02/27/15 08:56
pH, sat. paste		7.75	s.u.	0.10				0.0	30	
Lab ID: H15020204-040ADUP	Sample Duplicate					Run: SOIL PH METER_150217A				02/27/15 09:04
pH, sat. paste		7.57	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 28216
Lab ID: LCS-28216	Laboratory Control Sample					Run: SOIL PH METER_150217A				02/27/15 09:13
pH, sat. paste		7.59	s.u.	0.10	101	95	105			
Lab ID: H15020204-050ADUP	Sample Duplicate					Run: SOIL PH METER_150217A				02/27/15 09:21
pH, sat. paste		6.62	s.u.	0.10				0.0	30	
Lab ID: H15020204-060ADUP	Sample Duplicate					Run: SOIL PH METER_150217A				02/27/15 09:30
pH, sat. paste		7.83	s.u.	0.10				0.1	30	
Lab ID: H15020204-068ADUP	Sample Duplicate					Run: SOIL PH METER_150217A				02/27/15 09:37
pH, sat. paste		7.82	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150226A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/26/15 10:19
Arsenic			0.785	mg/L	0.0085	98	90	110			
Cadmium			0.387	mg/L	0.0010	97	90	110			
Copper			0.793	mg/L	0.010	99	90	110			
Lead			0.801	mg/L	0.010	100	90	110			
Zinc			0.790	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/26/15 10:34
Arsenic			-0.0163	mg/L	0.0085		0	0			
Cadmium			0.000590	mg/L	0.0010		0	0			
Copper			-0.00237	mg/L	0.010		0	0			
Lead			-0.0116	mg/L	0.010		0	0			
Zinc			0.00412	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/26/15 10:38
Arsenic			0.962	mg/L	0.0085	96	80	120			
Cadmium			0.900	mg/L	0.0010	90	80	120			
Copper			0.498	mg/L	0.010	100	80	120			
Lead			0.884	mg/L	0.010	88	80	120			
Zinc			0.989	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/26/15 11:52
Arsenic			2.46	mg/L	0.0085	98	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/26/15 11:56
Arsenic			-0.00749	mg/L	0.0085						
Cadmium			0.000380	mg/L	0.0010						
Copper			-0.000860	mg/L	0.010						
Lead			0.000770	mg/L	0.010						
Zinc			0.000880	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/26/15 12:36
Arsenic			2.51	mg/L	0.0085	101	90	110			
Cadmium			2.49	mg/L	0.0010	99	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.53	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/26/15 12:40
Arsenic			-0.00880	mg/L	0.0085						
Cadmium			0.000210	mg/L	0.0010						
Copper			-0.00127	mg/L	0.010						
Lead			0.0173	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150226A	
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/26/15 12:40
Zinc			0.000670	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/26/15 13:20
Arsenic			2.41	mg/L	0.0085	97	90	110			
Cadmium			2.37	mg/L	0.0010	95	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.41	mg/L	0.010	96	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/26/15 13:24
Arsenic			-0.00718	mg/L	0.0085						
Cadmium			0.000520	mg/L	0.0010						
Copper			-0.00100	mg/L	0.010						
Lead			-0.00103	mg/L	0.010						
Zinc			0.00126	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/26/15 14:04
Arsenic			2.45	mg/L	0.0085	98	90	110			
Cadmium			2.40	mg/L	0.0010	96	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.44	mg/L	0.010	98	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/26/15 14:08
Arsenic			-0.00389	mg/L	0.0085						
Cadmium			0.000460	mg/L	0.0010						
Copper			0.00152	mg/L	0.010						
Lead			0.0157	mg/L	0.010						
Zinc			0.000350	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/26/15 14:31
Arsenic			2.50	mg/L	0.0085	100	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/26/15 14:34
Arsenic			-0.00951	mg/L	0.0085						
Cadmium			0.000570	mg/L	0.0010						
Copper			0.000280	mg/L	0.010						
Lead			-0.0144	mg/L	0.010						
Zinc			0.00213	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/26/15 15:15
Arsenic			2.54	mg/L	0.0085	102	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150226A	
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/26/15 15:15	
Cadmium			2.56	mg/L	0.0010	102	90	110			
Copper			2.55	mg/L	0.010	102	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/26/15 15:18	
Arsenic			0.00421	mg/L	0.0085						
Cadmium			0.000880	mg/L	0.0010						
Copper			-0.00295	mg/L	0.010						
Lead			-0.00730	mg/L	0.010						
Zinc			0.00229	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/26/15 15:59	
Arsenic			2.54	mg/L	0.0085	102	90	110			
Cadmium			2.55	mg/L	0.0010	102	90	110			
Copper			2.57	mg/L	0.010	103	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.55	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/26/15 16:02	
Arsenic			-0.00555	mg/L	0.0085						
Cadmium			0.000530	mg/L	0.0010						
Copper			0.00264	mg/L	0.010						
Lead			0.00515	mg/L	0.010						
Zinc			0.00144	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/26/15 16:43	
Arsenic			2.47	mg/L	0.0085	99	90	110			
Cadmium			2.46	mg/L	0.0010	99	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.53	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/26/15 16:46	
Arsenic			-0.00395	mg/L	0.0085						
Cadmium			0.000960	mg/L	0.0010						
Copper			0.000610	mg/L	0.010						
Lead			-0.00233	mg/L	0.010						
Zinc			0.00145	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/26/15 17:27	
Arsenic			2.53	mg/L	0.0085	101	90	110			
Cadmium			2.53	mg/L	0.0010	101	90	110			
Copper			2.55	mg/L	0.010	102	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.59	mg/L	0.010	104	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150226A	
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/26/15 17:27	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/26/15 17:30	
Arsenic			-0.00299	mg/L	0.0085						
Cadmium			0.000570	mg/L	0.0010						
Copper			0.000310	mg/L	0.010						
Lead			-0.0171	mg/L	0.010						
Zinc			0.00101	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/26/15 18:11	
Arsenic			2.53	mg/L	0.0085	101	90	110			
Cadmium			2.53	mg/L	0.0010	101	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.57	mg/L	0.010	103	90	110			
Zinc			2.58	mg/L	0.010	103	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/26/15 18:14	
Arsenic			0.00426	mg/L	0.0085						
Cadmium			0.00118	mg/L	0.0010						
Copper			-0.00384	mg/L	0.010						
Lead			-0.00310	mg/L	0.010						
Zinc			0.000900	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/26/15 18:37	
Arsenic			2.42	mg/L	0.0085	97	90	110			
Cadmium			2.41	mg/L	0.0010	96	90	110			
Copper			2.44	mg/L	0.010	98	90	110			
Lead			2.43	mg/L	0.010	97	90	110			
Zinc			2.42	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/26/15 18:41	
Arsenic			-0.00887	mg/L	0.0085						
Cadmium			0.000220	mg/L	0.0010						
Copper			-0.00242	mg/L	0.010						
Lead			0.0252	mg/L	0.010						
Zinc			-0.000630	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/26/15 19:22	
Arsenic			2.41	mg/L	0.0085	96	90	110			
Cadmium			2.38	mg/L	0.0010	95	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.41	mg/L	0.010	96	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/26/15 19:25	
Arsenic			-0.000500	mg/L	0.0085						
Cadmium			0.000170	mg/L	0.0010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150226A	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/26/15 19:25	
Copper			-0.00174	mg/L	0.010						
Lead			0.0169	mg/L	0.010						
Zinc			-0.000980	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150227A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/27/15 09:36
Arsenic			0.789	mg/L	0.0085	99	90	110			
Cadmium			0.391	mg/L	0.0010	98	90	110			
Copper			0.797	mg/L	0.010	100	90	110			
Lead			0.768	mg/L	0.010	96	90	110			
Zinc			0.799	mg/L	0.010	100	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/27/15 09:50
Arsenic			0.0144	mg/L	0.0085		0	0			
Cadmium			0.00558	mg/L	0.0010		0	0			
Copper			-0.00122	mg/L	0.010		0	0			
Lead			-0.0226	mg/L	0.010		0	0			
Zinc			0.00443	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/27/15 09:54
Arsenic			0.973	mg/L	0.0085	97	80	120			
Cadmium			0.906	mg/L	0.0010	91	80	120			
Copper			0.505	mg/L	0.010	101	80	120			
Lead			0.920	mg/L	0.010	92	80	120			
Zinc			0.989	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 11:53
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 11:56
Arsenic			0.00798	mg/L	0.0085						
Cadmium			0.000400	mg/L	0.0010						
Copper			0.00169	mg/L	0.010						
Lead			-0.00186	mg/L	0.010						
Zinc			0.000910	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 12:37
Arsenic			2.46	mg/L	0.0085	99	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 12:40
Arsenic			0.00381	mg/L	0.0085						
Cadmium			0.000530	mg/L	0.0010						
Copper			-0.00273	mg/L	0.010						
Lead			-0.00820	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150227A	
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 12:40
Zinc			0.00128	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 13:21
Arsenic			2.45	mg/L	0.0085	98	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.56	mg/L	0.010	102	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 13:24
Arsenic			-0.000210	mg/L	0.0085						
Cadmium			0.000670	mg/L	0.0010						
Copper			-0.000990	mg/L	0.010						
Lead			-0.00320	mg/L	0.010						
Zinc			0.00117	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 13:47
Arsenic			2.46	mg/L	0.0085	98	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.43	mg/L	0.010	97	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 13:50
Arsenic			0.0114	mg/L	0.0085						
Cadmium			0.000890	mg/L	0.0010						
Copper			-0.00312	mg/L	0.010						
Lead			-0.0377	mg/L	0.010						
Zinc			0.000950	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 14:31
Arsenic			2.45	mg/L	0.0085	98	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.40	mg/L	0.010	96	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/27/15 14:35
Arsenic			-0.00668	mg/L	0.0085						
Cadmium			0.000570	mg/L	0.0010						
Copper			-0.00221	mg/L	0.010						
Lead			-0.00289	mg/L	0.010						
Zinc			-0.000260	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/27/15 15:15
Arsenic			2.55	mg/L	0.0085	102	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150227A		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/27/15 15:15	
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.59	mg/L	0.010	104	90	110			
Lead			2.48	mg/L	0.010	99	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/27/15 15:19	
Arsenic			0.0131	mg/L	0.0085						
Cadmium			0.000940	mg/L	0.0010						
Copper			-0.000480	mg/L	0.010						
Lead			-0.0126	mg/L	0.010						
Zinc			0.000400	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150302A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								03/02/15 11:13
Arsenic			0.819	mg/L	0.0085	102	90	110			
Cadmium			0.394	mg/L	0.0010	99	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.769	mg/L	0.010	96	90	110			
Zinc			0.813	mg/L	0.010	102	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								03/02/15 11:28
Arsenic			0.0169	mg/L	0.0085		0	0			
Cadmium			0.00587	mg/L	0.0010		0	0			
Copper			-0.000550	mg/L	0.010		0	0			
Lead			-0.0214	mg/L	0.010		0	0			
Zinc			0.00406	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								03/02/15 11:32
Arsenic			1.01	mg/L	0.0085	101	80	120			
Cadmium			0.927	mg/L	0.0010	93	80	120			
Copper			0.509	mg/L	0.010	102	80	120			
Lead			0.921	mg/L	0.010	92	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/02/15 13:31
Arsenic			2.56	mg/L	0.0085	102	90	110			
Cadmium			2.49	mg/L	0.0010	100	90	110			
Copper			2.60	mg/L	0.010	104	90	110			
Lead			2.51	mg/L	0.010	100	90	110			
Zinc			2.55	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/02/15 13:35
Arsenic			-0.00373	mg/L	0.0085						
Cadmium			0.000340	mg/L	0.0010						
Copper			-0.000690	mg/L	0.010						
Lead			0.00192	mg/L	0.010						
Zinc			0.00133	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								03/02/15 14:15
Arsenic			2.54	mg/L	0.0085	102	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.58	mg/L	0.010	103	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								03/02/15 14:18
Arsenic			-0.00457	mg/L	0.0085						
Cadmium			0.000740	mg/L	0.0010						
Copper			-0.00437	mg/L	0.010						
Lead			0.00713	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150302A	
Lab ID: CCB	5	Continuing Calibration Blank							03/02/15 14:18	
Zinc		0.00208	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150306A	
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							03/06/15 09:21	
Lead			0.816	mg/L	0.010	102	90	110			
Zinc			0.798	mg/L	0.010	100	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							03/06/15 09:36	
Lead			-0.0399	mg/L	0.010		0	0			
Zinc			0.00225	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	2	Interference Check Sample AB							03/06/15 09:40	
Lead			0.915	mg/L	0.010	91	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/06/15 10:10	
Lead			2.56	mg/L	0.010	103	90	110			
Zinc			2.55	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/06/15 10:13	
Lead			-0.0147	mg/L	0.010						
Zinc			0.000940	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/06/15 10:54	
Lead			2.56	mg/L	0.010	102	90	110			
Zinc			2.53	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/06/15 10:58	
Lead			0.00718	mg/L	0.010						
Zinc			0.000200	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/06/15 11:38	
Lead			2.42	mg/L	0.010	97	90	110			
Zinc			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/06/15 11:42	
Lead			0.0131	mg/L	0.010						
Zinc			0.000390	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/06/15 12:22	
Lead			2.43	mg/L	0.010	97	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							03/06/15 12:26	
Lead			-0.0155	mg/L	0.010						
Zinc			0.000820	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							03/06/15 13:06	
Lead			2.45	mg/L	0.010	98	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150306A	
Lab ID: CCB	2	Continuing Calibration Blank							03/06/15 13:10	
Lead		0.00536	mg/L	0.010						
Zinc		0.000700	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150302B		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/03/15 03:51	
Arsenic			0.0505	mg/L	0.0050	101	90	110			
Cadmium			0.0498	mg/L	0.0010	100	90	110			
Lead			0.0490	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/03/15 04:00	
Arsenic			2.74E-05	mg/L	0.0050						
Cadmium			1.90E-06	mg/L	0.0010						
Lead			5.90E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/03/15 04:56	
Arsenic			0.0503	mg/L	0.0050	101	90	110			
Cadmium			0.0491	mg/L	0.0010	98	90	110			
Lead			0.0486	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/03/15 05:06	
Arsenic			4.53E-05	mg/L	0.0050						
Cadmium			ND	mg/L	0.0010						
Lead			7.80E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/03/15 05:57	
Arsenic			0.0507	mg/L	0.0050	101	90	110			
Cadmium			0.0493	mg/L	0.0010	99	90	110			
Lead			0.0491	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/03/15 06:06	
Arsenic			4.46E-05	mg/L	0.0050						
Cadmium			7.00E-07	mg/L	0.0010						
Lead			4.60E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/03/15 07:07	
Arsenic			0.0506	mg/L	0.0050	101	90	110			
Cadmium			0.0492	mg/L	0.0010	98	90	110			
Lead			0.0485	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/03/15 07:16	
Arsenic			2.24E-05	mg/L	0.0050						
Cadmium			2.70E-06	mg/L	0.0010						
Lead			8.20E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/03/15 08:26	
Arsenic			0.0508	mg/L	0.0050	102	90	110			
Cadmium			0.0497	mg/L	0.0010	99	90	110			
Lead			0.0491	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/03/15 08:39	
Arsenic			3.12E-05	mg/L	0.0050						
Cadmium			5.30E-06	mg/L	0.0010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150302B		
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/03/15 08:39	
Lead			1.01E-05	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							03/03/15 09:49	
Arsenic			0.0506	mg/L	0.0050	101	90	110			
Cadmium			0.0494	mg/L	0.0010	99	90	110			
Lead			0.0487	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							03/03/15 09:59	
Arsenic			2.90E-05	mg/L	0.0050						
Cadmium			2.90E-06	mg/L	0.0010						
Lead			6.00E-06	mg/L	0.010						
Method:	**E200.8**								Analytical Run: ICPMS204-B_150309A		
Lab ID:	**CCV**		Continuing Calibration Verification Standard							03/09/15 12:58	
Lead			0.0490	mg/L	0.010	98	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							03/09/15 13:07	
Lead			-4.90E-06	mg/L	0.010						
Lab ID:	**CCV**		Continuing Calibration Verification Standard							03/09/15 13:36	
Lead			0.0491	mg/L	0.010	98	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							03/09/15 13:45	
Lead			-1.10E-06	mg/L	0.010						
Lab ID:	**CCV**		Continuing Calibration Verification Standard							03/09/15 14:42	
Lead			0.0491	mg/L	0.010	98	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							03/09/15 14:53	
Lead			-3.70E-06	mg/L	0.010						
Lab ID:	**CCV**		Continuing Calibration Verification Standard							03/09/15 15:41	
Lead			0.0494	mg/L	0.010	99	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							03/09/15 15:49	
Lead			4.00E-07	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28171
Lab ID:	**MB-28171**	5	Method Blank				Run: ICP2-HE_150226A			02/26/15 11:01	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			4	mg/kg	0.09						
Lab ID:	**LFB-28171**	5	Laboratory Fortified Blank				Run: ICP2-HE_150226A			02/26/15 11:05	
Arsenic			48.8	mg/kg	1.0	98	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			49.7	mg/kg	1.0	99	80	120			
Lead			49.7	mg/kg	1.0	99	80	120			
Zinc			51.1	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-28171**	5	Laboratory Control Sample				Run: ICP2-HE_150226A			02/26/15 11:16	
Arsenic			290	mg/kg	3.4	84	72.3	106.4			
Cadmium			121	mg/kg	1.0	88	73	105.1			
Copper			263	mg/kg	2.1	94	77.5	109.6			
Lead			190	mg/kg	6.0	102	75.9	108.6			
Zinc			204	mg/kg	1.0	94	74.2	109.9			
Lab ID:	**H15020121-062APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150226A			02/26/15 11:49	
Arsenic			1410	mg/kg	1.8		75	125			A
Cadmium			121	mg/kg	1.0	89	75	125			
Copper			8790	mg/kg	1.1		75	125			A
Lead			803	mg/kg	3.2	92	75	125			
Zinc			3670	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-062AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150226A			02/26/15 12:00	
Arsenic			1210	mg/kg	1.7		75	125			A
Cadmium			32.1	mg/kg	1.0	92	75	125			
Copper			8630	mg/kg	1.1		75	125			A
Lead			629	mg/kg	3.1		75	125			A
Zinc			3460	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-062AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150226A			02/26/15 12:03	
Arsenic			1220	mg/kg	1.7		75	125	0.7	20	A
Cadmium			32.7	mg/kg	1.0	93	75	125	1.7	20	
Copper			8420	mg/kg	1.1		75	125	2.5	20	A
Lead			649	mg/kg	3.1		75	125	3.2	20	A
Zinc			3490	mg/kg	1.0		75	125	0.7	20	A
Lab ID:	**H15020204-006APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150226A			02/26/15 12:29	
Arsenic			228	mg/kg	1.8	86	75	125			
Cadmium			105	mg/kg	1.0	82	75	125			
Copper			297	mg/kg	1.1	86	75	125			
Lead			246	mg/kg	3.2	85	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28171
Lab ID:	**H15020204-006APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150226A				02/26/15 12:29
Zinc			358	mg/kg	1.0	87	75	125			
Lab ID:	**H15020204-006AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150226A				02/26/15 12:32
Arsenic			49.1	mg/kg	1.8	85	75	125			
Cadmium			20.9	mg/kg	1.0	84	75	125			
Copper			121	mg/kg	1.1	89	75	125			
Lead			67.9	mg/kg	3.1	79	75	125			
Zinc			182	mg/kg	1.0	92	75	125			
Lab ID:	**H15020204-006AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150226A				02/26/15 12:43
Arsenic			51.8	mg/kg	1.8	91	75	125	5.2	20	
Cadmium			20.9	mg/kg	1.0	84	75	125	0.2	20	
Copper			120	mg/kg	1.1	87	75	125	1.1	20	
Lead			67.9	mg/kg	3.1	79	75	125	0.1	20	
Zinc			183	mg/kg	1.0	93	75	125	0.2	20	
Method:	**SW6010B**										Batch: 28173
Lab ID:	**MB-28173**	4	Method Blank				Run: ICP2-HE_150226A				02/26/15 12:47
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Lab ID:	**LFB-28173**	4	Laboratory Fortified Blank				Run: ICP2-HE_150226A				02/26/15 12:51
Arsenic			48.5	mg/kg	1.0	97	80	120			
Cadmium			24.1	mg/kg	1.0	96	80	120			
Copper			49.6	mg/kg	1.0	99	80	120			
Lead			49.8	mg/kg	1.0	100	80	120			
Lab ID:	**LCS-28173**	4	Laboratory Control Sample				Run: ICP2-HE_150226A				02/26/15 12:55
Arsenic			295	mg/kg	3.5	86	72.3	106.4			
Cadmium			122	mg/kg	1.0	89	73	105.1			
Copper			259	mg/kg	2.2	93	77.5	109.6			
Lead			199	mg/kg	6.2	107	75.9	108.6			
Lab ID:	**H15020204-024APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150226A				02/26/15 14:49
Arsenic			223	mg/kg	1.8	86	75	125			
Cadmium			104	mg/kg	1.0	84	75	125			
Copper			268	mg/kg	1.1	87	75	125			
Lead			230	mg/kg	3.2	84	75	125			
Lab ID:	**H15020204-024AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150226A				02/26/15 14:53
Arsenic			49.9	mg/kg	1.7	84	75	125			
Cadmium			21.1	mg/kg	1.0	87	75	125			
Copper			95.7	mg/kg	1.1	95	75	125			
Lead			60.4	mg/kg	3.1	82	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28173	
Lab ID:	**H15020204-024AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150226A			02/26/15 14:53	
Lab ID:	**H15020204-024AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150226A			02/26/15 14:56	
Arsenic			48.8	mg/kg	1.7	81	75	125	2.3	20	
Cadmium			21.1	mg/kg	1.0	87	75	125	0.2	20	
Copper			94.1	mg/kg	1.1	91	75	125	1.7	20	
Lead			64.3	mg/kg	3.1	90	75	125	6.3	20	
Method:	**SW6010B**									Batch: 28176	
Lab ID:	**MB-28176**	4	Method Blank				Run: ICP2-HE_150226A			02/26/15 15:00	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LFB-28176**	4	Laboratory Fortified Blank				Run: ICP2-HE_150226A			02/26/15 15:04	
Arsenic			49.9	mg/kg	1.0	100	80	120			
Cadmium			25.0	mg/kg	1.0	100	80	120			
Copper			51.1	mg/kg	1.0	102	80	120			
Zinc			52.4	mg/kg	1.0	104	80	120			
Lab ID:	**LCS-28176**	4	Laboratory Control Sample				Run: ICP2-HE_150226A			02/26/15 15:07	
Arsenic			322	mg/kg	3.3	94	72.3	106.4			
Cadmium			137	mg/kg	1.0	100	73	105.1			
Copper			287	mg/kg	2.0	103	77.5	109.6			
Zinc			218	mg/kg	1.0	102	74.2	109.9			
Lab ID:	**H15020204-042APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150226A			02/26/15 16:35	
Arsenic			244	mg/kg	1.8	89	75	125			
Cadmium			106	mg/kg	1.0	84	75	125			
Copper			362	mg/kg	1.1	89	75	125			
Zinc			567	mg/kg	1.0	86	75	125			
Lab ID:	**H15020204-042AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150226A			02/26/15 16:39	
Arsenic			67.4	mg/kg	1.7	96	75	125			
Cadmium			22.5	mg/kg	1.0	91	75	125			
Copper			183	mg/kg	1.1	91	75	125			
Zinc			393	mg/kg	1.0		75	125			A
Lab ID:	**H15020204-042AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150226A			02/26/15 16:50	
Arsenic			67.6	mg/kg	1.7	96	75	125	0.3	20	
Cadmium			22.8	mg/kg	1.0	92	75	125	0.9	20	
Copper			182	mg/kg	1.1	89	75	125	0.6	20	
Zinc			395	mg/kg	1.0		75	125	0.5	20	A
Method:	**SW6010B**									Batch: 28178	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28178
Lab ID:	**MB-28178**	5	Method Blank				Run: ICP2-HE_150226A			02/26/15 16:54	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-28178**	5	Laboratory Fortified Blank				Run: ICP2-HE_150226A			02/26/15 16:57	
Arsenic			49.6	mg/kg	1.0	99	80	120			
Cadmium			24.6	mg/kg	1.0	98	80	120			
Copper			50.9	mg/kg	1.0	101	80	120			
Lead			50.0	mg/kg	1.0	100	80	120			
Zinc			51.4	mg/kg	1.0	102	80	120			
Lab ID:	**LCS-28178**	5	Laboratory Control Sample				Run: ICP2-HE_150226A			02/26/15 17:01	
Arsenic			314	mg/kg	3.6	92	72.3	106.4			
Cadmium			132	mg/kg	1.0	96	73	105.1			
Copper			279	mg/kg	2.2	100	77.5	109.6			
Lead			199	mg/kg	6.4	106	75.9	108.6			
Zinc			219	mg/kg	1.0	103	74.2	109.9			
Lab ID:	**H15020204-060APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150226A			02/26/15 18:55	
Arsenic			436	mg/kg	1.8	83	75	125			
Cadmium			103	mg/kg	1.0	81	75	125			
Copper			1860	mg/kg	1.1		75	125			A
Lead			441	mg/kg	3.1	74	75	125			S
Zinc			917	mg/kg	1.0	73	75	125			S
Lab ID:	**H15020204-060AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150226A			02/26/15 18:59	
Arsenic			267	mg/kg	1.7		75	125			A
Cadmium			23.6	mg/kg	1.0	81	75	125			
Copper			1720	mg/kg	1.1		75	125			A
Lead			282	mg/kg	3.1		75	125			A
Zinc			749	mg/kg	1.0		75	125			A
Lab ID:	**H15020204-060AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150226A			02/26/15 19:03	
Arsenic			266	mg/kg	1.7		75	125	0.2	20	A
Cadmium			23.7	mg/kg	1.0	83	75	125	0.8	20	
Copper			1670	mg/kg	1.0		75	125	3.2	20	A
Lead			280	mg/kg	3.0		75	125	0.8	20	A
Zinc			747	mg/kg	1.0		75	125	0.3	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28173
Lab ID:	**MB-28173**	4	Method Blank				Run: ICP2-HE_150227A				02/27/15 10:10
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Lab ID:	**LFB-28173**	4	Laboratory Fortified Blank				Run: ICP2-HE_150227A				02/27/15 10:14
Arsenic			48.5	mg/kg	1.0	97	80	120			
Cadmium			24.2	mg/kg	1.0	97	80	120			
Copper			50.7	mg/kg	1.0	101	80	120			
Lead			49.3	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-28173**	4	Laboratory Control Sample				Run: ICP2-HE_150227A				02/27/15 10:17
Arsenic			295	mg/kg	3.5	86	72.3	106.4			
Cadmium			122	mg/kg	1.0	89	73	105.1			
Copper			267	mg/kg	2.2	95	77.5	109.6			
Lead			183	mg/kg	6.2	98	75.9	108.6			
Lab ID:	**H15020204-024APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150227A				02/27/15 11:45
Arsenic			223	mg/kg	1.8	86	75	125			
Cadmium			106	mg/kg	1.0	84	75	125			
Copper			271	mg/kg	1.1	88	75	125			
Lead			229	mg/kg	3.2	84	75	125			
Lab ID:	**H15020204-024AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150227A				02/27/15 11:49
Arsenic			50.9	mg/kg	1.7	85	75	125			
Cadmium			21.4	mg/kg	1.0	86	75	125			
Copper			95.7	mg/kg	1.1	95	75	125			
Lead			61.3	mg/kg	3.1	87	75	125			
Lab ID:	**H15020204-024AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150227A				02/27/15 12:00
Arsenic			52.8	mg/kg	1.7	89	75	125	3.6	20	
Cadmium			21.7	mg/kg	1.0	88	75	125	1.7	20	
Copper			94.4	mg/kg	1.1	92	75	125	1.4	20	
Lead			66.0	mg/kg	3.1	97	75	125	7.3	20	
Method:	**SW6010B**										Batch: 28176
Lab ID:	**MB-28176**	4	Method Blank				Run: ICP2-HE_150227A				02/27/15 12:04
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LFB-28176**	4	Laboratory Fortified Blank				Run: ICP2-HE_150227A				02/27/15 12:08
Arsenic			49.6	mg/kg	1.0	99	80	120			
Cadmium			24.5	mg/kg	1.0	98	80	120			
Copper			50.6	mg/kg	1.0	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28176
Lab ID:	**LFB-28176**	4	Laboratory Fortified Blank				Run: ICP2-HE_150227A			02/27/15 12:08	
Zinc			51.4	mg/kg	1.0	102	80	120			
Lab ID:	**LCS-28176**	4	Laboratory Control Sample				Run: ICP2-HE_150227A			02/27/15 12:11	
Arsenic			319	mg/kg	3.3	93	72.3	106.4			
Cadmium			134	mg/kg	1.0	98	73	105.1			
Copper			281	mg/kg	2.0	100	77.5	109.6			
Zinc			215	mg/kg	1.0	101	74.2	109.9			
Lab ID:	**H15020204-042APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150227A			02/27/15 14:05	
Arsenic			240	mg/kg	1.8	87	75	125			
Cadmium			104	mg/kg	1.0	82	75	125			
Copper			362	mg/kg	1.1	90	75	125			
Zinc			539	mg/kg	1.0	84	75	125			
Lab ID:	**H15020204-042AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150227A			02/27/15 14:09	
Arsenic			68.3	mg/kg	1.7	96	75	125			
Cadmium			22.7	mg/kg	1.0	89	75	125			
Copper			183	mg/kg	1.1	97	75	125			
Zinc			381	mg/kg	1.0		75	125			A
Lab ID:	**H15020204-042AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150227A			02/27/15 14:12	
Arsenic			66.7	mg/kg	1.7	92	75	125	2.5	20	
Cadmium			22.3	mg/kg	1.0	87	75	125	2.0	20	
Copper			183	mg/kg	1.1	96	75	125	0.2	20	
Zinc			369	mg/kg	1.0		75	125	3.2	20	A
Method:	**SW6010B**										Batch: 28185
Lab ID:	**MB-28185**	5	Method Blank				Run: ICP2-HE_150227A			02/27/15 14:16	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28185**	5	Laboratory Fortified Blank				Run: ICP2-HE_150227A			02/27/15 14:20	
Arsenic			47.4	mg/kg	1.0	95	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			49.5	mg/kg	1.0	99	80	120			
Lead			46.6	mg/kg	1.0	93	80	120			
Zinc			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28185**	5	Laboratory Control Sample				Run: ICP2-HE_150227A			02/27/15 14:24	
Arsenic			285	mg/kg	3.6	83	72.3	106.4			
Cadmium			120	mg/kg	1.0	87	73	105.1			
Copper			253	mg/kg	2.2	90	77.5	109.6			
Lead			172	mg/kg	6.4	92	75.9	108.6			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28185
Lab ID:	**LCS-28185**	5	Laboratory Control Sample				Run: ICP2-HE_150227A			02/27/15 14:24	
Zinc			193	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H15020204-068APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150227A			02/27/15 15:08	
Arsenic			257	mg/kg	1.8	84	75	125			
Cadmium			102	mg/kg	1.0	80	75	125			
Copper			316	mg/kg	1.1	87	75	125			
Lead			223	mg/kg	3.2	80	75	125			
Zinc			307	mg/kg	1.0	84	75	125			
Lab ID:	**H15020204-068AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150227A			02/27/15 15:11	
Arsenic			92.5	mg/kg	1.8	98	75	125			
Cadmium			22.0	mg/kg	1.0	86	75	125			
Copper			146	mg/kg	1.1	101	75	125			
Lead			59.7	mg/kg	3.2	78	75	125			
Zinc			144	mg/kg	1.0	100	75	125			
Lab ID:	**H15020204-068AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150227A			02/27/15 15:22	
Arsenic			93.1	mg/kg	1.8	98	75	125	0.6	20	
Cadmium			22.4	mg/kg	1.0	87	75	125	1.7	20	
Copper			149	mg/kg	1.1	107	75	125	2.6	20	
Lead			67.2	mg/kg	3.2	92	75	125	12	20	
Zinc			146	mg/kg	1.0	104	75	125	1.8	20	
Method:	**SW6010B**										Batch: 28171
Lab ID:	**H15020204-001APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150302A			03/02/15 13:46	
Arsenic			618	mg/kg	1.8	89	75	125			
Cadmium			117	mg/kg	1.0	85	75	125			
Copper			2120	mg/kg	1.1		75	125			A
Lead			499	mg/kg	3.2	84	75	125			
Zinc			1860	mg/kg	1.0		75	125			A
Lab ID:	**H15020204-001AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150302A			03/02/15 13:49	
Arsenic			427	mg/kg	1.8		75	125			A
Cadmium			31.8	mg/kg	1.0	86	75	125			
Copper			1970	mg/kg	1.1		75	125			A
Lead			324	mg/kg	3.2		75	125			A
Zinc			1660	mg/kg	1.0		75	125			A
Lab ID:	**H15020204-001AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150302A			03/02/15 13:53	
Arsenic			443	mg/kg	1.8		75	125	3.7	20	A
Cadmium			32.7	mg/kg	1.0	90	75	125	3.0	20	
Copper			2020	mg/kg	1.1		75	125	2.6	20	A
Lead			332	mg/kg	3.2		75	125	2.4	20	A
Zinc			1730	mg/kg	1.0		75	125	4.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28303
Lab ID:	**MB-28303**	Method Blank				Run: ICP2-HE_150306A				03/06/15 09:55
Zinc		0.2	mg/kg	0.09						
Lab ID:	**LFB-28303**	Laboratory Fortified Blank				Run: ICP2-HE_150306A				03/06/15 09:59
Zinc		49.1	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-28303**	Laboratory Control Sample				Run: ICP2-HE_150306A				03/06/15 10:03
Zinc		186	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H15020204-024APDS**	Post Digestion/Distillation Spike				Run: ICP2-HE_150306A				03/06/15 11:31
Zinc		312	mg/kg	1.0	85	75	125			
Lab ID:	**H15020204-024AMS**	Sample Matrix Spike				Run: ICP2-HE_150306A				03/06/15 11:34
Zinc		144	mg/kg	1.0	98	75	125			
Lab ID:	**H15020204-024AMSD**	Sample Matrix Spike Duplicate				Run: ICP2-HE_150306A				03/06/15 11:45
Zinc		139	mg/kg	1.0	90	75	125	3.4	20	
Method:	**SW6010B**									Batch: 28304
Lab ID:	**MB-28304**	Method Blank				Run: ICP2-HE_150306A				03/06/15 11:49
Lead		ND	mg/kg	0.6						
Lab ID:	**LFB-28304**	Laboratory Fortified Blank				Run: ICP2-HE_150306A				03/06/15 11:53
Lead		46.1	mg/kg	1.0	92	80	120			
Lab ID:	**LCS-28304**	Laboratory Control Sample				Run: ICP2-HE_150306A				03/06/15 11:57
Lead		163	mg/kg	3.1	87	75.9	108.6			
Lab ID:	**H15020204-042APDS**	Post Digestion/Distillation Spike				Run: ICP2-HE_150306A				03/06/15 13:51
Lead		229	mg/kg	3.2	82	75	125			
Lab ID:	**H15020204-042AMS**	Sample Matrix Spike				Run: ICP2-HE_150306A				03/06/15 13:54
Lead		63.3	mg/kg	3.1	84	75	125			
Lab ID:	**H15020204-042AMSD**	Sample Matrix Spike Duplicate				Run: ICP2-HE_150306A				03/06/15 13:58
Lead		61.8	mg/kg	3.1	81	75	125	2.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150302B		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							03/02/15 23:12	
Arsenic			0.0591	mg/L	0.0010	99	90	110			
Cadmium			0.0306	mg/L	0.0010	102	90	110			
Lead			0.0578	mg/L	0.0010	96	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							03/02/15 23:16	
Arsenic			0.000107	mg/L	0.0010						
Cadmium			0.000723	mg/L	0.0010						
Lead			0.000236	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							03/02/15 23:21	
Arsenic			0.0106	mg/L	0.0010	106	70	130			
Cadmium			0.0103	mg/L	0.0010	103	70	130			
Lead			0.000238	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 28171	
Lab ID:	**H15020204-001APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B			03/02/15 23:54	
Arsenic			2720	mg/kg	1.0	96	75	125			
Lead			2610	mg/kg	1.0	96	75	125			
Lab ID:	**H15020204-001AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150302B			03/02/15 23:58	
Arsenic			451	mg/kg	1.0		75	125			A
Lead			348	mg/kg	1.0		75	125			A
Lab ID:	**H15020204-001AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150302B			03/03/15 00:02	
Arsenic			461	mg/kg	1.0		75	125	2.2	20	A
Lead			347	mg/kg	1.0		75	125	0.2	20	A
Lab ID:	**MB-28171**	2	Method Blank				Run: ICPMS204-B_150302B			03/03/15 00:12	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28171**	2	Laboratory Control Sample				Run: ICPMS204-B_150302B			03/03/15 00:17	
Arsenic			308	mg/kg	1.0	90	72.3	106.4			
Lead			187	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-28171**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150302B			03/03/15 00:21	
Arsenic			49.6	mg/kg	1.0	99	80	120			
Lead			49.4	mg/kg	1.0	99	80	120			
Lab ID:	**H15020204-006APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B			03/03/15 01:03	
Arsenic			2360	mg/kg	1.0	95	75	125			
Lead			2370	mg/kg	1.0	95	75	125			
Lab ID:	**H15020204-006AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150302B			03/03/15 01:08	
Arsenic			57.3	mg/kg	1.0	96	75	125			
Lead			70.3	mg/kg	1.0	92	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28171
Lab ID:	**H15020204-006AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150302B			03/03/15 01:12	
Arsenic			55.5	mg/kg	1.0	93	75	125	3.2	20	
Lead			71.1	mg/kg	1.0	94	75	125	1.1	20	
Method:	**SW6020**										Batch: 28173
Lab ID:	**MB-28173**	2	Method Blank				Run: ICPMS204-B_150302B			03/03/15 01:22	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28173**	2	Laboratory Control Sample				Run: ICPMS204-B_150302B			03/03/15 01:26	
Arsenic			321	mg/kg	1.0	93	72.3	106.4			
Lead			191	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-28173**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150302B			03/03/15 01:31	
Arsenic			50.6	mg/kg	1.0	101	80	120			
Lead			49.6	mg/kg	1.0	99	80	120			
Lab ID:	**H15020204-024APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B			03/03/15 03:37	
Arsenic			2390	mg/kg	1.0	98	75	125			
Lead			2390	mg/kg	1.0	98	75	125			
Lab ID:	**H15020204-024AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150302B			03/03/15 03:41	
Arsenic			56.3	mg/kg	1.0	98	75	125			
Lead			61.9	mg/kg	1.0	89	75	125			
Lab ID:	**H15020204-024AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150302B			03/03/15 03:46	
Arsenic			56.0	mg/kg	1.0	98	75	125	0.4	20	
Lead			65.5	mg/kg	1.0	97	75	125	5.6	20	
Method:	**SW6020**										Batch: 28176
Lab ID:	**MB-28176**		Method Blank				Run: ICPMS204-B_150302B			03/03/15 04:05	
Arsenic			ND	mg/kg	0.3						
Lab ID:	**LCS-28176**		Laboratory Control Sample				Run: ICPMS204-B_150302B			03/03/15 04:09	
Arsenic			341	mg/kg	1.0	99	72.3	106.4			
Lab ID:	**LFB-28176**		Laboratory Fortified Blank				Run: ICPMS204-B_150302B			03/03/15 04:14	
Arsenic			50.6	mg/kg	1.0	101	80	120			
Lab ID:	**H15020204-042APDS**		Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B			03/03/15 06:20	
Arsenic			2370	mg/kg	1.0	96	75	125			
Lab ID:	**H15020204-042AMS**		Sample Matrix Spike				Run: ICPMS204-B_150302B			03/03/15 06:25	
Arsenic			68.4	mg/kg	1.0	92	75	125			
Lab ID:	**H15020204-042AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS204-B_150302B			03/03/15 06:29	
Arsenic			73.2	mg/kg	1.0	101	75	125	6.7	20	
Method:	**SW6020**										Batch: 28178

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28178
Lab ID:	**MB-28178**	2	Method Blank				Run: ICPMS204-B_150302B			03/03/15 06:39	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lab ID:	**LCS-28178**	2	Laboratory Control Sample				Run: ICPMS204-B_150302B			03/03/15 06:43	
Arsenic			337	mg/kg	1.0	98	72.3	106.4			
Cadmium			138	mg/kg	1.0	101	73	105.1			
Lab ID:	**LFB-28178**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150302B			03/03/15 06:48	
Arsenic			51.2	mg/kg	1.0	102	80	120			
Cadmium			26.0	mg/kg	1.0	104	80	120			
Lab ID:	**H15020204-060APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B			03/03/15 08:12	
Arsenic			2630	mg/kg	1.0	95	75	125			
Cadmium			1140	mg/kg	1.0	91	75	125			
Lab ID:	**H15020204-060AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150302B			03/03/15 08:17	
Arsenic			300	mg/kg	1.0		75	125			A
Cadmium			27.0	mg/kg	1.0	94	75	125			
Lab ID:	**H15020204-060AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150302B			03/03/15 08:21	
Arsenic			295	mg/kg	1.0		75	125	1.7	20	A
Cadmium			26.5	mg/kg	1.0	92	75	125	2.0	20	
Method:	**SW6020**										Batch: 28185
Lab ID:	**MB-28185**	3	Method Blank				Run: ICPMS204-B_150302B			03/03/15 08:44	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28185**	3	Laboratory Control Sample				Run: ICPMS204-B_150302B			03/03/15 08:48	
Arsenic			304	mg/kg	1.0	89	72.3	106.4			
Cadmium			125	mg/kg	1.0	91	73	105.1			
Lead			181	mg/kg	1.0	97	75.9	108.6			
Lab ID:	**LFB-28185**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150302B			03/03/15 08:53	
Arsenic			50.1	mg/kg	1.0	100	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Lead			47.7	mg/kg	1.0	95	80	120			
Lab ID:	**H15020204-068APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B			03/03/15 09:36	
Arsenic			2440	mg/kg	1.0	97	75	125			
Cadmium			1170	mg/kg	1.0	95	75	125			
Lead			2420	mg/kg	1.0	98	75	125			
Lab ID:	**H15020204-068AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150302B			03/03/15 09:40	
Arsenic			102	mg/kg	1.0	110	75	125			
Cadmium			24.6	mg/kg	1.0	97	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 28185
Lab ID: H15020204-068AMS	3	Sample Matrix Spike				Run: ICPMS204-B_150302B			03/03/15 09:40	
Lead		68.0	mg/kg	1.0	99	75	125			
Lab ID: H15020204-068AMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150302B			03/03/15 09:45	
Arsenic		103	mg/kg	1.0	112	75	125	1.2	20	
Cadmium		24.7	mg/kg	1.0	97	75	125	0.2	20	
Lead		68.7	mg/kg	1.0	100	75	125	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150309A	
Lab ID:	**ICV STD**		Initial Calibration Verification Standard								03/09/15 11:29
Lead			0.0618	mg/L	0.0010	103	90	110			
Lab ID:	**ICSA**		Interference Check Sample A								03/09/15 11:34
Lead			0.000244	mg/L	0.0010						
Lab ID:	**ICSAB**		Interference Check Sample AB								03/09/15 11:38
Lead			0.000245	mg/L	0.0010		0	0			
Lab ID:	**CCV**		Continuing Calibration Verification Standard								03/09/15 11:47
Lead			0.0496	mg/L	0.0010	99	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank								03/09/15 11:55
Lead			-3.80E-06	mg/L	0.0010						
Method:	**SW6020**										Batch: 28304
Lab ID:	**MB-28304**		Method Blank				Run: ICPMS204-B_150309A				03/09/15 12:10
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28304**		Laboratory Control Sample				Run: ICPMS204-B_150309A				03/09/15 12:14
Lead			176	mg/kg	1.0	94	75.9	108.6			
Lab ID:	**LFB-28304**		Laboratory Fortified Blank				Run: ICPMS204-B_150309A				03/09/15 12:19
Lead			47.9	mg/kg	1.0	96	80	120			
Lab ID:	**H15020204-042APDS**		Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A				03/09/15 13:24
Lead			2350	mg/kg	1.0	96	75	125			
Lab ID:	**H15020204-042AMS**		Sample Matrix Spike				Run: ICPMS204-B_150309A				03/09/15 13:28
Lead			69.2	mg/kg	1.0	93	75	125			
Lab ID:	**H15020204-042AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A				03/09/15 13:32
Lead			69.0	mg/kg	1.0	93	75	125	0.3	20	
Method:	**SW6020**										Batch: 28305
Lab ID:	**MB-28305**		Method Blank				Run: ICPMS204-B_150309A				03/09/15 14:57
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28305**		Laboratory Control Sample				Run: ICPMS204-B_150309A				03/09/15 15:01
Lead			176	mg/kg	1.0	94	75.9	108.6			
Lab ID:	**LFB-28305**		Laboratory Fortified Blank				Run: ICPMS204-B_150309A				03/09/15 15:06
Lead			46.5	mg/kg	1.0	93	80	120			
Lab ID:	**H15020204-058APDS**		Post Digestion/Distillation Spike				Run: ICPMS204-B_150309A				03/09/15 15:28
Lead			2290	mg/kg	1.0	94	75	125			
Lab ID:	**H15020204-058AMS**		Sample Matrix Spike				Run: ICPMS204-B_150309A				03/09/15 15:32
Lead			60.0	mg/kg	1.0	93	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/09/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020204

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 28305
Lab ID:	**H15020204-058AMSD**	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150309A			03/09/15 15:36	
Lead		60.1	mg/kg	1.0	94	75	125	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020204

Login completed by: Austin H. Nearpass
Date Received: 2/12/2015
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 2/16/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	Comments°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at -0.3 °C, Cooler 2 at 0.5 °C.
Time on bag 4-107-0612 says 14:11. COC states 141. Logged in with time from bag .
Bag states 4-060-2430. COC states 4-060E-2430. Used COC at login. An 2/12/15

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-058-0006	1052	2/5/15	Soil	A	B		1
4-058-0612	1051	2/5/15	Soil	A	B		1
4-058-1218	1050	2/5/15	Soil	A	B		1
4-060-3036	1022	2/5/15	Soil	A	B		1
4-060-3642	1021	2/5/15	Soil	A	B		1
4-060-4248	1020	2/5/15	Soil	A	B		1
4-060E-1218	1135	2/5/15	Soil	A	B		1
4-060E-1824	1134	2/5/15	Soil	A	B		1
4-060E-2430	1133	2/5/15	Soil	A	B		1
4-060S-0006	1107	2/5/15	Soil	A	B		1
4-060S-0612	1106	2/5/15	Soil	A	B		1
4-070-0006	1657	2/5/15	Soil	A	B		1
4-070-0612	1656	2/5/15	Soil	A	B		1
4-070-1218	1655	2/5/15	Soil	A	B		1
4-072-0612	936	2/5/15	Soil	A	B		1
4-072-1218	935	2/5/15	Soil	A	B		1
4-072-1824	934	2/5/15	Soil	A	B		1
4-080-0612	1556	2/5/15	Soil	A	B		1
4-080-1218	1555	2/5/15	Soil	A	B		1
4-080-1824	1554	2/5/15	Soil	A	B		1

H15020204

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/12/15 1110

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: C1 = -0.3 C2 = 0.5 Hand del.
2/12/15 11:10

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
4-081-0612	1617	2/5/15	Soil	A	B		1
4-081-1218	1615	2/5/15	Soil	A	B		1
4-081-1218D	1616	2/5/15	Soil	A	B		1
4-081-1824	1614	2/5/15	Soil	A	B		1
4-082-0612	1206	2/5/15	Soil	A	B		1
4-082-1218	1205	2/5/15	Soil	A	B		1
4-082-1824	1204	2/5/15	Soil	A	B		1
4-083-0612	916	2/5/15	Soil	A	B		1
4-083-1218	915	2/5/15	Soil	A	B		1
4-083-1824	914	2/5/15	Soil	A	B		1
4-087-1218	1235	2/5/15	Soil	A	B		1
4-087-1218D	1236	2/5/15	Soil	A	B		1
4-087-1824	1234	2/5/15	Soil	A	B		1
4-087-2430	1233	2/5/15	Soil	A	B		1
4-087E-0006	1537	2/5/15	Soil	A	B		1
4-087E-0612	1536	2/5/15	Soil	A	B		1
4-087E-1218	1535	2/5/15	Soil	A	B		1
4-088-1824	1004	2/5/15	Soil	A	B		1
4-088-2430	1003	2/5/15	Soil	A	B		1
4-088-3036	1002	2/5/15	Soil	A	B		1

H150202

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) Erin M Ford
Date/Time: 2/12/15 1110

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): Tracy Nevast

On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: C1 = -0.3 C2 = 0.5 2/12/15 11:10

Hand del.

COC02_05_15 EL.xls

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-089-1218	855	2/5/15	Soil	A	B		1
4-089-1218D	856	2/5/15	Soil	A	B		1
4-089-1824	854	2/5/15	Soil	A	B		1
4-089-2430	853	2/5/15	Soil	A	B		1
4-096-1218	1345	2/5/15	Soil	A	B		1
4-096-1824	1344	2/5/15	Soil	A	B		1
4-096-2430	1343	2/5/15	Soil	A	B		1
4-096E-0612	1514	2/5/15	Soil	A	B		1
4-096E-1218	1513	2/5/15	Soil	A	B		1
4-096E-1824	1512	2/5/15	Soil	A	B		1
4-097-0006	1427	2/5/15	Soil	A	B		1
4-097-0612	1426	2/5/15	Soil	A	B		1
4-097-1218	1425	2/5/15	Soil	A	B		1
4-103-3642	756	2/5/15	Soil	A	B		1
4-103-4248	755	2/5/15	Soil	A	B		1
4-106-1218	1445	2/5/15	Soil	A	B		1
4-106-1824	1444	2/5/15	Soil	A	B		1
4-106-2430	1443	2/5/15	Soil	A	B		1
4-106E-0006	1635	2/5/15	Soil	A	B		1
4-106E-0612	1634	2/5/15	Soil	A	B		1

H15020204

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 2/12/15 1110

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

On Ice: (Y) N
Temp Blank: (Y) N

Date/Time: C1 = -0.3 C2 = 0.5 2/12/15 11:10

Hand del.

COC02_05_15 EL.xls

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-106E-1218	1633	2/5/15	Soil	A	B		1
4-107-0006	1412	2/5/15	Soil	A	B		1
4-107-0612	141	2/5/15	Soil	A	B		1
4-110-1824	814	2/5/15	Soil	A	B		1
4-110-2430	813	2/5/15	Soil	A	B		1
4-110-3036	812	2/5/15	Soil	A	B		1
4-124W-0006	1320	2/5/15	Soil	A	B		1
4-124W-0612	1319	2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1
		2/5/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15020204

Preservatives Used:
1 - Ice

Relinquished By (sign):
(1) [signature]
Date/Time: 2/12/15 1110

Received By (sign):
(1) _____
Date/Time:

Relinquished By (sign):
(2) _____
Date/Time:

Received By (sign):
(2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

On Ice: Y N
Temp Blank: Y N

Date/Time:
C1 = -0.3
C2 = 0.5
2/12/15 11:10

Hand del.

COC02_05_15 EL.xls

ANALYTICAL SUMMARY REPORT

March 03, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020121

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 62 samples for MT DEQ-Federal Superfund on 2/6/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020121-001	4-186-0612	01/27/15 9:46	02/06/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020121-002	4-186-1218	01/27/15 9:45	02/06/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020121-003	4-186-1824	01/27/15 9:44	02/06/15	Soil	Same As Above
H15020121-004	4-192-0006	01/27/15 8:57	02/06/15	Soil	Same As Above
H15020121-005	4-192-0612	01/27/15 8:56	02/06/15	Soil	Same As Above
H15020121-006	4-193-1218	01/27/15 8:35	02/06/15	Soil	Same As Above
H15020121-007	4-193-1824	01/27/15 8:34	02/06/15	Soil	Same As Above
H15020121-008	4-193-2430	01/27/15 8:33	02/06/15	Soil	Same As Above
H15020121-009	4-193E-0006	01/27/15 15:50	02/06/15	Soil	Same As Above
H15020121-010	4-193E-0612	01/27/15 15:49	02/06/15	Soil	Same As Above
H15020121-011	4-193S-0006	01/27/15 16:05	02/06/15	Soil	Same As Above
H15020121-012	4-193S-0612	01/27/15 16:04	02/06/15	Soil	Same As Above
H15020121-013	4-193S-1218	01/27/15 16:03	02/06/15	Soil	Same As Above
H15020121-014	4-194-0006	01/27/15 9:28	02/06/15	Soil	Same As Above
H15020121-015	4-194-0612	01/27/15 9:27	02/06/15	Soil	Same As Above
H15020121-016	4-194-1218	01/27/15 9:25	02/06/15	Soil	Same As Above
H15020121-017	4-194-1218D	01/27/15 9:26	02/06/15	Soil	Same As Above
H15020121-018	4-195-2430	01/27/15 16:33	02/06/15	Soil	Same As Above
H15020121-019	4-195-3036	01/27/15 16:32	02/06/15	Soil	Same As Above
H15020121-020	4-195-3642	01/27/15 16:31	02/06/15	Soil	Same As Above
H15020121-021	4-204-1824	01/27/15 16:54	02/06/15	Soil	Same As Above
H15020121-022	4-204-2430	01/27/15 16:53	02/06/15	Soil	Same As Above
H15020121-023	4-204-3036	01/27/15 16:52	02/06/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020121-024	4-208E-0612	01/27/15 7:55	02/06/15	Soil	Same As Above
H15020121-025	4-208E-1218	01/27/15 7:53	02/06/15	Soil	Same As Above
H15020121-026	4-208E-1218D	01/27/15 7:54	02/06/15	Soil	Same As Above
H15020121-027	4-208E-1824	01/27/15 7:52	02/06/15	Soil	Same As Above
H15020121-028	4-255-3642	01/27/15 10:51	02/06/15	Soil	Same As Above
H15020121-029	4-255-4248	01/27/15 10:50	02/06/15	Soil	Same As Above
H15020121-030	4-256-1218	01/27/15 11:15	02/06/15	Soil	Same As Above
H15020121-031	4-256-1824	01/27/15 11:14	02/06/15	Soil	Same As Above
H15020121-032	4-256-2430	01/27/15 11:13	02/06/15	Soil	Same As Above
H15020121-033	4-257-0612	01/27/15 11:56	02/06/15	Soil	Same As Above
H15020121-034	4-257-1218	01/27/15 11:55	02/06/15	Soil	Same As Above
H15020121-035	4-257-1824	01/27/15 11:54	02/06/15	Soil	Same As Above
H15020121-036	4-258-3642	01/27/15 12:11	02/06/15	Soil	Same As Above
H15020121-037	4-258-4248	01/27/15 12:10	02/06/15	Soil	Same As Above
H15020121-038	4-258-4854	01/27/15 12:26	02/06/15	Soil	Same As Above
H15020121-039	4-266-1824	01/27/15 11:34	02/06/15	Soil	Same As Above
H15020121-040	4-266-2430	01/27/15 11:33	02/06/15	Soil	Same As Above
H15020121-041	4-266-3036	01/27/15 11:32	02/06/15	Soil	Same As Above
H15020121-042	4-267-0006	01/27/15 12:52	02/06/15	Soil	Same As Above
H15020121-043	4-267-0612	01/27/15 12:51	02/06/15	Soil	Same As Above
H15020121-044	4-267-1218	01/27/15 12:50	02/06/15	Soil	Same As Above
H15020121-045	4-276-1824	01/27/15 12:54	02/06/15	Soil	Same As Above
H15020121-046	4-276-2430	01/27/15 12:53	02/06/15	Soil	Same As Above
H15020121-047	4-276-3036	01/27/15 12:52	02/06/15	Soil	Same As Above
H15020121-048	4-277-1218	01/27/15 13:26	02/06/15	Soil	Same As Above
H15020121-049	4-277-1824	01/27/15 13:24	02/06/15	Soil	Same As Above
H15020121-050	4-277-1824D	01/27/15 13:25	02/06/15	Soil	Same As Above
H15020121-051	4-277-2430	01/27/15 13:23	02/06/15	Soil	Same As Above
H15020121-052	4-284-0612	01/27/15 14:24	02/06/15	Soil	Same As Above
H15020121-053	4-284-1218	01/27/15 14:23	02/06/15	Soil	Same As Above
H15020121-054	4-284-1824	01/27/15 14:22	02/06/15	Soil	Same As Above
H15020121-055	4-285-0006	01/27/15 14:07	02/06/15	Soil	Same As Above
H15020121-056	4-285-0612	01/27/15 14:06	02/06/15	Soil	Same As Above
H15020121-057	4-285-1218	01/27/15 14:05	02/06/15	Soil	Same As Above
H15020121-058	4-294-2430	01/27/15 14:51	02/06/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020121-059	4-294-3036	01/27/15 14:50	02/06/15	Soil	Same As Above
H15020121-060	4-295-3036	01/27/15 14:27	02/06/15	Soil	Same As Above
H15020121-061	4-295-3642	01/27/15 14:26	02/06/15	Soil	Same As Above
H15020121-062	4-295-4248	01/27/15 14:25	02/06/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020121

Report Date: 03/03/15
Date Received: 02/06/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020121-001	4-186-0612	7.5	641	4	1240	425	1590
H15020121-002	4-186-1218	7.7	57	2	605	127	511
H15020121-003	4-186-1824	7.6	17	< 1	57	23	109
H15020121-004	4-192-0006	7.8	190	4	1350	224	1020
H15020121-005	4-192-0612	7.6	133	2	756	108	474
H15020121-006	4-193-1218	7.7	1210	14	9160	839	3200
H15020121-007	4-193-1824	7.7	69	4	690	164	769
H15020121-008	4-193-2430	7.7	48	< 1	141	27	178
H15020121-009	4-193E-0006	7.8	31	< 1	120	20	114
H15020121-010	4-193E-0612	7.8	19	< 1	82	20	103
H15020121-011	4-193S-0006	7.5	723	13	3800	564	2570
H15020121-012	4-193S-0612	7.7	213	4	1210	186	844
H15020121-013	4-193S-1218	7.6	25	< 1	125	27	131
H15020121-014	4-194-0006	7.5	320	6	1450	299	1360
H15020121-015	4-194-0612	7.6	163	2	791	145	583
H15020121-016	4-194-1218	7.5	26	< 1	105	25	95
H15020121-017	4-194-1218D	7.4	26	< 1	122	27	116
H15020121-018	4-195-2430	7.1	12	6	1490	13	2530
H15020121-019	4-195-3036	6.8	8	3	108	10	1050
H15020121-020	4-195-3642	6.9	21	4	889	14	850
H15020121-021	4-204-1824	6.6	4	3	97	9	1420
H15020121-022	4-204-2430	5.6	5	< 1	114	9	151
H15020121-023	4-204-3036	7.9	2	< 1	26	8	51
H15020121-024	4-208E-0612	7.8	404	6	2450	354	1970
H15020121-025	4-208E-1218	7.8	200	4	1330	184	1120
H15020121-026	4-208E-1218D	7.8	19	< 1	148	25	148
H15020121-027	4-208E-1824	6.5	12	< 1	50	13	79
H15020121-028	4-255-3642	7.2	169	7	1680	149	2360
H15020121-029	4-255-4248	6.6	311	8	2410	229	1930
H15020121-030	4-256-1218	6.0	37	4	878	31	458
H15020121-031	4-256-1824	6.7	7	3	36	15	1230
H15020121-032	4-256-2430	7.0	10	2	152	18	898
H15020121-033	4-257-0612	7.7	297	5	1700	301	946
H15020121-034	4-257-1218	7.7	58	1	313	52	265
H15020121-035	4-257-1824	7.8	23	< 1	71	16	100
H15020121-036	4-258-3642	6.2	262	9	1670	441	2200
H15020121-037	4-258-4248	5.9	15	< 1	56	29	101
H15020121-038	4-258-4854	4.7	25	< 1	55	11	174
H15020121-039	4-266-1824	7.3	8	27	4680	16	5300
H15020121-040	4-266-2430	7.5	8	< 1	71	10	182

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020121

Report Date: 03/03/15
Date Received: 02/06/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020121-041	4-266-3036	6.6	5	< 1	19	10	49
H15020121-042	4-267-0006	5.2	1540	3	3240	1270	1410
H15020121-043	4-267-0612	7.5	55	2	517	66	557
H15020121-044	4-267-1218	7.6	12	< 1	63	13	108
H15020121-045	4-276-1824	6.9	482	8	7340	1400	2790
H15020121-046	4-276-2430	6.8	52	< 1	91	62	227
H15020121-047	4-276-3036	7.3	5	< 1	37	12	77
H15020121-048	4-277-1218	6.5	27	14	5650	40	1740
H15020121-049	4-277-1824	7.1	8	< 1	100	16	522
H15020121-050	4-277-1824D	7.0	6	< 1	63	11	213
H15020121-051	4-277-2430	6.9	10	< 1	334	18	354
H15020121-052	4-284-0612	6.4	23	3	377	11	635
H15020121-053	4-284-1218	6.5	10	< 1	24	10	607
H15020121-054	4-284-1824	6.6	12	2	44	14	828
H15020121-055	4-285-0006	6.2	1970	5	6570	1720	2260
H15020121-056	4-285-0612	7.6	24	< 1	169	34	296
H15020121-057	4-285-1218	7.6	31	< 1	240	41	269
H15020121-058	4-294-2430	7.1	483	5	3370	308	1670
H15020121-059	4-294-3036	6.9	573	7	3210	359	2070
H15020121-060	4-295-3036	7.4	713	6	3730	659	2020
H15020121-061	4-295-3642	7.4	786	11	5980	824	4090
H15020121-062	4-295-4248	6.8	1160	10	8490	574	3400

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2							Analytical Run: SOIL PH METER_150217A			
Lab ID: CCV_1_150225_1		Continuing Calibration Verification Standard							02/26/15 09:09	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150225_1		Continuing Calibration Verification Standard							02/26/15 09:09	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150225_1		Initial Calibration Verification Standard							02/26/15 09:10	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150225_1		Continuing Calibration Verification Standard							02/26/15 09:20	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150225_1		Continuing Calibration Verification Standard							02/26/15 09:34	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150225_1		Continuing Calibration Verification Standard							02/26/15 09:34	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150225_1		Initial Calibration Verification Standard							02/26/15 09:35	
pH, sat. paste		9.98	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150225_1		Continuing Calibration Verification Standard							02/26/15 09:45	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150225_1		Continuing Calibration Verification Standard							02/26/15 09:59	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150225_1		Continuing Calibration Verification Standard							02/26/15 09:59	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150225_1		Initial Calibration Verification Standard							02/26/15 10:00	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150225_1		Continuing Calibration Verification Standard							02/26/15 10:09	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150225_1		Continuing Calibration Verification Standard							02/26/15 10:18	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150226_1		Initial Calibration Verification Standard							02/27/15 08:21	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150226_1		Initial Calibration Verification Standard							02/27/15 08:47	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150226_1		Initial Calibration Verification Standard							02/27/15 09:12	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 28161	
Lab ID: LCS-28161		Laboratory Control Sample				Run: SOIL PH METER_150217A			02/26/15 09:12	
pH, sat. paste		7.60	s.u.	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28161
Lab ID: LCS-28161		Laboratory Control Sample				Run: SOIL PH METER_150217A			02/26/15 09:12	
Lab ID: H15020121-010ADUP		Sample Duplicate				Run: SOIL PH METER_150217A			02/26/15 09:20	
pH, sat. paste		7.80	s.u.	0.10				0.1	30	
Lab ID: H15020121-020ADUP		Sample Duplicate				Run: SOIL PH METER_150217A			02/26/15 09:28	
pH, sat. paste		6.91	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 28162
Lab ID: LCS-28162		Laboratory Control Sample				Run: SOIL PH METER_150217A			02/26/15 09:36	
pH, sat. paste		7.57	s.u.	0.10	101	95	105			
Lab ID: H15020121-030ADUP		Sample Duplicate				Run: SOIL PH METER_150217A			02/26/15 09:44	
pH, sat. paste		5.95	s.u.	0.10				0.2	30	
Lab ID: H15020121-040ADUP		Sample Duplicate				Run: SOIL PH METER_150217A			02/26/15 09:53	
pH, sat. paste		7.50	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 28163
Lab ID: LCS-28163		Laboratory Control Sample				Run: SOIL PH METER_150217A			02/26/15 10:01	
pH, sat. paste		7.52	s.u.	0.10	101	95	105			
Lab ID: H15020121-050ADUP		Sample Duplicate				Run: SOIL PH METER_150217A			02/26/15 10:08	
pH, sat. paste		7.05	s.u.	0.10				0.3	30	
Lab ID: H15020121-060ADUP		Sample Duplicate				Run: SOIL PH METER_150217A			02/26/15 10:18	
pH, sat. paste		7.40	s.u.	0.10				0.1	30	
Lab ID: H15020121-062ADUP		Sample Duplicate				Run: SOIL PH METER_150217A			02/26/15 10:20	
pH, sat. paste		6.79	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150220D	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/20/15 12:58
Arsenic			0.795	mg/L	0.0085	99	90	110			
Cadmium			0.383	mg/L	0.0010	96	90	110			
Copper			0.798	mg/L	0.010	100	90	110			
Lead			0.776	mg/L	0.010	97	90	110			
Zinc			0.783	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/20/15 13:13
Arsenic			0.00523	mg/L	0.0085		0	0			
Cadmium			0.00533	mg/L	0.0010		0	0			
Copper			-0.00407	mg/L	0.010		0	0			
Lead			-0.0453	mg/L	0.010		0	0			
Zinc			0.00275	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/20/15 13:17
Arsenic			0.976	mg/L	0.0085	98	80	120			
Cadmium			0.894	mg/L	0.0010	89	80	120			
Copper			0.509	mg/L	0.010	102	80	120			
Lead			0.914	mg/L	0.010	91	80	120			
Zinc			0.970	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 21:19
Arsenic			2.36	mg/L	0.0085	94	90	110			
Cadmium			2.32	mg/L	0.0010	93	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.30	mg/L	0.010	92	90	110			
Zinc			2.34	mg/L	0.010	94	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 21:22
Arsenic			0.00879	mg/L	0.0085						
Cadmium			-0.000370	mg/L	0.0010						
Copper			0.00759	mg/L	0.010						
Lead			-0.00273	mg/L	0.010						
Zinc			-0.00108	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 22:03
Arsenic			2.38	mg/L	0.0085	95	90	110			
Cadmium			2.35	mg/L	0.0010	94	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.34	mg/L	0.010	93	90	110			
Zinc			2.36	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 22:07
Arsenic			0.00544	mg/L	0.0085						
Cadmium			-0.000220	mg/L	0.0010						
Copper			0.00710	mg/L	0.010						
Lead			-0.00578	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150220D	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/20/15 22:07	
Zinc			0.000210	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/20/15 22:48	
Arsenic			2.37	mg/L	0.0085	95	90	110			
Cadmium			2.36	mg/L	0.0010	94	90	110			
Copper			2.49	mg/L	0.010	99	90	110			
Lead			2.30	mg/L	0.010	92	90	110			
Zinc			2.36	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/20/15 22:51	
Arsenic			0.0173	mg/L	0.0085						
Cadmium			7.00E-05	mg/L	0.0010						
Copper			0.00533	mg/L	0.010						
Lead			0.0118	mg/L	0.010						
Zinc			-0.00134	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/20/15 22:55	
Arsenic			2.39	mg/L	0.0085	95	90	110			
Cadmium			2.36	mg/L	0.0010	94	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.36	mg/L	0.010	94	90	110			
Zinc			2.37	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/20/15 22:59	
Arsenic			0.0162	mg/L	0.0085						
Cadmium			-0.000220	mg/L	0.0010						
Copper			0.00219	mg/L	0.010						
Lead			-0.0128	mg/L	0.010						
Zinc			-0.00111	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150223B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/23/15 10:42
Arsenic			0.776	mg/L	0.0085	97	90	110			
Cadmium			0.384	mg/L	0.0010	96	90	110			
Copper			0.807	mg/L	0.010	101	90	110			
Lead			0.787	mg/L	0.010	98	90	110			
Zinc			0.785	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/23/15 10:57
Arsenic			-0.00408	mg/L	0.0085		0	0			
Cadmium			0.00115	mg/L	0.0010		0	0			
Copper			0.00265	mg/L	0.010		0	0			
Lead			-0.0116	mg/L	0.010		0	0			
Zinc			-0.00260	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/23/15 11:01
Arsenic			0.956	mg/L	0.0085	96	80	120			
Cadmium			0.884	mg/L	0.0010	88	80	120			
Copper			0.506	mg/L	0.010	101	80	120			
Lead			0.891	mg/L	0.010	89	80	120			
Zinc			0.958	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/23/15 13:04
Arsenic			2.42	mg/L	0.0085	97	90	110			
Cadmium			2.36	mg/L	0.0010	94	90	110			
Copper			2.56	mg/L	0.010	102	90	110			
Lead			2.38	mg/L	0.010	95	90	110			
Zinc			2.37	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/23/15 13:07
Arsenic			-0.00657	mg/L	0.0085						
Cadmium			0.000150	mg/L	0.0010						
Copper			0.00180	mg/L	0.010						
Lead			-0.00378	mg/L	0.010						
Zinc			-0.000680	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/23/15 13:48
Arsenic			2.43	mg/L	0.0085	97	90	110			
Cadmium			2.37	mg/L	0.0010	95	90	110			
Copper			2.59	mg/L	0.010	104	90	110			
Lead			2.41	mg/L	0.010	97	90	110			
Zinc			2.37	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/23/15 13:52
Arsenic			-0.000750	mg/L	0.0085						
Cadmium			0.000690	mg/L	0.0010						
Copper			0.00158	mg/L	0.010						
Lead			-0.00457	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150223B	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/23/15 13:52	
Zinc			0.000440	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/23/15 14:33	
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.40	mg/L	0.0010	96	90	110			
Copper			2.59	mg/L	0.010	104	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.38	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/23/15 14:36	
Arsenic			-0.00710	mg/L	0.0085						
Cadmium			0.00109	mg/L	0.0010						
Copper			0.000720	mg/L	0.010						
Lead			-0.0217	mg/L	0.010						
Zinc			0.000710	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150224B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/24/15 09:11
Arsenic			0.811	mg/L	0.0085	101	90	110			
Cadmium			0.390	mg/L	0.0010	98	90	110			
Copper			0.796	mg/L	0.010	99	90	110			
Lead			0.770	mg/L	0.010	96	90	110			
Zinc			0.793	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/24/15 09:26
Arsenic			0.0137	mg/L	0.0085		0	0			
Cadmium			0.00597	mg/L	0.0010		0	0			
Copper			-0.00190	mg/L	0.010		0	0			
Lead			-0.0158	mg/L	0.010		0	0			
Zinc			0.00220	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/24/15 09:30
Arsenic			0.974	mg/L	0.0085	97	80	120			
Cadmium			0.881	mg/L	0.0010	88	80	120			
Copper			0.490	mg/L	0.010	98	80	120			
Lead			0.899	mg/L	0.010	90	80	120			
Zinc			0.960	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/24/15 14:57
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.51	mg/L	0.0010	100	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/24/15 15:01
Arsenic			2.00E-05	mg/L	0.0085						
Cadmium			0.000550	mg/L	0.0010						
Copper			-0.00149	mg/L	0.010						
Lead			-0.0126	mg/L	0.010						
Zinc			0.000350	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/24/15 15:42
Arsenic			2.49	mg/L	0.0085	100	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/24/15 15:45
Arsenic			0.00702	mg/L	0.0085						
Cadmium			0.000550	mg/L	0.0010						
Copper			-0.00172	mg/L	0.010						
Lead			-0.00809	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150224B	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/24/15 15:45	
Zinc			0.00107	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/24/15 16:26	
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.55	mg/L	0.010	102	90	110			
Lead			2.43	mg/L	0.010	97	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/24/15 16:29	
Arsenic			-0.00643	mg/L	0.0085						
Cadmium			0.00123	mg/L	0.0010						
Copper			-0.00156	mg/L	0.010						
Lead			0.0128	mg/L	0.010						
Zinc			0.000750	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/24/15 17:10	
Arsenic			2.45	mg/L	0.0085	98	90	110			
Cadmium			2.44	mg/L	0.0010	97	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.42	mg/L	0.010	97	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/24/15 17:14	
Arsenic			-0.00335	mg/L	0.0085						
Cadmium			0.000740	mg/L	0.0010						
Copper			-0.00104	mg/L	0.010						
Lead			-0.0109	mg/L	0.010						
Zinc			0.000880	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150225B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/25/15 08:54
Arsenic			0.780	mg/L	0.0085	98	90	110			
Cadmium			0.385	mg/L	0.0010	96	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.791	mg/L	0.010	99	90	110			
Zinc			0.792	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/25/15 09:09
Arsenic			-0.00336	mg/L	0.0085		0	0			
Cadmium			0.000370	mg/L	0.0010		0	0			
Copper			0.00280	mg/L	0.010		0	0			
Lead			-0.00623	mg/L	0.010		0	0			
Zinc			0.000760	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/25/15 09:13
Arsenic			0.976	mg/L	0.0085	98	80	120			
Cadmium			0.907	mg/L	0.0010	91	80	120			
Copper			0.513	mg/L	0.010	103	80	120			
Lead			0.892	mg/L	0.010	89	80	120			
Zinc			0.988	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/25/15 19:41
Arsenic			2.45	mg/L	0.0085	98	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/25/15 19:44
Arsenic			-0.00745	mg/L	0.0085						
Cadmium			0.000630	mg/L	0.0010						
Copper			0.00512	mg/L	0.010						
Lead			-0.00115	mg/L	0.010						
Zinc			0.000580	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/25/15 20:25
Arsenic			2.47	mg/L	0.0085	99	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.49	mg/L	0.010	99	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/25/15 20:29
Arsenic			-0.0112	mg/L	0.0085						
Cadmium			0.000550	mg/L	0.0010						
Copper			0.00262	mg/L	0.010						
Lead			-0.00167	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150225B	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/25/15 20:29	
Zinc			0.00123	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/25/15 21:09	
Arsenic			2.47	mg/L	0.0085	99	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.44	mg/L	0.010	98	90	110			
Zinc			2.46	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/25/15 21:13	
Arsenic			-0.00493	mg/L	0.0085						
Cadmium			-9.00E-05	mg/L	0.0010						
Copper			0.00383	mg/L	0.010						
Lead			-0.00590	mg/L	0.010						
Zinc			0.000940	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150226A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/26/15 10:19
Arsenic			0.785	mg/L	0.0085	98	90	110			
Cadmium			0.387	mg/L	0.0010	97	90	110			
Copper			0.793	mg/L	0.010	99	90	110			
Lead			0.801	mg/L	0.010	100	90	110			
Zinc			0.790	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/26/15 10:34
Arsenic			-0.0163	mg/L	0.0085		0	0			
Cadmium			0.000590	mg/L	0.0010		0	0			
Copper			-0.00237	mg/L	0.010		0	0			
Lead			-0.0116	mg/L	0.010		0	0			
Zinc			0.00412	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/26/15 10:38
Arsenic			0.962	mg/L	0.0085	96	80	120			
Cadmium			0.900	mg/L	0.0010	90	80	120			
Copper			0.498	mg/L	0.010	100	80	120			
Lead			0.884	mg/L	0.010	88	80	120			
Zinc			0.989	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/26/15 11:08
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.51	mg/L	0.010	101	90	110			
Lead			2.49	mg/L	0.010	99	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/26/15 11:12
Arsenic			0.000330	mg/L	0.0085						
Cadmium			0.000290	mg/L	0.0010						
Copper			-0.000140	mg/L	0.010						
Lead			-0.0131	mg/L	0.010						
Zinc			0.000640	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/26/15 11:52
Arsenic			2.46	mg/L	0.0085	98	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/26/15 11:56
Arsenic			-0.00749	mg/L	0.0085						
Cadmium			0.000380	mg/L	0.0010						
Copper			-0.000860	mg/L	0.010						
Lead			0.000770	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150226A	
Lab ID: CCB	5	Continuing Calibration Blank							02/26/15 11:56	
Zinc		0.000880	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150225A		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/25/15 20:06	
Arsenic			0.0479	mg/L	0.0050	96	90	110			
Lead			0.0476	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/25/15 20:16	
Arsenic			ND	mg/L	0.0050						
Lead			-3.60E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/25/15 21:23	
Arsenic			0.0483	mg/L	0.0050	97	90	110			
Lead			0.0475	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/25/15 21:32	
Arsenic			-1.50E-06	mg/L	0.0050						
Lead			-3.20E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150226A		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								02/28/15 00:07
Arsenic			0.0487	mg/L	0.0050	97	90	110			
Cadmium			0.0479	mg/L	0.0010	96	90	110			
Lead			0.0466	mg/L	0.010	93	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								02/28/15 00:16
Arsenic			1.75E-05	mg/L	0.0050						
Cadmium			1.80E-06	mg/L	0.0010						
Lead			6.80E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								02/28/15 01:24
Arsenic			0.0487	mg/L	0.0050	97	90	110			
Cadmium			0.0482	mg/L	0.0010	96	90	110			
Lead			0.0465	mg/L	0.010	93	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								02/28/15 01:33
Arsenic			2.37E-05	mg/L	0.0050						
Cadmium			3.10E-06	mg/L	0.0010						
Lead			7.40E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								02/28/15 02:28
Arsenic			0.0488	mg/L	0.0050	98	90	110			
Cadmium			0.0478	mg/L	0.0010	96	90	110			
Lead			0.0468	mg/L	0.010	94	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								02/28/15 02:38
Arsenic			1.11E-05	mg/L	0.0050						
Cadmium			2.00E-07	mg/L	0.0010						
Lead			2.60E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								02/28/15 03:46
Arsenic			0.0479	mg/L	0.0050	96	90	110			
Cadmium			0.0470	mg/L	0.0010	94	90	110			
Lead			0.0464	mg/L	0.010	93	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								02/28/15 03:55
Arsenic			1.59E-05	mg/L	0.0050						
Cadmium			4.20E-06	mg/L	0.0010						
Lead			1.30E-05	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard								02/28/15 04:36
Arsenic			0.0489	mg/L	0.0050	98	90	110			
Cadmium			0.0478	mg/L	0.0010	96	90	110			
Lead			0.0467	mg/L	0.010	93	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank								02/28/15 04:45
Arsenic			8.00E-06	mg/L	0.0050						
Cadmium			2.60E-06	mg/L	0.0010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150226A		
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/28/15 04:45	
Lead			5.60E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							02/28/15 05:31	
Arsenic			0.0488	mg/L	0.0050	98	90	110			
Cadmium			0.0476	mg/L	0.0010	95	90	110			
Lead			0.0466	mg/L	0.010	93	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/28/15 05:40	
Arsenic			9.00E-06	mg/L	0.0050						
Cadmium			8.50E-06	mg/L	0.0010						
Lead			1.52E-05	mg/L	0.010						
Method:	**E200.8**								Analytical Run: ICPMS204-B_150302B		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/02/15 14:15	
Arsenic			0.0490	mg/L	0.0050	98	90	110			
Cadmium			0.0491	mg/L	0.0010	98	90	110			
Copper			0.0493	mg/L	0.010	99	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Zinc			0.0488	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/02/15 14:24	
Arsenic			-9.00E-06	mg/L	0.0050						
Cadmium			-3.30E-06	mg/L	0.0010						
Copper			-7.63E-05	mg/L	0.010						
Lead			-2.40E-06	mg/L	0.010						
Zinc			-6.91E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							03/02/15 15:47	
Arsenic			0.0491	mg/L	0.0050	98	90	110			
Cadmium			0.0497	mg/L	0.0010	99	90	110			
Copper			0.0488	mg/L	0.010	98	90	110			
Lead			0.0491	mg/L	0.010	98	90	110			
Zinc			0.0488	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							03/02/15 15:56	
Arsenic			3.43E-05	mg/L	0.0050						
Cadmium			-3.00E-07	mg/L	0.0010						
Copper			-3.13E-05	mg/L	0.010						
Lead			2.48E-05	mg/L	0.010						
Zinc			-4.34E-05	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28107
Lab ID:	**MB-28107**	5	Method Blank				Run: ICP2-HE_150220D				02/20/15 20:27
Arsenic			ND	mg/kg	0.4						
Cadmium			0.01	mg/kg	0.01						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28107**	5	Laboratory Fortified Blank				Run: ICP2-HE_150220D				02/20/15 20:30
Arsenic			48.1	mg/kg	1.0	96	80	120			
Cadmium			23.9	mg/kg	1.0	95	80	120			
Copper			47.8	mg/kg	1.0	95	80	120			
Lead			47.8	mg/kg	1.0	96	80	120			
Zinc			48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28107**	5	Laboratory Control Sample				Run: ICP2-HE_150220D				02/20/15 20:34
Arsenic			297	mg/kg	3.6	87	72.3	106.4			
Cadmium			134	mg/kg	1.0	97	73	105.1			
Copper			265	mg/kg	2.2	94	77.5	109.6			
Lead			179	mg/kg	6.4	96	75.9	108.6			
Zinc			200	mg/kg	1.0	94	74.2	109.9			
Lab ID:	**H15020120-062APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150220D				02/20/15 21:41
Arsenic			218	mg/kg	1.8	80	75	125			
Cadmium			97.7	mg/kg	1.0	77	75	125			
Copper			259	mg/kg	1.1	84	75	125			
Lead			210	mg/kg	3.2	78	75	125			
Zinc			276	mg/kg	1.0	80	75	125			
Lab ID:	**H15020120-062AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150220D				02/20/15 21:45
Arsenic			56.2	mg/kg	1.7	83	75	125			
Cadmium			19.5	mg/kg	1.0	79	75	125			
Copper			87.3	mg/kg	1.1	84	75	125			
Lead			48.9	mg/kg	3.1	76	75	125			
Zinc			115	mg/kg	1.0	84	75	125			
Lab ID:	**H15020120-062AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150220D				02/20/15 21:49
Arsenic			55.6	mg/kg	1.8	81	75	125	1.0	20	
Cadmium			20.0	mg/kg	1.0	80	75	125	2.5	20	
Copper			93.7	mg/kg	1.1	96	75	125	7.1	20	
Lead			53.3	mg/kg	3.1	84	75	125	8.6	20	
Zinc			117	mg/kg	1.0	87	75	125	1.8	20	
Lab ID:	**H15020121-009APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150220D				02/20/15 22:36
Arsenic			251	mg/kg	1.9	85	75	125			
Cadmium			105	mg/kg	1.0	81	75	125			
Copper			354	mg/kg	1.1	91	75	125			
Lead			231	mg/kg	3.3	83	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28107
Lab ID:	**H15020121-009APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150220D				02/20/15 22:36
Zinc			331	mg/kg	1.0	84	75	125			
Lab ID:	**H15020121-009AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150220D				02/20/15 22:40
Arsenic			78.7	mg/kg	1.8	91	75	125			
Cadmium			21.2	mg/kg	1.0	83	75	125			
Copper			174	mg/kg	1.1	109	75	125			
Lead			64.5	mg/kg	3.2	93	75	125			
Zinc			160	mg/kg	1.0	93	75	125			
Lab ID:	**H15020121-009AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150220D				02/20/15 22:44
Arsenic			76.8	mg/kg	1.8	88	75	125	2.4	20	
Cadmium			21.0	mg/kg	1.0	83	75	125	0.7	20	
Copper			173	mg/kg	1.1	106	75	125	0.8	20	
Lead			57.8	mg/kg	3.2	79	75	125	11	20	
Zinc			158	mg/kg	1.0	89	75	125	1.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28128	
Lab ID:	**MB-28128**	5	Method Blank				Run: ICP2-HE_150223B			02/23/15 13:15	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28128**	5	Laboratory Fortified Blank				Run: ICP2-HE_150223B			02/23/15 13:19	
Arsenic			48.5	mg/kg	1.0	97	80	120			
Cadmium			23.5	mg/kg	1.0	94	80	120			
Copper			51.9	mg/kg	1.0	104	80	120			
Lead			47.2	mg/kg	1.0	94	80	120			
Zinc			48.0	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-28128**	5	Laboratory Control Sample				Run: ICP2-HE_150223B			02/23/15 13:23	
Arsenic			295	mg/kg	3.7	86	72.3	106.4			
Cadmium			122	mg/kg	1.0	89	73	105.1			
Copper			270	mg/kg	2.2	96	77.5	109.6			
Lead			190	mg/kg	6.5	102	75.9	108.6			
Zinc			195	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H15020121-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150223B			02/23/15 14:10	
Arsenic			235	mg/kg	1.8	90	75	125			
Cadmium			113	mg/kg	1.0	85	75	125			
Copper			1730	mg/kg	1.1		75	125			A
Lead			226	mg/kg	3.2	84	75	125			
Zinc			2730	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150223B			02/23/15 14:14	
Arsenic			57.2	mg/kg	1.7	95	75	125			
Cadmium			28.1	mg/kg	1.0	90	75	125			
Copper			1570	mg/kg	1.1		75	125			A
Lead			62.1	mg/kg	3.1	94	75	125			
Zinc			2590	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150223B			02/23/15 14:17	
Arsenic			55.9	mg/kg	1.7	92	75	125	2.4	20	
Cadmium			28.0	mg/kg	1.0	90	75	125	0.4	20	
Copper			1560	mg/kg	1.1		75	125	0.8	20	A
Lead			58.0	mg/kg	3.1	85	75	125	6.8	20	
Zinc			2580	mg/kg	1.0		75	125	0.2	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28146
Lab ID:	**MB-28146**	5	Method Blank				Run: ICP2-HE_150224B			02/24/15 15:09	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-28146**	5	Laboratory Fortified Blank				Run: ICP2-HE_150224B			02/24/15 15:12	
Arsenic			49.9	mg/kg	1.0	100	80	120			
Cadmium			24.5	mg/kg	1.0	98	80	120			
Copper			50.3	mg/kg	1.0	101	80	120			
Lead			49.6	mg/kg	1.0	99	80	120			
Zinc			50.2	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-28146**	5	Laboratory Control Sample				Run: ICP2-HE_150224B			02/24/15 15:16	
Arsenic			289	mg/kg	3.6	84	72.3	106.4			
Cadmium			119	mg/kg	1.0	87	73	105.1			
Copper			261	mg/kg	2.2	93	77.5	109.6			
Lead			179	mg/kg	6.4	96	75.9	108.6			
Zinc			192	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H15020121-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150224B			02/24/15 16:44	
Arsenic			509	mg/kg	1.9	94	75	125			
Cadmium			127	mg/kg	1.0	90	75	125			
Copper			2010	mg/kg	1.2		75	125			A
Lead			671	mg/kg	3.3	88	75	125			
Zinc			2490	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150224B			02/24/15 16:48	
Arsenic			316	mg/kg	1.8		75	125			A
Cadmium			32.2	mg/kg	1.0	91	75	125			
Copper			1780	mg/kg	1.1		75	125			A
Lead			496	mg/kg	3.2		75	125			A
Zinc			2300	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150224B			02/24/15 16:51	
Arsenic			308	mg/kg	1.9		75	125	2.7	20	A
Cadmium			31.6	mg/kg	1.0	88	75	125	1.7	20	
Copper			1750	mg/kg	1.1		75	125	2.0	20	A
Lead			475	mg/kg	3.3		75	125	4.4	20	A
Zinc			2190	mg/kg	1.0		75	125	5.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28147	
Lab ID:	**MB-28147**	5	Method Blank				Run: ICP2-HE_150225B			02/25/15 19:37	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-28147**	5	Laboratory Fortified Blank				Run: ICP2-HE_150225B			02/25/15 19:48	
Arsenic			48.7	mg/kg	1.0	97	80	120			
Cadmium			24.3	mg/kg	1.0	97	80	120			
Copper			50.0	mg/kg	1.0	100	80	120			
Lead			48.0	mg/kg	1.0	96	80	120			
Zinc			49.5	mg/kg	1.0	98	80	120			
Lab ID:	**LCS2-28147**	5	Laboratory Control Sample				Run: ICP2-HE_150225B			02/25/15 19:52	
Arsenic			94.1	mg/kg	3.5	98	69.2	131			
Cadmium			380	mg/kg	1.0	99	73.4	126.6			
Copper			104	mg/kg	2.2	97	74.5	125.2			
Lead			188	mg/kg	6.2	100	74.5	125.5			
Zinc			707	mg/kg	1.0	100	73.8	126.3			
Lab ID:	**H15020121-054APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150225B			02/25/15 21:47	
Arsenic			221	mg/kg	1.8	85	75	125			
Cadmium			103	mg/kg	1.0	82	75	125			
Copper			256	mg/kg	1.1	86	75	125			
Lead			216	mg/kg	3.2	80	75	125			
Zinc			1020	mg/kg	1.0	79	75	125			
Lab ID:	**H15020121-054AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150225B			02/25/15 21:50	
Arsenic			54.5	mg/kg	1.7	89	75	125			
Cadmium			23.1	mg/kg	1.0	88	75	125			
Copper			88.5	mg/kg	1.1	92	75	125			
Lead			56.0	mg/kg	3.1	78	75	125			
Zinc			846	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-054AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150225B			02/25/15 21:54	
Arsenic			54.6	mg/kg	1.7	90	75	125	0.2	20	
Cadmium			23.1	mg/kg	1.0	89	75	125	0.2	20	
Copper			87.0	mg/kg	1.1	90	75	125	1.7	20	
Lead			64.6	mg/kg	3.1	96	75	125	14	20	
Zinc			860	mg/kg	1.0		75	125	1.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28171	
Lab ID:	**MB-28171**	5	Method Blank				Run: ICP2-HE_150226A			02/26/15 11:01	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			4	mg/kg	0.09						
Lab ID:	**LFB-28171**	5	Laboratory Fortified Blank				Run: ICP2-HE_150226A			02/26/15 11:05	
Arsenic			48.8	mg/kg	1.0	98	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			49.7	mg/kg	1.0	99	80	120			
Lead			49.7	mg/kg	1.0	99	80	120			
Zinc			51.1	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-28171**	5	Laboratory Control Sample				Run: ICP2-HE_150226A			02/26/15 11:16	
Arsenic			290	mg/kg	3.4	84	72.3	106.4			
Cadmium			121	mg/kg	1.0	88	73	105.1			
Copper			263	mg/kg	2.1	94	77.5	109.6			
Lead			190	mg/kg	6.0	102	75.9	108.6			
Zinc			204	mg/kg	1.0	94	74.2	109.9			
Lab ID:	**H15020121-062APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150226A			02/26/15 11:49	
Arsenic			1410	mg/kg	1.8		75	125			A
Cadmium			121	mg/kg	1.0	89	75	125			
Copper			8790	mg/kg	1.1		75	125			A
Lead			803	mg/kg	3.2	92	75	125			
Zinc			3670	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-062AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150226A			02/26/15 12:00	
Arsenic			1210	mg/kg	1.7		75	125			A
Cadmium			32.1	mg/kg	1.0	92	75	125			
Copper			8630	mg/kg	1.1		75	125			A
Lead			629	mg/kg	3.1		75	125			A
Zinc			3460	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-062AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150226A			02/26/15 12:03	
Arsenic			1220	mg/kg	1.7		75	125	0.7	20	A
Cadmium			32.7	mg/kg	1.0	93	75	125	1.7	20	
Copper			8420	mg/kg	1.1		75	125	2.5	20	A
Lead			649	mg/kg	3.1		75	125	3.2	20	A
Zinc			3490	mg/kg	1.0		75	125	0.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150225A		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							02/25/15 18:32	
Arsenic			0.0591	mg/L	0.0010	99	90	110			
Lead			0.0588	mg/L	0.0010	98	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							02/25/15 18:39	
Arsenic			6.60E-05	mg/L	0.0010						
Lead			0.000221	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							02/25/15 18:45	
Arsenic			0.0103	mg/L	0.0010	103	70	130			
Lead			0.000218	mg/L	0.0010		0	0			
Method:	**SW6020**										Batch: 28128
Lab ID:	**MB-28128**	2	Method Blank				Run: ICPMS204-B_150225A			02/25/15 20:20	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28128**	2	Laboratory Control Sample				Run: ICPMS204-B_150225A			02/25/15 20:25	
Arsenic			308	mg/kg	1.0	90	72.3	106.4			
Lead			187	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-28128**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150225A			02/25/15 20:30	
Arsenic			49.2	mg/kg	1.0	98	80	120			
Lead			47.5	mg/kg	1.0	95	80	120			
Lab ID:	**H15020121-018APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150225A			02/25/15 21:09	
Arsenic			2260	mg/kg	1.0	93	75	125			
Lead			2350	mg/kg	1.0	96	75	125			
Lab ID:	**H15020121-018AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150225A			02/25/15 21:13	
Arsenic			60.6	mg/kg	1.0	99	75	125			
Lead			59.7	mg/kg	1.0	97	75	125			
Lab ID:	**H15020121-018AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150225A			02/25/15 21:18	
Arsenic			61.0	mg/kg	1.0	100	75	125	0.7	20	
Lead			60.8	mg/kg	1.0	99	75	125	1.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150226A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard								02/27/15 17:53
Arsenic			0.0590	mg/L	0.0010	98	90	110			
Cadmium			0.0306	mg/L	0.0010	102	90	110			
Lead			0.0570	mg/L	0.0010	95	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A								02/27/15 17:58
Arsenic			8.00E-05	mg/L	0.0010						
Cadmium			0.000666	mg/L	0.0010						
Lead			0.000222	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB								02/27/15 18:02
Arsenic			0.0104	mg/L	0.0010	104	70	130			
Cadmium			0.0102	mg/L	0.0010	102	70	130			
Lead			0.000223	mg/L	0.0010		0	0			
Method:	**SW6020**										Batch: 28107
Lab ID:	**MB-28107**	2	Method Blank				Run: ICPMS204-B_150226A				02/27/15 23:40
Arsenic			0.5	mg/kg	0.3						
Lead			0.4	mg/kg	0.2						
Lab ID:	**LCS-28107**	2	Laboratory Control Sample				Run: ICPMS204-B_150226A				02/27/15 23:44
Arsenic			308	mg/kg	1.0	90	72.3	106.4			
Lead			175	mg/kg	1.0	93	75.9	108.6			
Lab ID:	**LFB-28107**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150226A				02/27/15 23:49
Arsenic			47.2	mg/kg	1.0	93	80	120			
Lead			45.9	mg/kg	1.0	91	80	120			
Lab ID:	**H15020120-062APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150226A				02/28/15 00:35
Arsenic			2260	mg/kg	1.0	91	75	125			
Lead			2310	mg/kg	1.0	94	75	125			
Lab ID:	**H15020120-062AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150226A				02/28/15 00:39
Arsenic			59.0	mg/kg	1.0	91	75	125			
Lead			56.0	mg/kg	1.0	86	75	125			
Lab ID:	**H15020120-062AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150226A				02/28/15 00:43
Arsenic			59.0	mg/kg	1.0	90	75	125	0.1	20	
Lead			57.5	mg/kg	1.0	88	75	125	2.5	20	
Lab ID:	**H15020121-009APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150226A				02/28/15 01:11
Arsenic			2350	mg/kg	1.0	93	75	125			
Lead			2390	mg/kg	1.0	95	75	125			
Lab ID:	**H15020121-009AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150226A				02/28/15 01:15
Arsenic			78.8	mg/kg	1.0	96	75	125			
Lead			64.6	mg/kg	1.0	89	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 28107	
Lab ID:	**H15020121-009AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150226A			02/28/15 01:19	
Arsenic			78.9	mg/kg	1.0	97	75	125	0.2	20	
Lead			66.2	mg/kg	1.0	92	75	125	2.3	20	
Method:	**SW6020**									Batch: 28146	
Lab ID:	**MB-28146**	3	Method Blank				Run: ICPMS204-B_150226A			02/28/15 01:38	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28146**	3	Laboratory Control Sample				Run: ICPMS204-B_150226A			02/28/15 01:42	
Arsenic			294	mg/kg	1.0	86	72.3	106.4			
Cadmium			120	mg/kg	1.0	88	73	105.1			
Lead			174	mg/kg	1.0	93	75.9	108.6			
Lab ID:	**LFB-28146**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150226A			02/28/15 01:47	
Arsenic			48.6	mg/kg	1.0	97	80	120			
Cadmium			24.6	mg/kg	1.0	98	80	120			
Lead			46.0	mg/kg	1.0	92	80	120			
Lab ID:	**H15020121-036APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150226A			02/28/15 03:14	
Arsenic			2570	mg/kg	1.0	91	75	125			
Cadmium			1220	mg/kg	1.0	95	75	125			
Lead			2790	mg/kg	1.0	92	75	125			
Lab ID:	**H15020121-036AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150226A			02/28/15 03:18	
Arsenic			309	mg/kg	1.0		75	125			A
Cadmium			30.6	mg/kg	1.0	88	75	125			
Lead			480	mg/kg	1.0		75	125			A
Lab ID:	**H15020121-036AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150226A			02/28/15 03:23	
Arsenic			314	mg/kg	1.0		75	125	1.4	20	A
Cadmium			31.9	mg/kg	1.0	93	75	125	4.3	20	
Lead			482	mg/kg	1.0		75	125	0.4	20	A
Method:	**SW6020**									Batch: 28147	
Lab ID:	**MB-28147**	2	Method Blank				Run: ICPMS204-B_150226A			02/28/15 03:32	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS2-28147**	2	Laboratory Control Sample				Run: ICPMS204-B_150226A			02/28/15 03:37	
Arsenic			94.5	mg/kg	1.0	98	69.2	131			
Lead			174	mg/kg	1.0	93	74.5	125.5			
Lab ID:	**LFB-28147**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150226A			02/28/15 03:41	
Arsenic			48.1	mg/kg	1.0	96	80	120			
Lead			46.4	mg/kg	1.0	93	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28147
Lab ID:	**H15020121-054APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150226A				02/28/15 05:17
Arsenic			2200	mg/kg	1.0	91	75	125			
Lead			2310	mg/kg	1.0	95	75	125			
Lab ID:	**H15020121-054AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150226A				02/28/15 05:21
Arsenic			61.2	mg/kg	1.0	101	75	125			
Lead			59.9	mg/kg	1.0	95	75	125			
Lab ID:	**H15020121-054AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150226A				02/28/15 05:26
Arsenic			57.7	mg/kg	1.0	95	75	125	5.8	20	
Lead			58.3	mg/kg	1.0	93	75	125	2.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**							Analytical Run: ICPMS204-B_150302B			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							03/02/15 12:32	
Arsenic			0.0564	mg/L	0.0010	94	90	110			
Cadmium			0.0310	mg/L	0.0010	103	90	110			
Copper			0.0576	mg/L	0.0010	96	90	110			
Lead			0.0585	mg/L	0.0010	97	90	110			
Zinc			0.0586	mg/L	0.0010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							03/02/15 12:37	
Arsenic			6.20E-05	mg/L	0.0010						
Cadmium			0.000747	mg/L	0.0010						
Copper			0.000860	mg/L	0.0010						
Lead			0.000227	mg/L	0.0010						
Zinc			0.00104	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							03/02/15 12:42	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Cadmium			0.0105	mg/L	0.0010	105	70	130			
Copper			0.0204	mg/L	0.0010	102	70	130			
Lead			0.000234	mg/L	0.0010		0	0			
Zinc			0.0105	mg/L	0.0010	105	70	130			
Method:	**SW6020**									Batch: 28206	
Lab ID:	**MB-28206**	5	Method Blank				Run: ICPMS204-B_150302B			03/02/15 15:06	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			ND	mg/kg	4						
Lab ID:	**LCS-28206**	5	Laboratory Control Sample				Run: ICPMS204-B_150302B			03/02/15 15:10	
Arsenic			338	mg/kg	1.0	98	72.3	106.4			
Cadmium			135	mg/kg	1.0	99	73	105.1			
Copper			297	mg/kg	1.3	106	77.5	109.6			
Lead			199	mg/kg	1.0	106	75.9	108.6			
Zinc			229	mg/kg	6.9	107	74.2	109.9			
Lab ID:	**LFB-28206**	5	Laboratory Fortified Blank				Run: ICPMS204-B_150302B			03/02/15 15:15	
Arsenic			51.0	mg/kg	1.0	102	80	120			
Cadmium			25.4	mg/kg	1.0	102	80	120			
Copper			51.5	mg/kg	1.0	103	80	120			
Lead			49.5	mg/kg	1.0	99	80	120			
Zinc			54.7	mg/kg	3.5	109	80	120			
Lab ID:	**H15020121-055APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B			03/02/15 15:34	
Arsenic			4420	mg/kg	1.0	99	75	125			
Cadmium			1010	mg/kg	1.0	81	75	125			
Copper			8310	mg/kg	1.0	70	75	125			S

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020121

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28206
Lab ID:	**H15020121-055APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150302B			03/02/15 15:34	
Lead			3560	mg/kg	1.0	74	75	125			S
Zinc			4500	mg/kg	3.5	91	75	125			
Lab ID:	**H15020121-055AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_150302B			03/02/15 15:38	
Arsenic			2040	mg/kg	1.0		75	125			A
Cadmium			29.9	mg/kg	1.0	99	75	125			
Copper			6630	mg/kg	1.0		75	125			A
Lead			1780	mg/kg	1.0		75	125			A
Zinc			2330	mg/kg	3.5		75	125			A
Lab ID:	**H15020121-055AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150302B			03/02/15 15:42	
Arsenic			2090	mg/kg	1.0		75	125	2.5	20	A
Cadmium			30.0	mg/kg	1.0	100	75	125	0.6	20	
Copper			6850	mg/kg	1.0		75	125	3.2	20	A
Lead			1790	mg/kg	1.0		75	125	0.3	20	A
Zinc			2370	mg/kg	3.4		75	125	1.9	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020121

Login completed by: Tracy L. Lorash
Date Received: 2/6/2015
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 2/10/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection time on COC for 4-194-0006 is 928 - sample bag has time of 09:27. Logged in with time from COC.
Collection time on COC for 4-194-0612 is 927 - sample bag has time of 09:26. Logged in with time from COC.
Cooler 1 was received at 5.7°C, Cooler 2 at 1.7°C. Samples were received on wet ice. TI 2/9/15

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15020121

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
4-186-0612	946	1/27/15	Soil	A	B		1
4-186-1218	945	1/27/15	Soil	A	B		1
4-186-1824	944	1/27/15	Soil	A	B		1
4-192-0006	857	1/27/15	Soil	A	B		1
4-192-0612	856	1/27/15	Soil	A	B		1
4-193-1218	835	1/27/15	Soil	A	B		1
4-193-1824	834	1/27/15	Soil	A	B		1
4-193-2430	833	1/27/15	Soil	A	B		1
4-193E-0006	1550	1/27/15	Soil	A	B		1
4-193E-0612	1549	1/27/15	Soil	A	B		1
4-193S-0006	1605	1/27/15	Soil	A	B		1
4-193S-0612	1604	1/27/15	Soil	A	B		1
4-193S-1218	1603	1/27/15	Soil	A	B		1
4-194-0006	928	1/27/15	Soil	A	B		1
4-194-0612	927	1/27/15	Soil	A	B		1
4-194-1218	925	1/27/15	Soil	A	B		1
4-194-1218D	926	1/27/15	Soil	A	B		1
4-195-2430	1633	1/27/15	Soil	A	B		1
4-195-3036	1632	1/27/15	Soil	A	B		1
4-195-3642	1631	1/27/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 2/6/15 1235	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1=4.3 TB C2=1.6 / on ice hand del	2/6/15 12:35

COC01_27_15 EL.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15020121

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-204-1824	1654	1/27/15	Soil	A	B		1
4-204-2430	1653	1/27/15	Soil	A	B		1
4-204-3036	1652	1/27/15	Soil	A	B		1
4-208E-0612	755	1/27/15	Soil	A	B		1
4-208E-1218	753	1/27/15	Soil	A	B		1
4-208E-1218D	754	1/27/15	Soil	A	B		1
4-208E-1824	752	1/27/15	Soil	A	B		1
4-255-3642	1051	1/27/15	Soil	A	B		1
4-255-4248	1050	1/27/15	Soil	A	B		1
4-256-1218	1115	1/27/15	Soil	A	B		1
4-256-1824	1114	1/27/15	Soil	A	B		1
4-256-2430	1113	1/27/15	Soil	A	B		1
4-257-0612	1156	1/27/15	Soil	A	B		1
4-257-1218	1155	1/27/15	Soil	A	B		1
4-257-1824	1154	1/27/15	Soil	A	B		1
4-258-3642	1211	1/27/15	Soil	A	B		1
4-258-4248	1210	1/27/15	Soil	A	B		1
4-258-4854	1226	1/27/15	Soil	A	B		1
4-266-1824	1134	1/27/15	Soil	A	B		1
4-266-2430	1133	1/27/15	Soil	A	B		1

C2

C1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/6/15 1235

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 = 4.3 TD
C2 = 1.6 on ice

Date/Time: hand del
2/6/15 12:35

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15020121

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-266-3036 C2	1132	1/27/15	Soil	A	B		1
4-267-0006 C1	1252	1/27/15	Soil	A	B		1
4-267-0612	1251	1/27/15	Soil	A	B		1
4-267-1218	1250	1/27/15	Soil	A	B		1
4-276-1824	1254	1/27/15	Soil	A	B		1
4-276-2430	1253	1/27/15	Soil	A	B		1
4-276-3036	1252	1/27/15	Soil	A	B		1
4-277-1218	1326	1/27/15	Soil	A	B		1
4-277-1824	1324	1/27/15	Soil	A	B		1
4-277-1824D	1325	1/27/15	Soil	A	B		1
4-277-2430	1323	1/27/15	Soil	A	B		1
4-284-0612	1424	1/27/15	Soil	A	B		1
4-284-1218	1423	1/27/15	Soil	A	B		1
4-284-1824	1422	1/27/15	Soil	A	B		1
4-285-0006	1407	1/27/15	Soil	A	B		1
4-285-0612	1406	1/27/15	Soil	A	B		1
4-285-1218	1405	1/27/15	Soil	A	B		1
4-294-2430	1451	1/27/15	Soil	A	B		1
4-294-3036	1450	1/27/15	Soil	A	B		1
4-295-3036	1427	1/27/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature] Date/Time: 2/6/15 1235

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) _____ Date/Time:

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] C1=4.3, TB C2=1.6 on ice

Date/Time: hand del 2/6/15 12:35

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15020121

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-295-3642	1426	1/27/15	Soil	A	B		1
4-295-4248	1425	1/27/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) Karin M Ford	(1)	(2)	(2)
Date/Time: 2/6/15 1235	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	C1 = 4.3 TB C2 = 1.6 on ice	hand del 2/6/15 12:35

ANALYTICAL SUMMARY REPORT

March 03, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020120

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 62 samples for MT DEQ-Federal Superfund on 2/6/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020120-001	4-201-0006	01/26/15 16:58	02/06/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020120-002	4-201-0612	01/26/15 16:57	02/06/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020120-003	4-201-1218	01/26/15 16:55	02/06/15	Soil	Same As Above
H15020120-004	4-201-1218D	01/26/15 16:56	02/06/15	Soil	Same As Above
H15020120-005	4-208-1218	01/26/15 16:30	02/06/15	Soil	Same As Above
H15020120-006	4-208-1824	01/26/15 16:29	02/06/15	Soil	Same As Above
H15020120-007	4-208-2430	01/26/15 16:28	02/06/15	Soil	Same As Above
H15020120-008	4-216-0612	01/26/15 12:56	02/06/15	Soil	Same As Above
H15020120-009	4-216-1218	01/26/15 12:55	02/06/15	Soil	Same As Above
H15020120-010	4-216-1824	01/26/15 12:54	02/06/15	Soil	Same As Above
H15020120-011	4-218-1218	01/26/15 13:20	02/06/15	Soil	Same As Above
H15020120-012	4-218-1824	01/26/15 13:19	02/06/15	Soil	Same As Above
H15020120-013	4-218-2430	01/26/15 13:18	02/06/15	Soil	Same As Above
H15020120-014	4-219-1824	01/26/15 13:44	02/06/15	Soil	Same As Above
H15020120-015	4-219-2430	01/26/15 13:43	02/06/15	Soil	Same As Above
H15020120-016	4-219-3036	01/26/15 13:42	02/06/15	Soil	Same As Above
H15020120-017	4-225-0006	01/26/15 12:27	02/06/15	Soil	Same As Above
H15020120-018	4-225-0612	01/26/15 12:26	02/06/15	Soil	Same As Above
H15020120-019	4-226-3642	01/26/15 14:01	02/06/15	Soil	Same As Above
H15020120-020	4-226-4248	01/26/15 14:00	02/06/15	Soil	Same As Above
H15020120-021	4-226-4854	01/26/15 14:26	02/06/15	Soil	Same As Above
H15020120-022	4-227-2430	01/26/15 14:33	02/06/15	Soil	Same As Above
H15020120-023	4-227-3036	01/26/15 14:32	02/06/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020120-024	4-227-3642	01/26/15 14:31	02/06/15	Soil	Same As Above
H15020120-025	4-233-1218	01/26/15 15:20	02/06/15	Soil	Same As Above
H15020120-026	4-233-1824	01/26/15 15:19	02/06/15	Soil	Same As Above
H15020120-027	4-233-2430	01/26/15 15:18	02/06/15	Soil	Same As Above
H15020120-028	4-234-1218	01/26/15 11:10	02/06/15	Soil	Same As Above
H15020120-029	4-234-1824	01/26/15 11:09	02/06/15	Soil	Same As Above
H15020120-030	4-234-2430	01/26/15 11:08	02/06/15	Soil	Same As Above
H15020120-031	4-234E-0612	01/26/15 11:44	02/06/15	Soil	Same As Above
H15020120-032	4-234E-1218	01/26/15 11:43	02/06/15	Soil	Same As Above
H15020120-033	4-234E-1824	01/26/15 11:42	02/06/15	Soil	Same As Above
H15020120-034	4-234S-0006	01/26/15 15:50	02/06/15	Soil	Same As Above
H15020120-035	4-234S-0612	01/26/15 15:49	02/06/15	Soil	Same As Above
H15020120-036	4-234S-1218	01/26/15 15:48	02/06/15	Soil	Same As Above
H15020120-037	4-234S-1218D	01/26/15 15:51	02/06/15	Soil	Same As Above
H15020120-038	4-238-1824	01/26/15 14:54	02/06/15	Soil	Same As Above
H15020120-039	4-238-2430	01/26/15 14:53	02/06/15	Soil	Same As Above
H15020120-040	4-238-3036	01/26/15 14:52	02/06/15	Soil	Same As Above
H15020120-041	4-238-3642	01/26/15 14:51	02/06/15	Soil	Same As Above
H15020120-042	4-245-0006	01/26/15 10:58	02/06/15	Soil	Same As Above
H15020120-043	4-245-0612	01/26/15 10:57	02/06/15	Soil	Same As Above
H15020120-044	4-245-1218	01/26/15 10:56	02/06/15	Soil	Same As Above
H15020120-045	4-254-1218	01/26/15 8:45	02/06/15	Soil	Same As Above
H15020120-046	4-254-1824	01/26/15 8:44	02/06/15	Soil	Same As Above
H15020120-047	4-254-2430	01/26/15 8:43	02/06/15	Soil	Same As Above
H15020120-048	4-254E-0612	01/26/15 10:24	02/06/15	Soil	Same As Above
H15020120-049	4-254E-1218	01/26/15 10:23	02/06/15	Soil	Same As Above
H15020120-050	4-254E-1824	01/26/15 10:22	02/06/15	Soil	Same As Above
H15020120-051	4-264-0612	01/26/15 9:07	02/06/15	Soil	Same As Above
H15020120-052	4-264-1218	01/26/15 9:05	02/06/15	Soil	Same As Above
H15020120-053	4-264-1218D	01/26/15 9:06	02/06/15	Soil	Same As Above
H15020120-054	4-264-1824	01/26/15 9:04	02/06/15	Soil	Same As Above
H15020120-055	4-264E-0006	01/26/15 10:05	02/06/15	Soil	Same As Above
H15020120-056	4-264E-0612	01/26/15 10:04	02/06/15	Soil	Same As Above
H15020120-057	4-264E-1218	01/26/15 10:03	02/06/15	Soil	Same As Above
H15020120-058	4-265-1218	01/26/15 9:30	02/06/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020120-059	4-265-1824	01/26/15 9:29	02/06/15	Soil	Same As Above
H15020120-060	4-265-2430	01/26/15 9:28	02/06/15	Soil	Same As Above
H15020120-061	4-291E-0006	01/26/15 8:07	02/06/15	Soil	Same As Above
H15020120-062	4-291E-0612	01/26/15 8:06	02/06/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020120

Report Date: 03/03/15
Date Received: 02/06/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020120-001	4-201-0006	7.3	27	< 1	137	30	156
H15020120-002	4-201-0612	7.9	20	< 1	34	13	76
H15020120-003	4-201-1218	7.9	24	< 1	39	13	83
H15020120-004	4-201-1218D	7.9	17	< 1	37	13	81
H15020120-005	4-208-1218	7.8	336	3	1330	343	1130
H15020120-006	4-208-1824	7.8	12	< 1	70	18	94
H15020120-007	4-208-2430	7.7	5	< 1	32	12	67
H15020120-008	4-216-0612	7.9	329	6	2080	308	1610
H15020120-009	4-216-1218	8.0	186	5	1380	170	1170
H15020120-010	4-216-1824	7.9	85	2	603	88	472
H15020120-011	4-218-1218	7.6	609	19	5800	513	4080
H15020120-012	4-218-1824	7.7	28	1	209	38	578
H15020120-013	4-218-2430	7.8	8	< 1	45	12	72
H15020120-014	4-219-1824	7.6	40	34	1780	34	6160
H15020120-015	4-219-2430	7.2	8	< 1	31	13	83
H15020120-016	4-219-3036	7.1	5	< 1	21	11	144
H15020120-017	4-225-0006	7.7	39	< 1	75	23	116
H15020120-018	4-225-0612	8.1	40	< 1	37	10	72
H15020120-019	4-226-3642	7.1	272	6	1250	274	1700
H15020120-020	4-226-4248	7.1	7	< 1	47	20	114
H15020120-021	4-226-4854	7.4	6	< 1	23	11	66
H15020120-022	4-227-2430	7.2	6	1	1850	10	221
H15020120-023	4-227-3036	7.1	5	2	1600	8	354
H15020120-024	4-227-3642	6.7	26	2	1580	20	237
H15020120-025	4-233-1218	4.6	1460	5	3790	1250	2030
H15020120-026	4-233-1824	6.7	66	2	2920	52	296
H15020120-027	4-233-2430	7.0	12	2	2890	12	266
H15020120-028	4-234-1218	7.6	505	8	4870	671	2230
H15020120-029	4-234-1824	7.8	56	1	503	67	393
H15020120-030	4-234-2430	7.9	8	< 1	46	13	106
H15020120-031	4-234E-0612	7.8	290	5	2220	321	1630
H15020120-032	4-234E-1218	7.6	202	3	766	84	869
H15020120-033	4-234E-1824	7.5	34	< 1	47	18	83
H15020120-034	4-234S-0006	7.8	18	< 1	41	14	61
H15020120-035	4-234S-0612	7.7	76	2	211	57	229
H15020120-036	4-234S-1218	7.6	7	< 1	37	12	71
H15020120-037	4-234S-1218D	7.5	11	< 1	49	19	78
H15020120-038	4-238-1824	5.2	1160	4	3340	1630	2430
H15020120-039	4-238-2430	5.0	8	1	1520	14	242
H15020120-040	4-238-3036	5.1	3	1	735	6	168

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020120

Report Date: 03/03/15
Date Received: 02/06/15

	Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
	Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020120-041	4-238-3642	5.3	4	3	1240	9	297
H15020120-042	4-245-0006	7.1	937	6	3180	569	2190
H15020120-043	4-245-0612	7.6	111	6	946	193	1830
H15020120-044	4-245-1218	8.1	15	< 1	86	16	116
H15020120-045	4-254-1218	7.2	494	7	2970	344	2200
H15020120-046	4-254-1824	7.7	96	4	500	48	956
H15020120-047	4-254-2430	7.6	20	< 1	57	14	105
H15020120-048	4-254E-0612	7.6	612	9	3960	654	2330
H15020120-049	4-254E-1218	7.8	117	3	1080	160	675
H15020120-050	4-254E-1824	7.6	20	< 1	71	15	101
H15020120-051	4-264-0612	7.6	687	10	7080	1340	2710
H15020120-052	4-264-1218	7.6	18	< 1	118	19	104
H15020120-053	4-264-1218D	7.8	14	< 1	83	15	101
H15020120-054	4-264-1824	7.9	25	< 1	166	28	124
H15020120-055	4-264E-0006	7.8	462	6	2480	356	1940
H15020120-056	4-264E-0612	7.8	219	3	1570	193	903
H15020120-057	4-264E-1218	8.1	14	< 1	81	17	88
H15020120-058	4-265-1218	7.1	528	7	6670	1030	2200
H15020120-059	4-265-1824	7.4	20	< 1	105	93	223
H15020120-060	4-265-2430	7.3	13	< 1	50	26	170
H15020120-061	4-291E-0006	7.9	67	2	265	35	304
H15020120-062	4-291E-0612	7.2	15	< 1	47	14	74

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150220A		
Lab ID: CCV_1_150219_1		Continuing Calibration Verification Standard							02/20/15 06:23	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150219_1		Continuing Calibration Verification Standard							02/20/15 06:24	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150219_1		Initial Calibration Verification Standard							02/20/15 06:24	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150219_1		Continuing Calibration Verification Standard							02/20/15 06:33	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150219_1		Continuing Calibration Verification Standard							02/20/15 06:47	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150219_1		Continuing Calibration Verification Standard							02/20/15 06:47	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150219_1		Initial Calibration Verification Standard							02/20/15 06:48	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150219_1		Continuing Calibration Verification Standard							02/20/15 06:58	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150219_1		Continuing Calibration Verification Standard							02/20/15 07:32	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150219_1		Continuing Calibration Verification Standard							02/20/15 07:11	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150219_1		Continuing Calibration Verification Standard							02/20/15 07:12	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150219_1		Initial Calibration Verification Standard							02/20/15 07:12	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150219_1		Continuing Calibration Verification Standard							02/20/15 07:21	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 28111
Lab ID: LCS-28111		Laboratory Control Sample				Run: SOIL PH METER_150220A			02/20/15 06:25	
pH, sat. paste		7.58	s.u.	0.10	101	95	105			
Lab ID: H15020120-010ADUP		Sample Duplicate				Run: SOIL PH METER_150220A			02/20/15 06:33	
pH, sat. paste		7.92	s.u.	0.10				0.1	30	
Lab ID: H15020120-020ADUP		Sample Duplicate				Run: SOIL PH METER_150220A			02/20/15 06:41	
pH, sat. paste		7.09	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 28112

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28112
Lab ID: LCS-28112		Laboratory Control Sample				Run: SOIL PH METER_150220A				02/20/15 06:49
pH, sat. paste		7.61	s.u.	0.10	102	95	105			
Lab ID: H15020120-030ADUP		Sample Duplicate				Run: SOIL PH METER_150220A				02/20/15 06:57
pH, sat. paste		7.94	s.u.	0.10				0.3	30	
Lab ID: H15020120-040ADUP		Sample Duplicate				Run: SOIL PH METER_150220A				02/20/15 07:06
pH, sat. paste		5.15	s.u.	0.10				0.4	30	
Method: ASAM10-3.2										Batch: 28113
Lab ID: H15020120-060ADUP		Sample Duplicate				Run: SOIL PH METER_150220A				02/20/15 07:32
pH, sat. paste		7.30	s.u.	0.10				0.0	30	
Lab ID: H15020120-062ADUP		Sample Duplicate				Run: SOIL PH METER_150220A				02/20/15 07:35
pH, sat. paste		7.24	s.u.	0.10				0.0	30	
Lab ID: LCS-28113		Laboratory Control Sample				Run: SOIL PH METER_150220A				02/20/15 07:13
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15020120-050ADUP		Sample Duplicate				Run: SOIL PH METER_150220A				02/20/15 07:21
pH, sat. paste		7.63	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150219A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/19/15 10:34
Arsenic			0.779	mg/L	0.0085	97	90	110			
Cadmium			0.380	mg/L	0.0010	95	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.743	mg/L	0.010	93	90	110			
Zinc			0.783	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/19/15 10:49
Arsenic			-0.00202	mg/L	0.0085		0	0			
Cadmium			0.00538	mg/L	0.0010		0	0			
Copper			0.000620	mg/L	0.010		0	0			
Lead			-0.0373	mg/L	0.010		0	0			
Zinc			0.00216	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/19/15 10:53
Arsenic			0.965	mg/L	0.0085	96	80	120			
Cadmium			0.897	mg/L	0.0010	90	80	120			
Copper			0.514	mg/L	0.010	103	80	120			
Lead			0.893	mg/L	0.010	89	80	120			
Zinc			0.980	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/19/15 23:11
Arsenic			2.46	mg/L	0.0085	98	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/19/15 23:14
Arsenic			0.000600	mg/L	0.0085						
Cadmium			0.000520	mg/L	0.0010						
Copper			0.00290	mg/L	0.010						
Lead			-0.0204	mg/L	0.010						
Zinc			0.00218	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/19/15 23:55
Arsenic			2.40	mg/L	0.0085	96	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.41	mg/L	0.010	96	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/19/15 23:58
Arsenic			-0.00111	mg/L	0.0085						
Cadmium			0.000450	mg/L	0.0010						
Copper			0.00132	mg/L	0.010						
Lead			-0.0124	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150219A	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/19/15 23:58	
Zinc			0.00126	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/20/15 00:39	
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.50	mg/L	0.0010	100	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.45	mg/L	0.010	98	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/20/15 00:43	
Arsenic			0.000580	mg/L	0.0085						
Cadmium			0.000240	mg/L	0.0010						
Copper			0.00287	mg/L	0.010						
Lead			0.00128	mg/L	0.010						
Zinc			0.00110	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/20/15 01:23	
Arsenic			2.42	mg/L	0.0085	97	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.45	mg/L	0.010	98	90	110			
Lead			2.41	mg/L	0.010	96	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/20/15 01:27	
Arsenic			0.0137	mg/L	0.0085						
Cadmium			0.000150	mg/L	0.0010						
Copper			-0.00296	mg/L	0.010						
Lead			-0.00744	mg/L	0.010						
Zinc			0.000540	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150220D	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/20/15 12:58
Arsenic			0.795	mg/L	0.0085	99	90	110			
Cadmium			0.383	mg/L	0.0010	96	90	110			
Copper			0.798	mg/L	0.010	100	90	110			
Lead			0.776	mg/L	0.010	97	90	110			
Zinc			0.783	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/20/15 13:13
Arsenic			0.00523	mg/L	0.0085		0	0			
Cadmium			0.00533	mg/L	0.0010		0	0			
Copper			-0.00407	mg/L	0.010		0	0			
Lead			-0.0453	mg/L	0.010		0	0			
Zinc			0.00275	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/20/15 13:17
Arsenic			0.976	mg/L	0.0085	98	80	120			
Cadmium			0.894	mg/L	0.0010	89	80	120			
Copper			0.509	mg/L	0.010	102	80	120			
Lead			0.914	mg/L	0.010	91	80	120			
Zinc			0.970	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 17:12
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.48	mg/L	0.010	99	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 17:15
Arsenic			-0.00211	mg/L	0.0085						
Cadmium			0.000430	mg/L	0.0010						
Copper			-0.000590	mg/L	0.010						
Lead			0.00170	mg/L	0.010						
Zinc			0.000510	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 17:56
Arsenic			2.45	mg/L	0.0085	98	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.49	mg/L	0.010	99	90	110			
Lead			2.45	mg/L	0.010	98	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 17:59
Arsenic			-0.00581	mg/L	0.0085						
Cadmium			0.000270	mg/L	0.0010						
Copper			0.00278	mg/L	0.010						
Lead			0.00346	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150220D	
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 17:59
Zinc			0.000520	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 18:40
Arsenic			2.53	mg/L	0.0085	101	90	110			
Cadmium			2.53	mg/L	0.0010	101	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.55	mg/L	0.010	102	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 18:43
Arsenic			-0.00340	mg/L	0.0085						
Cadmium			0.000260	mg/L	0.0010						
Copper			0.00414	mg/L	0.010						
Lead			-0.0160	mg/L	0.010						
Zinc			0.00117	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 19:24
Arsenic			2.51	mg/L	0.0085	100	90	110			
Cadmium			2.50	mg/L	0.0010	100	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 19:28
Arsenic			-0.00356	mg/L	0.0085						
Cadmium			0.000650	mg/L	0.0010						
Copper			-0.000140	mg/L	0.010						
Lead			-0.00630	mg/L	0.010						
Zinc			0.000270	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 20:08
Arsenic			2.53	mg/L	0.0085	101	90	110			
Cadmium			2.53	mg/L	0.0010	101	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.55	mg/L	0.010	102	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 20:12
Arsenic			0.0105	mg/L	0.0085						
Cadmium			0.000320	mg/L	0.0010						
Copper			0.00257	mg/L	0.010						
Lead			-0.0240	mg/L	0.010						
Zinc			0.00150	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 20:52
Arsenic			2.51	mg/L	0.0085	100	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150220D	
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 20:52
Cadmium			2.53	mg/L	0.0010	101	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 20:56
Arsenic			-0.00592	mg/L	0.0085						
Cadmium			0.000570	mg/L	0.0010						
Copper			0.00172	mg/L	0.010						
Lead			-0.00523	mg/L	0.010						
Zinc			0.000850	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 21:19
Arsenic			2.36	mg/L	0.0085	94	90	110			
Cadmium			2.32	mg/L	0.0010	93	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.30	mg/L	0.010	92	90	110			
Zinc			2.34	mg/L	0.010	94	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 21:22
Arsenic			0.00879	mg/L	0.0085						
Cadmium			-0.000370	mg/L	0.0010						
Copper			0.00759	mg/L	0.010						
Lead			-0.00273	mg/L	0.010						
Zinc			-0.00108	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/20/15 22:03
Arsenic			2.38	mg/L	0.0085	95	90	110			
Cadmium			2.35	mg/L	0.0010	94	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.34	mg/L	0.010	93	90	110			
Zinc			2.36	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/20/15 22:07
Arsenic			0.00544	mg/L	0.0085						
Cadmium			-0.000220	mg/L	0.0010						
Copper			0.00710	mg/L	0.010						
Lead			-0.00578	mg/L	0.010						
Zinc			0.000210	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150226A		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard								02/27/15 19:25
Arsenic			0.0492	mg/L	0.0050	99	90	110			
Lead			0.0469	mg/L	0.010	94	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank								02/27/15 19:34
Arsenic			1.22E-05	mg/L	0.0050						
Lead			1.90E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard								02/27/15 20:42
Arsenic			0.0486	mg/L	0.0050	97	90	110			
Lead			0.0471	mg/L	0.010	94	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank								02/27/15 20:52
Arsenic			1.91E-05	mg/L	0.0050						
Lead			4.30E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard								02/27/15 21:46
Arsenic			0.0482	mg/L	0.0050	96	90	110			
Lead			0.0471	mg/L	0.010	94	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank								02/27/15 21:55
Arsenic			1.82E-05	mg/L	0.0050						
Lead			9.10E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard								02/27/15 22:50
Arsenic			0.0490	mg/L	0.0050	98	90	110			
Lead			0.0468	mg/L	0.010	94	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank								02/27/15 22:59
Arsenic			1.00E-07	mg/L	0.0050						
Lead			2.00E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard								02/28/15 00:07
Arsenic			0.0487	mg/L	0.0050	97	90	110			
Lead			0.0466	mg/L	0.010	93	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank								02/28/15 00:16
Arsenic			1.75E-05	mg/L	0.0050						
Lead			6.80E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard								02/28/15 01:24
Arsenic			0.0487	mg/L	0.0050	97	90	110			
Lead			0.0465	mg/L	0.010	93	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank								02/28/15 01:33
Arsenic			2.37E-05	mg/L	0.0050						
Lead			7.40E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28092
Lab ID:	**MB-28092**	5	Method Blank				Run: ICP2-HE_150219A				02/19/15 23:40
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28092**	5	Laboratory Fortified Blank				Run: ICP2-HE_150219A				02/19/15 23:44
Arsenic			47.5	mg/kg	1.0	95	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			48.3	mg/kg	1.0	97	80	120			
Lead			46.2	mg/kg	1.0	92	80	120			
Zinc			48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28092**	5	Laboratory Control Sample				Run: ICP2-HE_150219A				02/19/15 23:47
Arsenic			292	mg/kg	3.4	85	72.3	106.4			
Cadmium			126	mg/kg	1.0	92	73	105.1			
Copper			257	mg/kg	2.1	92	77.5	109.6			
Lead			176	mg/kg	6.0	94	75.9	108.6			
Zinc			199	mg/kg	1.0	94	74.2	109.9			
Lab ID:	**H15020120-019APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150219A				02/20/15 01:20
Arsenic			470	mg/kg	1.8	81	75	125			
Cadmium			108	mg/kg	1.0	83	75	125			
Copper			1440	mg/kg	1.1		75	125			A
Lead			472	mg/kg	3.1	81	75	125			
Zinc			1910	mg/kg	1.0		75	125			A
Lab ID:	**H15020120-019AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150219A				02/20/15 01:31
Arsenic			301	mg/kg	1.7		75	125			A
Cadmium			25.7	mg/kg	1.0	81	75	125			
Copper			1310	mg/kg	1.0		75	125			A
Lead			307	mg/kg	3.0		75	125			A
Zinc			1680	mg/kg	1.0		75	125			A
Lab ID:	**H15020120-019AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150219A				02/20/15 01:34
Arsenic			309	mg/kg	1.7		75	125	2.8	20	A
Cadmium			26.4	mg/kg	1.0	84	75	125	2.7	20	
Copper			1230	mg/kg	1.0		75	125	5.9	20	A
Lead			316	mg/kg	3.0		75	125	2.9	20	A
Zinc			1730	mg/kg	1.0		75	125	2.8	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28093
Lab ID:	**MB-28093**	5	Method Blank				Run: ICP2-HE_150220D				02/20/15 16:19
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28093**	5	Laboratory Fortified Blank				Run: ICP2-HE_150220D				02/20/15 16:23
Arsenic			47.0	mg/kg	1.0	94	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			48.9	mg/kg	1.0	98	80	120			
Lead			48.0	mg/kg	1.0	96	80	120			
Zinc			48.0	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-28093**	5	Laboratory Control Sample				Run: ICP2-HE_150220D				02/20/15 16:27
Arsenic			271	mg/kg	3.6	79	72.3	106.4			
Cadmium			110	mg/kg	1.0	80	73	105.1			
Copper			240	mg/kg	2.2	86	77.5	109.6			
Lead			165	mg/kg	6.4	88	75.9	108.6			
Zinc			178	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H15020120-037APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150220D				02/20/15 18:21
Arsenic			230	mg/kg	1.8	87	75	125			
Cadmium			106	mg/kg	1.0	84	75	125			
Copper			271	mg/kg	1.1	89	75	125			
Lead			235	mg/kg	3.2	88	75	125			
Zinc			300	mg/kg	1.0	89	75	125			
Lab ID:	**H15020120-037AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150220D				02/20/15 18:25
Arsenic			55.0	mg/kg	1.7	88	75	125			
Cadmium			21.6	mg/kg	1.0	87	75	125			
Copper			94.9	mg/kg	1.1	94	75	125			
Lead			65.2	mg/kg	3.1	103	75	125			
Zinc			123	mg/kg	1.0	94	75	125			
Lab ID:	**H15020120-037AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150220D				02/20/15 18:29
Arsenic			54.7	mg/kg	1.7	87	75	125	0.5	20	
Cadmium			21.6	mg/kg	1.0	87	75	125	0.0	20	
Copper			94.6	mg/kg	1.1	94	75	125	0.3	20	
Lead			64.9	mg/kg	3.1	103	75	125	0.5	20	
Zinc			124	mg/kg	1.0	96	75	125	0.8	20	
Method:	**SW6010B**										Batch: 28106
Lab ID:	**MB-28106**	5	Method Blank				Run: ICP2-HE_150220D				02/20/15 18:32
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28106
Lab ID:	**MB-28106**	5	Method Blank				Run: ICP2-HE_150220D				02/20/15 18:32
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28106**	5	Laboratory Fortified Blank				Run: ICP2-HE_150220D				02/20/15 18:36
Arsenic			48.8	mg/kg	1.0	97	80	120			
Cadmium			24.1	mg/kg	1.0	97	80	120			
Copper			49.0	mg/kg	1.0	98	80	120			
Lead			48.9	mg/kg	1.0	98	80	120			
Zinc			49.2	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-28106**	5	Laboratory Control Sample				Run: ICP2-HE_150220D				02/20/15 18:47
Arsenic			285	mg/kg	3.5	83	72.3	106.4			
Cadmium			119	mg/kg	1.0	87	73	105.1			
Copper			252	mg/kg	2.1	90	77.5	109.6			
Lead			180	mg/kg	6.1	96	75.9	108.6			
Zinc			191	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H15020120-055APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150220D				02/20/15 20:16
Arsenic			712	mg/kg	1.8	98	75	125			
Cadmium			126	mg/kg	1.0	93	75	125			
Copper			2750	mg/kg	1.1		75	125			A
Lead			597	mg/kg	3.2	94	75	125			
Zinc			2200	mg/kg	1.0		75	125			A
Lab ID:	**H15020120-055AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150220D				02/20/15 20:19
Arsenic			518	mg/kg	1.8		75	125			A
Cadmium			30.5	mg/kg	1.0	97	75	125			
Copper			2590	mg/kg	1.1		75	125			A
Lead			413	mg/kg	3.2		75	125			A
Zinc			2030	mg/kg	1.0		75	125			A
Lab ID:	**H15020120-055AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150220D				02/20/15 20:23
Arsenic			530	mg/kg	1.8		75	125	2.2	20	A
Cadmium			31.2	mg/kg	1.0	100	75	125	2.2	20	
Copper			2620	mg/kg	1.1		75	125	1.2	20	A
Lead			427	mg/kg	3.2		75	125	3.3	20	A
Zinc			2050	mg/kg	1.0		75	125	1.3	20	A
Method:	**SW6010B**										Batch: 28107
Lab ID:	**MB-28107**	5	Method Blank				Run: ICP2-HE_150220D				02/20/15 20:27
Arsenic			ND	mg/kg	0.4						
Cadmium			0.01	mg/kg	0.01						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28107
Lab ID:	**LFB-28107**	5	Laboratory Fortified Blank				Run: ICP2-HE_150220D				02/20/15 20:30
Arsenic			48.1	mg/kg	1.0	96	80	120			
Cadmium			23.9	mg/kg	1.0	95	80	120			
Copper			47.8	mg/kg	1.0	95	80	120			
Lead			47.8	mg/kg	1.0	96	80	120			
Zinc			48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28107**	5	Laboratory Control Sample				Run: ICP2-HE_150220D				02/20/15 20:34
Arsenic			297	mg/kg	3.6	87	72.3	106.4			
Cadmium			134	mg/kg	1.0	97	73	105.1			
Copper			265	mg/kg	2.2	94	77.5	109.6			
Lead			179	mg/kg	6.4	96	75.9	108.6			
Zinc			200	mg/kg	1.0	94	74.2	109.9			
Lab ID:	**H15020120-062APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150220D				02/20/15 21:41
Arsenic			218	mg/kg	1.8	80	75	125			
Cadmium			97.7	mg/kg	1.0	77	75	125			
Copper			259	mg/kg	1.1	84	75	125			
Lead			210	mg/kg	3.2	78	75	125			
Zinc			276	mg/kg	1.0	80	75	125			
Lab ID:	**H15020120-062AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150220D				02/20/15 21:45
Arsenic			56.2	mg/kg	1.7	83	75	125			
Cadmium			19.5	mg/kg	1.0	79	75	125			
Copper			87.3	mg/kg	1.1	84	75	125			
Lead			48.9	mg/kg	3.1	76	75	125			
Zinc			115	mg/kg	1.0	84	75	125			
Lab ID:	**H15020120-062AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150220D				02/20/15 21:49
Arsenic			55.6	mg/kg	1.8	81	75	125	1.0	20	
Cadmium			20.0	mg/kg	1.0	80	75	125	2.5	20	
Copper			93.7	mg/kg	1.1	96	75	125	7.1	20	
Lead			53.3	mg/kg	3.1	84	75	125	8.6	20	
Zinc			117	mg/kg	1.0	87	75	125	1.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150226A		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							02/27/15 17:53	
Arsenic			0.0590	mg/L	0.0010	98	90	110			
Lead			0.0570	mg/L	0.0010	95	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							02/27/15 17:58	
Arsenic			8.00E-05	mg/L	0.0010						
Lead			0.000222	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							02/27/15 18:02	
Arsenic			0.0104	mg/L	0.0010	104	70	130			
Lead			0.000223	mg/L	0.0010		0	0			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/27/15 18:11	
Arsenic			0.0494	mg/L	0.0010	99	90	110			
Lead			0.0472	mg/L	0.0010	94	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/27/15 18:21	
Arsenic			2.52E-05	mg/L	0.0010						
Lead			1.70E-06	mg/L	0.0010						
Method:	**SW6020**									Batch: 28092	
Lab ID:	**MB-28092**	2	Method Blank				Run: ICPMS204-B_150226A			02/27/15 18:25	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28092**	2	Laboratory Control Sample				Run: ICPMS204-B_150226A			02/27/15 18:30	
Arsenic			303	mg/kg	1.0	88	72.3	106.4			
Lead			179	mg/kg	1.0	95	75.9	108.6			
Lab ID:	**LFB-28092**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150226A			02/27/15 18:35	
Arsenic			47.9	mg/kg	1.0	96	80	120			
Lead			46.8	mg/kg	1.0	94	80	120			
Lab ID:	**H15020120-019APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150226A			02/27/15 19:57	
Arsenic			2500	mg/kg	1.0	92	75	125			
Lead			2460	mg/kg	1.0	91	75	125			
Lab ID:	**H15020120-019AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150226A			02/27/15 20:01	
Arsenic			348	mg/kg	1.0		75	125			A
Lead			346	mg/kg	1.0		75	125			A
Lab ID:	**H15020120-019AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150226A			02/27/15 20:06	
Arsenic			346	mg/kg	1.0		75	125	0.5	20	A
Lead			343	mg/kg	1.0		75	125	1.0	20	A
Method:	**SW6020**									Batch: 28093	
Lab ID:	**MB-28093**	2	Method Blank				Run: ICPMS204-B_150226A			02/27/15 20:15	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28093
Lab ID:	**MB-28093**	2	Method Blank				Run: ICPMS204-B_150226A				02/27/15 20:15
Lab ID:	**LCS-28093**	2	Laboratory Control Sample				Run: ICPMS204-B_150226A				02/27/15 20:20
Arsenic			277	mg/kg	1.0	81	72.3	106.4			
Lead			162	mg/kg	1.0	87	75.9	108.6			
Lab ID:	**LFB-28093**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150226A				02/27/15 20:24
Arsenic			47.4	mg/kg	1.0	95	80	120			
Lead			45.0	mg/kg	1.0	90	80	120			
Lab ID:	**H15020120-037APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150226A				02/27/15 21:33
Arsenic			2230	mg/kg	1.0	91	75	125			
Lead			2290	mg/kg	1.0	93	75	125			
Lab ID:	**H15020120-037AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150226A				02/27/15 21:37
Arsenic			55.8	mg/kg	1.0	93	75	125			
Lead			61.6	mg/kg	1.0	87	75	125			
Lab ID:	**H15020120-037AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150226A				02/27/15 21:41
Arsenic			56.1	mg/kg	1.0	94	75	125	0.6	20	
Lead			60.7	mg/kg	1.0	86	75	125	1.5	20	
Method:	**SW6020**										Batch: 28106
Lab ID:	**MB-28106**	2	Method Blank				Run: ICPMS204-B_150226A				02/27/15 21:59
Arsenic			0.4	mg/kg	0.3						
Lead			0.4	mg/kg	0.2						
Lab ID:	**LCS-28106**	2	Laboratory Control Sample				Run: ICPMS204-B_150226A				02/27/15 22:04
Arsenic			285	mg/kg	1.0	83	72.3	106.4			
Lead			167	mg/kg	1.0	89	75.9	108.6			
Lab ID:	**LFB-28106**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150226A				02/27/15 22:09
Arsenic			49.0	mg/kg	1.0	97	80	120			
Lead			47.1	mg/kg	1.0	93	80	120			
Lab ID:	**H15020120-055APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150226A				02/27/15 23:22
Arsenic			2670	mg/kg	1.0	90	75	125			
Lead			2600	mg/kg	1.0	92	75	125			
Lab ID:	**H15020120-055AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150226A				02/27/15 23:26
Arsenic			501	mg/kg	1.0		75	125			A
Lead			388	mg/kg	1.0		75	125			A
Lab ID:	**H15020120-055AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150226A				02/27/15 23:30
Arsenic			517	mg/kg	1.0		75	125	3.1	20	A
Lead			394	mg/kg	1.0		75	125	1.6	20	A
Method:	**SW6020**										Batch: 28107

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 03/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020120

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28107
Lab ID:	**MB-28107**	2	Method Blank				Run: ICPMS204-B_150226A				02/27/15 23:40
Arsenic			0.5	mg/kg	0.3						
Lead			0.4	mg/kg	0.2						
Lab ID:	**LCS-28107**	2	Laboratory Control Sample				Run: ICPMS204-B_150226A				02/27/15 23:44
Arsenic			308	mg/kg	1.0	90	72.3	106.4			
Lead			175	mg/kg	1.0	93	75.9	108.6			
Lab ID:	**LFB-28107**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150226A				02/27/15 23:49
Arsenic			47.2	mg/kg	1.0	93	80	120			
Lead			45.9	mg/kg	1.0	91	80	120			
Lab ID:	**H15020120-062APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150226A				02/28/15 00:35
Arsenic			2260	mg/kg	1.0	91	75	125			
Lead			2310	mg/kg	1.0	94	75	125			
Lab ID:	**H15020120-062AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150226A				02/28/15 00:39
Arsenic			59.0	mg/kg	1.0	91	75	125			
Lead			56.0	mg/kg	1.0	86	75	125			
Lab ID:	**H15020120-062AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150226A				02/28/15 00:43
Arsenic			59.0	mg/kg	1.0	90	75	125	0.1	20	
Lead			57.5	mg/kg	1.0	88	75	125	2.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020120

Login completed by: Tracy L. Lorash
Date Received: 2/6/2015
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 2/10/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 5.7°C, Cooler 2 at 1.7°C. Samples were received on wet ice. TI 2/9/15

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020120

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-201-0006	1658	1/26/15	Soil	A	B		1
4-201-0612	1657	1/26/15	Soil	A	B		1
4-201-1218	1655	1/26/15	Soil	A	B		1
4-201-1218D	1656	1/26/15	Soil	A	B		1
4-208-1218	1630	1/26/15	Soil	A	B		1
4-208-1824	1629	1/26/15	Soil	A	B		1
4-208-2430	1628	1/26/15	Soil	A	B		1
4-216-0612	1256	1/26/15	Soil	A	B		1
4-216-1218	1255	1/26/15	Soil	A	B		1
4-216-1824	1254	1/26/15	Soil	A	B		1
4-218-1218	1320	1/26/15	Soil	A	B		1
4-218-1824	1319	1/26/15	Soil	A	B		1
4-218-2430	1318	1/26/15	Soil	A	B		1
4-219-1824	1344	1/26/15	Soil	A	B		1
4-219-2430	1343	1/26/15	Soil	A	B		1
4-219-3036	1342	1/26/15	Soil	A	B		1
4-225-0006	1227	1/26/15	Soil	A	B		1
4-225-0612	1226	1/26/15	Soil	A	B		1
4-226-3642	1401	1/26/15	Soil	A	B		1
4-226-4248	1400	1/26/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/6/15 1235

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 = 5.7 TB
C2 = 1.7 on ice

Date/Time: hand del
2/6/15 12:35

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15020120

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-226-4854	1426	1/26/15	Soil	A	B		1
4-227-2430	1433	1/26/15	Soil	A	B		1
4-227-3036	1432	1/26/15	Soil	A	B		1
4-227-3642	1431	1/26/15	Soil	A	B		1
4-233-1218	1520	1/26/15	Soil	A	B		1
4-233-1824	1519	1/26/15	Soil	A	B		1
4-233-2430	1518	1/26/15	Soil	A	B		1
4-234-1218	1110	1/26/15	Soil	A	B		1
4-234-1824	1109	1/26/15	Soil	A	B		1
4-234-2430	1108	1/26/15	Soil	A	B		1
4-234E-0612	1144	1/26/15	Soil	A	B		1
4-234E-1218	1143	1/26/15	Soil	A	B		1
4-234E-1824	1142	1/26/15	Soil	A	B		1
4-234S-0006	1550	1/26/15	Soil	A	B		1
4-234S-0612	1549	1/26/15	Soil	A	B		1
4-234S-1218	1548	1/26/15	Soil	A	B		1
4-234S-1218D	1551	1/26/15	Soil	A	B		1
4-238-1824	1454	1/26/15	Soil	A	B		1
4-238-2430	1453	1/26/15	Soil	A	B		1
4-238-3036	1452	1/26/15	Soil	A	B		1

C2

C1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/6/15 1235

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1=5.7 TB
C2=1.7 on ice

Date/Time: hand del 2/6/15 1235

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020120

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-238-3642 C2	1451	1/26/15	Soil	A	B		1
4-245-0006	1058	1/26/15	Soil	A	B		1
4-245-0612	1057	1/26/15	Soil	A	B		1
4-245-1218	1056	1/26/15	Soil	A	B		1
4-254-1218 ~~C1~~ A||C1	845	1/26/15	Soil	A	B		1
4-254-1824	844	1/26/15	Soil	A	B		1
4-254-2430	843	1/26/15	Soil	A	B		1
4-254E-0612	1024	1/26/15	Soil	A	B		1
4-254E-1218	1023	1/26/15	Soil	A	B		1
4-254E-1824	1022	1/26/15	Soil	A	B		1
4-264-0612	907	1/26/15	Soil	A	B		1
4-264-1218	905	1/26/15	Soil	A	B		1
4-264-1218D	906	1/26/15	Soil	A	B		1
4-264-1824	904	1/26/15	Soil	A	B		1
4-264E-0006	1005	1/26/15	Soil	A	B		1
4-264E-0612	1004	1/26/15	Soil	A	B		1
4-264E-1218	1003	1/26/15	Soil	A	B		1
4-265-1218	930	1/26/15	Soil	A	B		1
4-265-1824	929	1/26/15	Soil	A	B		1
4-265-2430	928	1/26/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/6/15 1235

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] C1 = 5.7, TB C2 = 1.7 Ice

Date/Time: hand del 2/6/15 12:35

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15020120

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-291E-0006	807	1/26/15	Soil	A	B		1
4-291E-0612	806	1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1
		1/26/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature] Date/Time: 2/6/15 1235

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) _____ Date/Time:

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] C1=5.7 C2=1.7 TB Date/Time: 2/6/15 12:35 Ice hand del

COC01_26_15 EL.xls

ANALYTICAL SUMMARY REPORT

February 27, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020116

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 45 samples for MT DEQ-Federal Superfund on 2/6/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020116-001	4-150-3036	01/28/15 13:17	02/06/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020116-002	4-150-3642	01/28/15 13:16	02/06/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020116-003	4-150-4248	01/28/15 13:15	02/06/15	Soil	Same As Above
H15020116-004	4-161-3642	01/28/15 12:01	02/06/15	Soil	Same As Above
H15020116-005	4-161-4248	01/28/15 12:00	02/06/15	Soil	Same As Above
H15020116-006	4-161-4854	01/28/15 12:25	02/06/15	Soil	Same As Above
H15020116-007	4-161E-2430	01/28/15 16:36	02/06/15	Soil	Same As Above
H15020116-008	4-161E-3036	01/28/15 16:35	02/06/15	Soil	Same As Above
H15020116-009	4-161E-3642	01/28/15 16:50	02/06/15	Soil	Same As Above
H15020116-010	4-162-1824	01/28/15 13:04	02/06/15	Soil	Same As Above
H15020116-011	4-162-2430	01/28/15 13:03	02/06/15	Soil	Same As Above
H15020116-012	4-162-3036	01/28/15 13:02	02/06/15	Soil	Same As Above
H15020116-013	4-163-3036	01/28/15 13:27	02/06/15	Soil	Same As Above
H15020116-014	4-163-3642	01/28/15 13:26	02/06/15	Soil	Same As Above
H15020116-015	4-163-4248	01/28/15 13:25	02/06/15	Soil	Same As Above
H15020116-016	4-164-3036	01/28/15 14:27	02/06/15	Soil	Same As Above
H15020116-017	4-164-3642	01/28/15 14:26	02/06/15	Soil	Same As Above
H15020116-018	4-164-4248	01/28/15 14:25	02/06/15	Soil	Same As Above
H15020116-019	4-170-3036	01/28/15 10:17	02/06/15	Soil	Same As Above
H15020116-020	4-170-3642	01/28/15 10:16	02/06/15	Soil	Same As Above
H15020116-021	4-170-4248	01/28/15 10:15	02/06/15	Soil	Same As Above
H15020116-022	4-170NE-0612	01/28/15 11:37	02/06/15	Soil	Same As Above
H15020116-023	4-170NE-1218	01/28/15 11:36	02/06/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020116-024	4-170NE-1824	01/28/15 11:35	02/06/15	Soil	Same As Above
H15020116-025	4-171-3036	01/28/15 13:47	02/06/15	Soil	Same As Above
H15020116-026	4-171-3642	01/28/15 13:46	02/06/15	Soil	Same As Above
H15020116-027	4-171-4248	01/28/15 13:45	02/06/15	Soil	Same As Above
H15020116-028	4-172-1824	01/28/15 14:04	02/06/15	Soil	Same As Above
H15020116-029	4-172-2430	01/28/15 14:03	02/06/15	Soil	Same As Above
H15020116-030	4-172-3036	01/28/15 14:02	02/06/15	Soil	Same As Above
H15020116-031	4-173-1218	01/28/15 14:45	02/06/15	Soil	Same As Above
H15020116-032	4-173-1824	01/28/15 14:44	02/06/15	Soil	Same As Above
H15020116-033	4-173-2430	01/28/15 14:43	02/06/15	Soil	Same As Above
H15020116-034	4-179-1824	01/28/15 15:14	02/06/15	Soil	Same As Above
H15020116-035	4-179-2430	01/28/15 15:13	02/06/15	Soil	Same As Above
H15020116-036	4-179-3036	01/28/15 15:12	02/06/15	Soil	Same As Above
H15020116-037	4-183-4248	01/28/15 15:00	02/06/15	Soil	Same As Above
H15020116-038	4-183-4854	01/28/15 15:35	02/06/15	Soil	Same As Above
H15020116-039	4-202-3642	01/28/15 8:16	02/06/15	Soil	Same As Above
H15020116-040	4-202-4248	01/28/15 8:15	02/06/15	Soil	Same As Above
H15020116-041	4-211-1824	01/28/15 8:59	02/06/15	Soil	Same As Above
H15020116-042	4-211-2430	01/28/15 8:58	02/06/15	Soil	Same As Above
H15020116-043	4-211-3036	01/28/15 8:57	02/06/15	Soil	Same As Above
H15020116-044	4-212-3642	01/28/15 9:31	02/06/15	Soil	Same As Above
H15020116-045	4-212-4248	01/28/15 9:30	02/06/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020116

Report Date: 02/27/15
Date Received: 02/06/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020116-001	4-150-3036	0	0	7.7	482	7	5380	1860	3310
H15020116-002	4-150-3642	0	0	7.2	9	< 1	33	16	68
H15020116-003	4-150-4248	0	0	7.1	4	< 1	27	12	62
H15020116-004	4-161-3642	0	0	6.7	203	10	3240	140	2100
H15020116-005	4-161-4248	0	0	7.1	7	< 1	42	18	86
H15020116-006	4-161-4854	0	0	7.4	15	< 1	107	23	127
H15020116-007	4-161E-2430	0	0	7.8	1150	10	11800	910	2340
H15020116-008	4-161E-3036	0	0	7.3	16	< 1	74	17	91
H15020116-009	4-161E-3642	0	0	7.2	7	< 1	37	8	86
H15020116-010	4-162-1824	0	0	7.1	14	6	171	15	1840
H15020116-011	4-162-2430	0	0	7.3	9	11	437	10	924
H15020116-012	4-162-3036	0	0	7.6	10	3	1070	5	635
H15020116-013	4-163-3036	0	0	7.2	107	4	4280	91	785
H15020116-014	4-163-3642	0	0	7.2	11	1	52	21	835
H15020116-015	4-163-4248	0	0	6.9	8	< 1	41	16	92
H15020116-016	4-164-3036	0	0	6.9	7	11	3200	10	1300
H15020116-017	4-164-3642	0	0	6.2	43	< 1	97	36	238
H15020116-018	4-164-4248	0	0	6.4	44	< 1	201	26	295
H15020116-019	4-170-3036	0	0	7.1	8	9	204	16	3160
H15020116-020	4-170-3642	0	0	7.0	5	< 1	28	11	70
H15020116-021	4-170-4248	0	0	7.3	6	< 1	38	14	85
H15020116-022	4-170NE-0612	0	0	7.8	585	7	3130	532	2040
H15020116-023	4-170NE-1218	0	0	7.8	62	1	464	77	385
H15020116-024	4-170NE-1824	0	0	8.0	13	< 1	73	15	100
H15020116-025	4-171-3036	0	0	7.4	16	15	6300	34	2950
H15020116-026	4-171-3642	0	0	7.3	5	< 1	32	11	81
H15020116-027	4-171-4248	0	0	7.4	6	< 1	32	12	82
H15020116-028	4-172-1824	0	0	6.9	1430	5	9110	1250	1180
H15020116-029	4-172-2430	0	0	7.4	12	9	802	13	784
H15020116-030	4-172-3036	0	0	7.1	5	1	31	9	399
H15020116-031	4-173-1218	0	0	7.6	19	9	5070	18	1770
H15020116-032	4-173-1824	0	0	7.9	12	4	293	21	716
H15020116-033	4-173-2430	0	0	7.9	6	< 1	36	9	72
H15020116-034	4-179-1824	0	0	6.1	29	2	4400	207	677
H15020116-035	4-179-2430	0	0	6.9	66	12	2790	45	1170
H15020116-036	4-179-3036	0	0	6.7	13	6	531	19	1020
H15020116-037	4-183-4248	0	0	7.4	2180	28	14300	718	7570
H15020116-038	4-183-4854	0	0	7.4	957	16	6670	520	4510
H15020116-039	4-202-3642	0	0	7.4	9	10	94	15	2880
H15020116-040	4-202-4248	0	0	6.6	7	< 1	38	12	109

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020116

Report Date: 02/27/15
Date Received: 02/06/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020116-041	4-211-1824	0	0	5.9	134	5	18400	312	2400
H15020116-042	4-211-2430	0	0	7.1	5	5	197	8	931
H15020116-043	4-211-3036	0	0	7.1	6	4	1870	10	415
H15020116-044	4-212-3642	0	0	6.6	388	10	5360	313	2950
H15020116-045	4-212-4248	0	0	7.2	136	30	1930	180	4560

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020116

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150219A		
Lab ID: ICV_1_150217_1		Initial Calibration Verification Standard							02/17/15 08:33	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150218_1		Continuing Calibration Verification Standard							02/19/15 06:35	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150218_1		Continuing Calibration Verification Standard							02/19/15 06:36	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150218_1		Initial Calibration Verification Standard							02/19/15 06:37	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150218_1		Continuing Calibration Verification Standard							02/19/15 06:45	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150218_1		Continuing Calibration Verification Standard							02/19/15 07:00	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150218_1		Continuing Calibration Verification Standard							02/19/15 07:00	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150218_1		Initial Calibration Verification Standard							02/19/15 07:01	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150218_1		Continuing Calibration Verification Standard							02/19/15 07:10	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150218_1		Continuing Calibration Verification Standard							02/19/15 07:20	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150218_1		Initial Calibration Verification Standard							02/18/15 10:17	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150218_1		Initial Calibration Verification Standard							02/18/15 07:14	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 28075	
Lab ID: LCS-28075		Laboratory Control Sample				Run: SOIL PH METER_150219A			02/19/15 06:37	
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H15020116-010ADUP		Sample Duplicate				Run: SOIL PH METER_150219A			02/19/15 06:44	
pH, sat. paste		7.06	s.u.	0.10				0.1	30	
Lab ID: H15020116-020ADUP		Sample Duplicate				Run: SOIL PH METER_150219A			02/19/15 06:53	
pH, sat. paste		6.97	s.u.	0.10				0.1	30	
Method: ASAM10-3.2									Batch: 28076	
Lab ID: LCS-28076		Laboratory Control Sample				Run: SOIL PH METER_150219A			02/19/15 07:02	
pH, sat. paste		7.59	s.u.	0.10	101	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020116

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28076
Lab ID: H15020116-030ADUP	Sample Duplicate					Run: SOIL PH METER_150219A			02/19/15 07:10	
pH, sat. paste		7.13	s.u.	0.10				0.1	30	
Lab ID: H15020116-040ADUP	Sample Duplicate					Run: SOIL PH METER_150219A			02/19/15 07:19	
pH, sat. paste		6.59	s.u.	0.10				0.2	30	
Lab ID: H15020116-045ADUP	Sample Duplicate					Run: SOIL PH METER_150219A			02/19/15 07:25	
pH, sat. paste		7.22	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020116

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150219A	
Lab ID: ICV	5	Initial Calibration Verification Standard							02/19/15 10:34	
Arsenic		0.779	mg/L	0.0085	97	90	110			
Cadmium		0.380	mg/L	0.0010	95	90	110			
Copper		0.799	mg/L	0.010	100	90	110			
Lead		0.743	mg/L	0.010	93	90	110			
Zinc		0.783	mg/L	0.010	98	90	110			
Lab ID: ICSA	5	Interference Check Sample A							02/19/15 10:49	
Arsenic		-0.00202	mg/L	0.0085		0	0			
Cadmium		0.00538	mg/L	0.0010		0	0			
Copper		0.000620	mg/L	0.010		0	0			
Lead		-0.0373	mg/L	0.010		0	0			
Zinc		0.00216	mg/L	0.010		0	0			
Lab ID: ICSAB	5	Interference Check Sample AB							02/19/15 10:53	
Arsenic		0.965	mg/L	0.0085	96	80	120			
Cadmium		0.897	mg/L	0.0010	90	80	120			
Copper		0.514	mg/L	0.010	103	80	120			
Lead		0.893	mg/L	0.010	89	80	120			
Zinc		0.980	mg/L	0.010	98	80	120			
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/19/15 17:53	
Arsenic		2.35	mg/L	0.0085	94	90	110			
Cadmium		2.36	mg/L	0.0010	94	90	110			
Copper		2.49	mg/L	0.010	99	90	110			
Lead		2.35	mg/L	0.010	94	90	110			
Zinc		2.39	mg/L	0.010	95	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/19/15 17:56	
Arsenic		-0.0114	mg/L	0.0085						
Cadmium		0.000990	mg/L	0.0010						
Copper		-0.00106	mg/L	0.010						
Lead		0.00808	mg/L	0.010						
Zinc		0.000490	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/19/15 23:55	
Arsenic		2.40	mg/L	0.0085	96	90	110			
Cadmium		2.43	mg/L	0.0010	97	90	110			
Copper		2.47	mg/L	0.010	99	90	110			
Lead		2.41	mg/L	0.010	96	90	110			
Zinc		2.43	mg/L	0.010	97	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/19/15 23:58	
Arsenic		-0.00111	mg/L	0.0085						
Cadmium		0.000450	mg/L	0.0010						
Copper		0.00132	mg/L	0.010						
Lead		-0.0124	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020116

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150219A	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/19/15 23:58	
Zinc			0.00126	mg/L	0.010						
Method:	**E200.7**									Analytical Run: ICP2-HE_150220D	
Lab ID:	**ICV**		Initial Calibration Verification Standard							02/20/15 12:58	
Lead			0.776	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							02/20/15 13:13	
Lead			-0.0453	mg/L	0.010		0	0			
Lab ID:	**ICSAB**		Interference Check Sample AB							02/20/15 13:17	
Lead			0.914	mg/L	0.010	91	80	120			
Lab ID:	**CCV**		Continuing Calibration Verification Standard							02/20/15 15:17	
Lead			2.41	mg/L	0.010	96	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							02/20/15 15:21	
Lead			0.00970	mg/L	0.010						
Lab ID:	**CCV**		Continuing Calibration Verification Standard							02/20/15 16:01	
Lead			2.41	mg/L	0.010	96	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							02/20/15 16:05	
Lead			0.0128	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020116

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150225A		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							02/26/15 03:50	
Arsenic			0.0478	mg/L	0.0050	96	90	110			
Cadmium			0.0478	mg/L	0.0010	96	90	110			
Lead			0.0474	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/26/15 03:59	
Arsenic			3.10E-06	mg/L	0.0050						
Cadmium			-4.30E-06	mg/L	0.0010						
Lead			-2.40E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							02/26/15 09:43	
Arsenic			0.0491	mg/L	0.0050	98	90	110			
Cadmium			0.0472	mg/L	0.0010	94	90	110			
Lead			0.0468	mg/L	0.010	94	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/26/15 09:52	
Arsenic			3.10E-06	mg/L	0.0050						
Cadmium			4.00E-06	mg/L	0.0010						
Lead			-9.00E-07	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020116

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 28060	
Lab ID:	**MB-28060**	5	Method Blank				Run: ICP2-HE_150219A			02/19/15 18:00	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			0.9	mg/kg	0.6						
Zinc			0.1	mg/kg	0.09						
Lab ID:	**LFB-28060**	5	Laboratory Fortified Blank				Run: ICP2-HE_150219A			02/19/15 18:04	
Arsenic			45.3	mg/kg	1.0	91	80	120			
Cadmium			22.8	mg/kg	1.0	91	80	120			
Copper			48.9	mg/kg	1.0	98	80	120			
Lead			45.4	mg/kg	1.0	89	80	120			
Zinc			47.1	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-28060**	5	Laboratory Control Sample				Run: ICP2-HE_150219A			02/19/15 18:08	
Arsenic			267	mg/kg	3.8	78	72.3	106.4			
Cadmium			117	mg/kg	1.0	86	73	105.1			
Copper			246	mg/kg	2.3	88	77.5	109.6			
Lead			177	mg/kg	6.8	94	75.9	108.6			
Zinc			184	mg/kg	1.0	86	74.2	109.9			
Lab ID:	**H15020116-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150219A			02/19/15 20:02	
Arsenic			283	mg/kg	1.9	93	75	125			
Cadmium			115	mg/kg	1.0	89	75	125			
Copper			435	mg/kg	1.1	91	75	125			
Lead			265	mg/kg	3.3	93	75	125			
Zinc			535	mg/kg	1.0	93	75	125			
Lab ID:	**H15020116-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150219A			02/19/15 20:06	
Arsenic			92.2	mg/kg	1.8	97	75	125			
Cadmium			24.4	mg/kg	1.0	95	75	125			
Copper			260	mg/kg	1.1		75	125			A
Lead			81.3	mg/kg	3.2	111	75	125			
Zinc			364	mg/kg	1.0		75	125			A
Lab ID:	**H15020116-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150219A			02/19/15 20:10	
Arsenic			89.7	mg/kg	1.8	92	75	125	2.7	20	
Cadmium			23.0	mg/kg	1.0	90	75	125	5.9	20	
Copper			263	mg/kg	1.1		75	125	1.3	20	A
Lead			76.5	mg/kg	3.2	101	75	125	6.0	20	
Zinc			347	mg/kg	1.0		75	125	4.8	20	A
Method:	**SW6010B**									Batch: 28061	
Lab ID:	**MB-28061**	5	Method Blank				Run: ICP2-HE_150219A			02/19/15 20:13	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020116

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28061
Lab ID:	**MB-28061**	5	Method Blank				Run: ICP2-HE_150219A			02/19/15 20:13	
Lead			2	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28061**	5	Laboratory Fortified Blank				Run: ICP2-HE_150219A			02/19/15 20:17	
Arsenic			48.1	mg/kg	1.0	96	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			48.9	mg/kg	1.0	98	80	120			
Lead			48.7	mg/kg	1.0	94	80	120			
Zinc			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-28061**	5	Laboratory Control Sample				Run: ICP2-HE_150219A			02/19/15 20:21	
Arsenic			294	mg/kg	3.7	86	72.3	106.4			
Cadmium			124	mg/kg	1.0	90	73	105.1			
Copper			263	mg/kg	2.2	94	77.5	109.6			
Lead			190	mg/kg	6.5	101	75.9	108.6			
Zinc			198	mg/kg	1.0	93	74.2	109.9			
Lab ID:	**H15020116-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150219A			02/19/15 21:49	
Arsenic			261	mg/kg	2.0	93	75	125			
Cadmium			126	mg/kg	1.0	89	75	125			
Copper			772	mg/kg	1.2	89	75	125			
Lead			262	mg/kg	3.5	90	75	125			
Zinc			1280	mg/kg	1.0	94	75	125			
Lab ID:	**H15020116-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150219A			02/19/15 21:53	
Arsenic			63.4	mg/kg	1.9	102	75	125			
Cadmium			31.0	mg/kg	1.0	94	75	125			
Copper			586	mg/kg	1.2		75	125			A
Lead			66.9	mg/kg	3.4	90	75	125			
Zinc			1090	mg/kg	1.0		75	125			A
Lab ID:	**H15020116-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150219A			02/19/15 21:56	
Arsenic			61.9	mg/kg	1.9	98	75	125	2.4	20	
Cadmium			31.1	mg/kg	1.0	94	75	125	0.3	20	
Copper			608	mg/kg	1.2		75	125	3.7	20	A
Lead			72.3	mg/kg	3.4	99	75	125	7.7	20	
Zinc			1090	mg/kg	1.0		75	125	0.2	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020116

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28062
Lab ID:	**MB-28062**	5	Method Blank				Run: ICP2-HE_150220D			02/20/15 15:06	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-28062**	5	Laboratory Fortified Blank				Run: ICP2-HE_150220D			02/20/15 15:10	
Arsenic			47.4	mg/kg	1.0	95	80	120			
Cadmium			23.4	mg/kg	1.0	94	80	120			
Copper			48.7	mg/kg	1.0	97	80	120			
Lead			48.7	mg/kg	1.0	97	80	120			
Zinc			47.9	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-28062**	5	Laboratory Control Sample				Run: ICP2-HE_150220D			02/20/15 15:14	
Arsenic			302	mg/kg	3.4	88	72.3	106.4			
Cadmium			130	mg/kg	1.0	95	73	105.1			
Copper			270	mg/kg	2.1	97	77.5	109.6			
Lead			190	mg/kg	6.0	101	75.9	108.6			
Zinc			203	mg/kg	1.0	95	74.2	109.9			
Lab ID:	**H15020116-045APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150220D			02/20/15 16:09	
Arsenic			371	mg/kg	1.9	90	75	125			
Cadmium			141	mg/kg	1.0	85	75	125			
Copper			2210	mg/kg	1.2		75	125			A
Lead			402	mg/kg	3.3	84	75	125			
Zinc			4630	mg/kg	1.0		75	125			A
Lab ID:	**H15020116-045AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150220D			02/20/15 16:12	
Arsenic			208	mg/kg	1.8	143	75	125			S
Cadmium			52.5	mg/kg	1.0	95	75	125			
Copper			2140	mg/kg	1.1		75	125			A
Lead			227	mg/kg	3.2	91	75	125			
Zinc			4650	mg/kg	1.0		75	125			A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Lab ID:	**H15020116-045AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150220D			02/20/15 16:16	
Arsenic			209	mg/kg	1.8	144	75	125	0.5	20	S
Cadmium			55.4	mg/kg	1.0	105	75	125	5.4	20	
Copper			2230	mg/kg	1.1		75	125	4.3	20	A
Lead			233	mg/kg	3.2	102	75	125	2.6	20	
Zinc			4990	mg/kg	1.0		75	125	7.1	20	A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020116

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150225A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/25/15 18:32	
Arsenic			0.0591	mg/L	0.0010	99	90	110			
Cadmium			0.0305	mg/L	0.0010	102	90	110			
Lead			0.0588	mg/L	0.0010	98	90	110			
Method:	**SW6020**									Batch: 28060	
Lab ID:	**MB-28060**	2	Method Blank				Run: ICPMS204-B_150225A			02/26/15 04:04	
Arsenic			ND	mg/kg	0.3						
Lead			0.3	mg/kg	0.2						
Lab ID:	**LCS-28060**	2	Laboratory Control Sample				Run: ICPMS204-B_150225A			02/26/15 04:09	
Arsenic			288	mg/kg	1.0	84	72.3	106.4			
Lead			172	mg/kg	1.0	92	75.9	108.6			
Lab ID:	**LFB-28060**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150225A			02/26/15 04:14	
Arsenic			48.5	mg/kg	1.0	97	80	120			
Lead			46.8	mg/kg	1.0	93	80	120			
Lab ID:	**H15020116-018APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150225A			02/26/15 05:45	
Arsenic			2410	mg/kg	1.0	94	75	125			
Lead			2480	mg/kg	1.0	98	75	125			
Lab ID:	**H15020116-018AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150225A			02/26/15 05:49	
Arsenic			98.0	mg/kg	1.0	101	75	125			
Lead			75.4	mg/kg	1.0	98	75	125			
Lab ID:	**H15020116-018AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150225A			02/26/15 05:54	
Arsenic			94.3	mg/kg	1.0	94	75	125	3.8	20	
Lead			72.9	mg/kg	1.0	93	75	125	3.4	20	
Method:	**SW6020**									Batch: 28061	
Lab ID:	**MB-28061**	3	Method Blank				Run: ICPMS204-B_150225A			02/26/15 06:28	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28061**	3	Laboratory Control Sample				Run: ICPMS204-B_150225A			02/26/15 06:32	
Arsenic			306	mg/kg	1.0	89	72.3	106.4			
Cadmium			123	mg/kg	1.0	90	73	105.1			
Lead			182	mg/kg	1.0	97	75.9	108.6			
Lab ID:	**LFB-28061**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150225A			02/26/15 06:37	
Arsenic			48.6	mg/kg	1.0	97	80	120			
Cadmium			24.4	mg/kg	1.0	97	80	120			
Lead			47.1	mg/kg	1.0	94	80	120			
Lab ID:	**H15020116-036APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150225A			02/26/15 08:13	
Arsenic			2550	mg/kg	1.0	101	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020116

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 28061	
Lab ID:	**H15020116-036APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150225A			02/26/15 08:13	
Cadmium			1290	mg/kg	1.0	103	75	125			
Lead			2610	mg/kg	1.0	104	75	125			
Lab ID:	**H15020116-036AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150225A			02/26/15 08:17	
Arsenic			64.2	mg/kg	1.0	97	75	125			
Cadmium			29.4	mg/kg	1.0	90	75	125			
Lead			60.3	mg/kg	1.0	90	75	125			
Lab ID:	**H15020116-036AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150225A			02/26/15 08:22	
Arsenic			63.2	mg/kg	1.0	94	75	125	1.5	20	
Cadmium			29.8	mg/kg	1.0	91	75	125	1.3	20	
Lead			61.0	mg/kg	1.0	90	75	125	1.2	20	
Method:	**SW6020**									Batch: 28062	
Lab ID:	**MB-28062**	2	Method Blank				Run: ICPMS204-B_150225A			02/26/15 08:41	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28062**	2	Laboratory Control Sample				Run: ICPMS204-B_150225A			02/26/15 08:46	
Arsenic			316	mg/kg	1.0	92	72.3	106.4			
Lead			185	mg/kg	1.0	99	75.9	108.6			
Lab ID:	**LFB-28062**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150225A			02/26/15 08:51	
Arsenic			48.0	mg/kg	1.0	96	80	120			
Lead			46.6	mg/kg	1.0	93	80	120			
Lab ID:	**H15020116-045APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150225A			02/26/15 09:29	
Arsenic			2600	mg/kg	1.0	96	75	125			
Lead			2610	mg/kg	1.0	96	75	125			
Lab ID:	**H15020116-045AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150225A			02/26/15 09:33	
Arsenic			219	mg/kg	1.0	151	75	125			S
Lead			224	mg/kg	1.0	101	75	125			
Lab ID:	**H15020116-045AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150225A			02/26/15 09:38	
Arsenic			221	mg/kg	1.0	153	75	125	0.8	20	S
Lead			236	mg/kg	1.0	124	75	125	5.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020116

Login completed by: Austin H. Nearpass
Reviewed by: BL2000\rwilliams
Reviewed Date: 2/10/2015

Date Received: 2/6/2015
Received by: AHN
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	1.8°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Per client request, the temperature was taken using a client sample. An 2/6/15

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-150-3036	1317	1/28/15	Soil	A	B		1
4-150-3642	1316	1/28/15	Soil	A	B		1
4-150-4248	1315	1/28/15	Soil	A	B		1
4-161-3642	1201	1/28/15	Soil	A	B		1
4-161-4248	1200	1/28/15	Soil	A	B		1
4-161-4854	1225	1/28/15	Soil	A	B		1
4-161E-2430	1636	1/28/15	Soil	A	B		1
4-161E-3036	1635	1/28/15	Soil	A	B		1
4-161E-3642	1650	1/28/15	Soil	A	B		1
4-162-1824	1304	1/28/15	Soil	A	B		1
4-162-2430	1303	1/28/15	Soil	A	B		1
4-162-3036	1302	1/28/15	Soil	A	B		1
4-163-3036	1327	1/28/15	Soil	A	B		1
4-163-3642	1326	1/28/15	Soil	A	B		1
4-163-4248	1325	1/28/15	Soil	A	B		1
4-164-3036	1427	1/28/15	Soil	A	B		1
4-164-3642	1426	1/28/15	Soil	A	B		1
4-164-4248	1425	1/28/15	Soil	A	B		1
4-170-3036	1017	1/28/15	Soil	A	B		1
4-170-3642	1016	1/28/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15020116

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) Date/Time: 2/6/15 1235

Received By (sign): (1) Date/Time:

Relinquished By (sign): (2) Date/Time:

Received By (sign): (2) Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): 1.8 ONATB on ice

Date/Time: hand del 2/6/15 12:35

COC01_28_15 EL.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-170-4248	1015	1/28/15	Soil	A	B		1
4-170NE-0612	1137	1/28/15	Soil	A	B		1
4-170NE-1218	1136	1/28/15	Soil	A	B		1
4-170NE-1824	1135	1/28/15	Soil	A	B		1
4-171-3036	1347	1/28/15	Soil	A	B		1
4-171-3642	1346	1/28/15	Soil	A	B		1
4-171-4248	1345	1/28/15	Soil	A	B		1
4-172-1824	1404	1/28/15	Soil	A	B		1
4-172-2430	1403	1/28/15	Soil	A	B		1
4-172-3036	1402	1/28/15	Soil	A	B		1
4-173-1218	1445	1/28/15	Soil	A	B		1
4-173-1824	1444	1/28/15	Soil	A	B		1
4-173-2430	1443	1/28/15	Soil	A	B		1
4-179-1824	1514	1/28/15	Soil	A	B		1
4-179-2430	1513	1/28/15	Soil	A	B		1
4-179-3036	1512	1/28/15	Soil	A	B		1
4-183-4248	1500	1/28/15	Soil	A	B		1
4-183-4854	1535	1/28/15	Soil	A	B		1
4-202-3642	816	1/28/15	Soil	A	B		1
4-202-4248	815	1/28/15	Soil	A	B		1
4-202-4854	831						

H15020116

Preservatives Used:
1 - Ice

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature] Date/Time: 2/6/15 1235

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) _____ Date/Time:

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 1.8 TB NA on ice

Date/Time: hand del 2/6/15 12:35

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-211-1824	859	1/28/15	Soil	A	B		1
4-211-2430	858	1/28/15	Soil	A	B		1
4-211-3036	857	1/28/15	Soil	A	B		1
4-212-3642	931	1/28/15	Soil	A	B		1
4-212-4248	930	1/28/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H150201 16

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/6/15 1235

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

1.8 TRUE ounce

Date/Time: hand del 2/6/15 12:35

COC01_28_15 EL.xls

ANALYTICAL SUMMARY REPORT

February 27, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020112

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 46 samples for MT DEQ-Federal Superfund on 2/6/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020112-001	4-126-1824	01/29/15 16:34	02/06/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020112-002	4-126-2430	01/29/15 16:33	02/06/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020112-003	4-126-3036	01/29/15 16:32	02/06/15	Soil	Same As Above
H15020112-004	4-131-0006	01/29/15 15:42	02/06/15	Soil	Same As Above
H15020112-005	4-131-0612	01/29/15 15:41	02/06/15	Soil	Same As Above
H15020112-006	4-132-0612	01/29/15 15:16	02/06/15	Soil	Same As Above
H15020112-007	4-132-1218	01/29/15 15:15	02/06/15	Soil	Same As Above
H15020112-008	4-132-1824	01/29/15 15:14	02/06/15	Soil	Same As Above
H15020112-009	4-133-0006	01/29/15 14:48	02/06/15	Soil	Same As Above
H15020112-010	4-133-0612	01/29/15 14:47	02/06/15	Soil	Same As Above
H15020112-011	4-134-0612	01/29/15 14:26	02/06/15	Soil	Same As Above
H15020112-012	4-134-1218	01/29/15 14:25	02/06/15	Soil	Same As Above
H15020112-013	4-134-1824	01/29/15 14:24	02/06/15	Soil	Same As Above
H15020112-014	4-135-3642	01/29/15 16:01	02/06/15	Soil	Same As Above
H15020112-015	4-135-4248	01/29/15 16:00	02/06/15	Soil	Same As Above
H15020112-016	4-135-4854	01/29/15 16:20	02/06/15	Soil	Same As Above
H15020112-017	4-142-0006	01/29/15 14:07	02/06/15	Soil	Same As Above
H15020112-018	4-142-0612	01/29/15 14:06	02/06/15	Soil	Same As Above
H15020112-019	4-147-0006	01/29/15 9:28	02/06/15	Soil	Same As Above
H15020112-020	4-147-0612	01/29/15 9:27	02/06/15	Soil	Same As Above
H15020112-021	4-147-1218	01/29/15 9:25	02/06/15	Soil	Same As Above
H15020112-022	4-147-1218d	01/29/15 9:26	02/06/15	Soil	Same As Above
H15020112-023	4-148-0612	01/29/15 10:46	02/06/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020112-024	4-148-1218	01/29/15 10:45	02/06/15	Soil	Same As Above
H15020112-025	4-148-1824	01/29/15 10:44	02/06/15	Soil	Same As Above
H15020112-026	4-149-1218	01/29/15 9:10	02/06/15	Soil	Same As Above
H15020112-027	4-149-1824	01/29/15 9:09	02/06/15	Soil	Same As Above
H15020112-028	4-149-2430	01/29/15 9:08	02/06/15	Soil	Same As Above
H15020112-029	4-149e-0612	01/29/15 10:14	02/06/15	Soil	Same As Above
H15020112-030	4-149e-1218	01/29/15 10:13	02/06/15	Soil	Same As Above
H15020112-031	4-149e-1824	01/29/15 10:12	02/06/15	Soil	Same As Above
H15020112-032	4-161e2-1824	01/29/15 8:12	02/06/15	Soil	Same As Above
H15020112-033	4-161e2-2430	01/29/15 8:11	02/06/15	Soil	Same As Above
H15020112-034	4-161e2-3036	01/29/15 8:10	02/06/15	Soil	Same As Above
H15020112-035	4-161e2n-1824	01/29/15 12:02	02/06/15	Soil	Same As Above
H15020112-036	4-161e2n-3036	01/29/15 12:00	02/06/15	Soil	Same As Above
H15020112-037	4-161e2n2-1218	01/29/15 13:05	02/06/15	Soil	Same As Above
H15020112-038	4-161e2n2-1824	01/29/15 13:04	02/06/15	Soil	Same As Above
H15020112-039	4-161e3-0612	01/29/15 11:36	02/06/15	Soil	Same As Above
H15020112-040	4-161e3n-0006	01/29/15 12:28	02/06/15	Soil	Same As Above
H15020112-041	4-161e3n-1218	01/29/15 12:26	02/06/15	Soil	Same As Above
H15020112-042	4-161e2n	01/29/15 12:01	02/06/15	Soil	Same As Above
H15020112-043	4-161e2n2-2430	01/29/15 13:03	02/06/15	Soil	Same As Above
H15020112-044	4-161e3-0006	01/29/15 11:37	02/06/15	Soil	Same As Above
H15020112-045	4-161e3-1218	01/29/15 11:35	02/06/15	Soil	Same As Above
H15020112-046	4-161e3n-0612	01/29/15 12:27	02/06/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020112

Report Date: 02/27/15
Date Received: 02/06/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020112-001	4-126-1824	0	0	6.9	530	7	9060	1060	3520
H15020112-002	4-126-2430	0	0	7.3	6	2	167	10	572
H15020112-003	4-126-3036	0	0	7.4	3	< 1	29	8	226
H15020112-004	4-131-0006	0	0	7.8	172	3	764	139	613
H15020112-005	4-131-0612	0	0	7.7	11	< 1	45	13	74
H15020112-006	4-132-0612	0	0	7.9	819	6	5220	979	2380
H15020112-007	4-132-1218	0	0	7.9	42	< 1	66	15	130
H15020112-008	4-132-1824	0	0	7.7	16	< 1	33	15	82
H15020112-009	4-133-0006	0	0	7.2	35	< 1	176	38	221
H15020112-010	4-133-0612	0	0	7.7	22	< 1	71	16	99
H15020112-011	4-134-0612	0	0	7.9	758	4	5000	658	1830
H15020112-012	4-134-1218	0	0	7.8	18	< 1	81	16	138
H15020112-013	4-134-1824	0	0	7.9	11	< 1	36	13	76
H15020112-014	4-135-3642	0	0	6.5	24	11	766	28	3970
H15020112-015	4-135-4248	0	0	7.4	8	12	1030	10	1320
H15020112-016	4-135-4854	0	0	7.7	12	2	584	18	709
H15020112-017	4-142-0006	0	0	7.4	101	3	579	130	607
H15020112-018	4-142-0612	0	0	7.7	25	< 1	39	10	54
H15020112-019	4-147-0006	0	0	7.4	286	8	1400	289	1420
H15020112-020	4-147-0612	0	0	7.8	29	< 1	47	15	82
H15020112-021	4-147-1218	0	0	7.7	17	< 1	33	15	82
H15020112-022	4-147-1218d	0	0	7.7	14	< 1	33	15	79
H15020112-023	4-148-0612	0	0	7.0	369	3	880	355	1420
H15020112-024	4-148-1218	0	0	7.9	52	< 1	209	33	145
H15020112-025	4-148-1824	0	0	7.8	22	< 1	48	10	64
H15020112-026	4-149-1218	0	0	7.8	409	5	2330	331	1790
H15020112-027	4-149-1824	0	0	7.8	31	< 1	202	31	190
H15020112-028	4-149-2430	0	0	8.0	11	< 1	65	18	104
H15020112-029	4-149e-0612	0	0	7.8	369	6	2520	385	1590
H15020112-030	4-149e-1218	0	0	7.7	31	< 1	113	26	111
H15020112-031	4-149e-1824	0	0	7.4	6	< 1	33	13	64
H15020112-032	4-161e2-1824	0	0	7.7	968	11	6400	653	3590
H15020112-033	4-161e2-2430	0	0	7.6	21	< 1	80	17	159
H15020112-034	4-161e2-3036	0	0	7.1	5	< 1	36	14	73
H15020112-035	4-161e2n-1824	0	0	7.7	418	12	9050	640	2880
H15020112-036	4-161e2n-3036	0	0	7.4	18	< 1	134	32	129
H15020112-037	4-161e2n2-1218	0	0	7.8	407	6	1480	341	2020
H15020112-038	4-161e2n2-1824	0	0	7.7	22	1	175	17	369
H15020112-039	4-161e3-0612	0	0	7.8	194	3	1180	192	1050
H15020112-040	4-161e3n-0006	0	0	8.0	595	7	3070	488	2100

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020112

Report Date: 02/27/15
Date Received: 02/06/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020112-041	4-161e3n-1218	0	0	7.9	11	< 1	65	18	94
H15020112-042	4-161e2n	0	0	7.2	30	< 1	52	23	133
H15020112-043	4-161e2n2-2430	0	0	7.5	18	< 1	44	14	78
H15020112-044	4-161e3-0006	0	0	7.9	76	2	760	126	676
H15020112-045	4-161e3-1218	0	0	7.8	14	< 1	59	15	71
H15020112-046	4-161e3n-0612	0	0	7.8	23	1	428	48	245

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150213A		
Lab ID: ICV_1_150210_1		Initial Calibration Verification Standard								02/11/15 08:54
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150210_1		Initial Calibration Verification Standard								02/11/15 09:17
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150210_1		Initial Calibration Verification Standard								02/11/15 09:42
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150210_1		Initial Calibration Verification Standard								02/11/15 10:13
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150211_1		Initial Calibration Verification Standard								02/12/15 06:45
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150211_1		Initial Calibration Verification Standard								02/12/15 07:08
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150211_1		Initial Calibration Verification Standard								02/12/15 07:31
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150212_1		Continuing Calibration Verification Standard								02/13/15 10:43
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150212_1		Continuing Calibration Verification Standard								02/13/15 10:43
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150212_1		Initial Calibration Verification Standard								02/13/15 10:43
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150212_1		Continuing Calibration Verification Standard								02/13/15 10:44
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150212_1		Continuing Calibration Verification Standard								02/13/15 10:45
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150212_1		Continuing Calibration Verification Standard								02/13/15 10:45
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150212_1		Initial Calibration Verification Standard								02/13/15 10:45
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150212_1		Continuing Calibration Verification Standard								02/13/15 10:45
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150212_1		Continuing Calibration Verification Standard								02/13/15 10:46
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150212_1		Initial Calibration Verification Standard								02/13/15 06:41
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 28037
Lab ID: LCS-28037		Laboratory Control Sample				Run: SOIL PH METER_150213A				02/13/15 10:43
pH, sat. paste		7.57	s.u.	0.10	101	95	105			
Lab ID: H15020112-010ADUP		Sample Duplicate				Run: SOIL PH METER_150213A				02/13/15 10:44
pH, sat. paste		7.68	s.u.	0.10				0.3	30	
Lab ID: H15020112-020ADUP		Sample Duplicate				Run: SOIL PH METER_150213A				02/13/15 10:44
pH, sat. paste		7.81	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 28038
Lab ID: LCS-28038		Laboratory Control Sample				Run: SOIL PH METER_150213A				02/13/15 10:45
pH, sat. paste		7.58	s.u.	0.10	101	95	105			
Lab ID: H15020112-030ADUP		Sample Duplicate				Run: SOIL PH METER_150213A				02/13/15 10:45
pH, sat. paste		7.73	s.u.	0.10				0.1	30	
Lab ID: H15020112-040ADUP		Sample Duplicate				Run: SOIL PH METER_150213A				02/13/15 10:46
pH, sat. paste		8.00	s.u.	0.10				0.1	30	
Lab ID: H15020112-046ADUP		Sample Duplicate				Run: SOIL PH METER_150213A				02/13/15 10:47
pH, sat. paste		7.82	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150217A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/17/15 09:38
Arsenic			0.789	mg/L	0.0085	99	90	110			
Cadmium			0.384	mg/L	0.0010	96	90	110			
Copper			0.802	mg/L	0.010	100	90	110			
Lead			0.779	mg/L	0.010	97	90	110			
Zinc			0.788	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/17/15 09:53
Arsenic			0.0203	mg/L	0.0085		0	0			
Cadmium			0.000150	mg/L	0.0010		0	0			
Copper			-0.00222	mg/L	0.010		0	0			
Lead			-0.00710	mg/L	0.010		0	0			
Zinc			0.00330	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/17/15 09:57
Arsenic			0.976	mg/L	0.0085	98	80	120			
Cadmium			0.879	mg/L	0.0010	88	80	120			
Copper			0.497	mg/L	0.010	99	80	120			
Lead			0.860	mg/L	0.010	86	80	120			
Zinc			0.962	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/17/15 13:51
Arsenic			2.46	mg/L	0.0085	98	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.42	mg/L	0.010	97	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/17/15 13:55
Arsenic			0.00487	mg/L	0.0085						
Cadmium			-7.00E-05	mg/L	0.0010						
Copper			0.00172	mg/L	0.010						
Lead			-0.0117	mg/L	0.010						
Zinc			0.000550	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/17/15 18:24
Arsenic			2.46	mg/L	0.0085	99	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/17/15 18:28
Arsenic			-0.000410	mg/L	0.0085						
Cadmium			0.000400	mg/L	0.0010						
Copper			-0.00262	mg/L	0.010						
Lead			0.0126	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150217A	
Lab ID: CCB	5	Continuing Calibration Blank							02/17/15 18:28	
Zinc		0.000450	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150219A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/19/15 10:34
Arsenic			0.779	mg/L	0.0085	97	90	110			
Cadmium			0.380	mg/L	0.0010	95	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.743	mg/L	0.010	93	90	110			
Zinc			0.783	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/19/15 10:49
Arsenic			-0.00202	mg/L	0.0085		0	0			
Cadmium			0.00538	mg/L	0.0010		0	0			
Copper			0.000620	mg/L	0.010		0	0			
Lead			-0.0373	mg/L	0.010		0	0			
Zinc			0.00216	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/19/15 10:53
Arsenic			0.965	mg/L	0.0085	96	80	120			
Cadmium			0.897	mg/L	0.0010	90	80	120			
Copper			0.514	mg/L	0.010	103	80	120			
Lead			0.893	mg/L	0.010	89	80	120			
Zinc			0.980	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/19/15 16:25
Arsenic			2.40	mg/L	0.0085	96	90	110			
Cadmium			2.39	mg/L	0.0010	95	90	110			
Copper			2.51	mg/L	0.010	101	90	110			
Lead			2.35	mg/L	0.010	94	90	110			
Zinc			2.42	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/19/15 16:28
Arsenic			-0.00386	mg/L	0.0085						
Cadmium			0.000950	mg/L	0.0010						
Copper			-0.00107	mg/L	0.010						
Lead			0.0122	mg/L	0.010						
Zinc			0.000480	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/19/15 17:53
Arsenic			2.35	mg/L	0.0085	94	90	110			
Cadmium			2.36	mg/L	0.0010	94	90	110			
Copper			2.49	mg/L	0.010	99	90	110			
Lead			2.35	mg/L	0.010	94	90	110			
Zinc			2.39	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/19/15 17:56
Arsenic			-0.0114	mg/L	0.0085						
Cadmium			0.000990	mg/L	0.0010						
Copper			-0.00106	mg/L	0.010						
Lead			0.00808	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150219A	
Lab ID: CCB	5	Continuing Calibration Blank							02/19/15 17:56	
Zinc		0.000490	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150225A		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							02/25/15 22:29	
Arsenic			0.0481	mg/L	0.0050	96	90	110			
Cadmium			0.0479	mg/L	0.0010	96	90	110			
Lead			0.0475	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/25/15 22:39	
Arsenic			-3.60E-06	mg/L	0.0050						
Cadmium			-4.70E-06	mg/L	0.0010						
Lead			-3.60E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							02/26/15 03:50	
Arsenic			0.0478	mg/L	0.0050	96	90	110			
Cadmium			0.0478	mg/L	0.0010	96	90	110			
Lead			0.0474	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/26/15 03:59	
Arsenic			3.10E-06	mg/L	0.0050						
Cadmium			-4.30E-06	mg/L	0.0010						
Lead			-2.40E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28052
Lab ID:	**MB-28052**	5	Method Blank				Run: ICP2-HE_150217A			02/17/15 14:17	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			0.7	mg/kg	0.6						
Zinc			0.9	mg/kg	0.09						
Lab ID:	**LFB-28052**	5	Laboratory Fortified Blank				Run: ICP2-HE_150217A			02/17/15 14:21	
Arsenic			46.5	mg/kg	1.0	93	80	120			
Cadmium			22.8	mg/kg	1.0	91	80	120			
Copper			49.4	mg/kg	1.0	99	80	120			
Lead			46.7	mg/kg	1.0	92	80	120			
Zinc			49.0	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28052**	5	Laboratory Control Sample				Run: ICP2-HE_150217A			02/17/15 14:25	
Arsenic			268	mg/kg	1.8	78	72.3	106.4			
Cadmium			112	mg/kg	1.0	82	73	105.1			
Copper			246	mg/kg	1.1	88	77.5	109.6			
Lead			165	mg/kg	3.1	88	75.9	108.6			
Zinc			188	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H15020112-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150217A			02/17/15 15:53	
Arsenic			239	mg/kg	1.9	84	75	125			
Cadmium			102	mg/kg	1.0	79	75	125			
Copper			265	mg/kg	1.1	88	75	125			
Lead			229	mg/kg	3.3	84	75	125			
Zinc			285	mg/kg	1.0	90	75	125			
Lab ID:	**H15020112-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150217A			02/17/15 15:57	
Arsenic			65.7	mg/kg	1.8	84	75	125			
Cadmium			19.7	mg/kg	1.0	79	75	125			
Copper			83.8	mg/kg	1.1	90	75	125			
Lead			59.1	mg/kg	3.2	95	75	125			
Zinc			99.5	mg/kg	1.0	91	75	125			
Lab ID:	**H15020112-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150217A			02/17/15 16:00	
Arsenic			62.3	mg/kg	1.8	77	75	125	5.3	20	
Cadmium			19.7	mg/kg	1.0	79	75	125	0.1	20	
Copper			82.5	mg/kg	1.1	87	75	125	1.6	20	
Lead			44.7	mg/kg	3.2	67	75	125	28	20	SR
Zinc			99.2	mg/kg	1.0	90	75	125	0.3	20	

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.

Method:	**SW6010B**										Batch: 28053
Lab ID:	**MB-28053**	5	Method Blank				Run: ICP2-HE_150217A			02/17/15 16:11	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28053
Lab ID:	**MB-28053**	5	Method Blank				Run: ICP2-HE_150217A			02/17/15 16:11	
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-28053**	5	Laboratory Fortified Blank				Run: ICP2-HE_150217A			02/17/15 16:15	
Arsenic			45.4	mg/kg	1.0	91	80	120			
Cadmium			22.3	mg/kg	1.0	89	80	120			
Copper			49.1	mg/kg	1.0	98	80	120			
Lead			46.5	mg/kg	1.0	93	80	120			
Zinc			49.9	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-28053**	5	Laboratory Control Sample				Run: ICP2-HE_150217A			02/17/15 16:19	
Arsenic			262	mg/kg	1.7	76	72.3	106.4			
Cadmium			108	mg/kg	1.0	79	73	105.1			
Copper			243	mg/kg	1.1	87	77.5	109.6			
Lead			160	mg/kg	3.1	86	75.9	108.6			
Zinc			187	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H15020112-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150217A			02/17/15 18:14	
Arsenic			241	mg/kg	1.9	87	75	125			
Cadmium			108	mg/kg	1.0	83	75	125			
Copper			360	mg/kg	1.1	88	75	125			
Lead			253	mg/kg	3.3	86	75	125			
Zinc			351	mg/kg	1.0	86	75	125			
Lab ID:	**H15020112-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150217A			02/17/15 18:17	
Arsenic			60.3	mg/kg	1.8	84	75	125			
Cadmium			21.7	mg/kg	1.0	86	75	125			
Copper			178	mg/kg	1.1	89	75	125			
Lead			78.9	mg/kg	3.2	94	75	125			
Zinc			174	mg/kg	1.0	88	75	125			
Lab ID:	**H15020112-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150217A			02/17/15 18:21	
Arsenic			63.5	mg/kg	1.8	90	75	125	5.1	20	
Cadmium			22.0	mg/kg	1.0	87	75	125	1.4	20	
Copper			183	mg/kg	1.1	99	75	125	2.8	20	
Lead			80.3	mg/kg	3.2	97	75	125	1.8	20	
Zinc			175	mg/kg	1.0	92	75	125	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28054
Lab ID:	**MB-28054**	5	Method Blank				Run: ICP2-HE_150219A			02/19/15 16:17	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.1	mg/kg	0.09						
Lab ID:	**LFB-28054**	5	Laboratory Fortified Blank				Run: ICP2-HE_150219A			02/19/15 16:21	
Arsenic			47.0	mg/kg	1.0	94	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			49.4	mg/kg	1.0	99	80	120			
Lead			45.5	mg/kg	1.0	91	80	120			
Zinc			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28054**	5	Laboratory Control Sample				Run: ICP2-HE_150219A			02/19/15 16:32	
Arsenic			259	mg/kg	1.8	76	72.3	106.4			
Cadmium			109	mg/kg	1.0	79	73	105.1			
Copper			244	mg/kg	1.1	87	77.5	109.6			
Lead			164	mg/kg	3.2	88	75.9	108.6			
Zinc			178	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H15010409-016APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150219A			02/19/15 16:43	
Arsenic			1020	mg/kg	1.8	70	75	125			S
Cadmium			116	mg/kg	1.0	81	75	125			
Copper			8850	mg/kg	1.1		75	125			A
Lead			1190	mg/kg	3.2		75	125			A
Zinc			3690	mg/kg	1.0		75	125			A
Lab ID:	**H15010409-016AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150219A			02/19/15 16:47	
Arsenic			873	mg/kg	1.8		75	125			A
Cadmium			35.2	mg/kg	1.0	85	75	125			
Copper			8840	mg/kg	1.1		75	125			A
Lead			1060	mg/kg	3.1		75	125			A
Zinc			3640	mg/kg	1.0		75	125			A
Lab ID:	**H15010409-016AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150219A			02/19/15 16:50	
Arsenic			853	mg/kg	1.7		75	125	2.2	20	A
Cadmium			33.7	mg/kg	1.0	80	75	125	4.2	20	
Copper			9140	mg/kg	1.1		75	125	3.3	20	A
Lead			1030	mg/kg	3.1		75	125	3.2	20	A
Zinc			3530	mg/kg	1.0		75	125	3.0	20	A
Lab ID:	**H15020112-046APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150219A			02/19/15 17:42	
Arsenic			248	mg/kg	1.9	88	75	125			
Cadmium			109	mg/kg	1.0	83	75	125			
Copper			663	mg/kg	1.1	91	75	125			
Lead			261	mg/kg	3.3	83	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28054
Lab ID:	**H15020112-046APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150219A			02/19/15 17:42	
Zinc			464	mg/kg	1.0	85	75	125			
Lab ID:	**H15020112-046AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150219A			02/19/15 17:45	
Arsenic			63.8	mg/kg	1.8	87	75	125			
Cadmium			22.3	mg/kg	1.0	84	75	125			
Copper			463	mg/kg	1.1		75	125			A
Lead			90.1	mg/kg	3.2	85	75	125			
Zinc			279	mg/kg	1.0		75	125			A
Lab ID:	**H15020112-046AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150219A			02/19/15 17:49	
Arsenic			61.6	mg/kg	1.8	82	75	125	3.5	20	
Cadmium			21.8	mg/kg	1.0	82	75	125	2.3	20	
Copper			472	mg/kg	1.1		75	125	2.0	20	A
Lead			91.3	mg/kg	3.2	87	75	125	1.3	20	
Zinc			273	mg/kg	1.0		75	125	2.3	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150225A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/25/15 18:32	
Arsenic			0.0591	mg/L	0.0010	99	90	110			
Cadmium			0.0305	mg/L	0.0010	102	90	110			
Lead			0.0588	mg/L	0.0010	98	90	110			
Method:	**SW6020**									Batch: 28052	
Lab ID:	**MB-28052**	2	Method Blank				Run: ICPMS204-B_150225A			02/25/15 22:43	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28052**	2	Laboratory Control Sample				Run: ICPMS204-B_150225A			02/25/15 22:48	
Arsenic			304	mg/kg	1.0	89	72.3	106.4			
Lead			185	mg/kg	1.0	99	75.9	108.6			
Lab ID:	**LFB-28052**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150225A			02/25/15 22:53	
Arsenic			48.9	mg/kg	1.0	98	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Lab ID:	**H15020112-018APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150225A			02/26/15 00:19	
Arsenic			2370	mg/kg	1.0	94	75	125			
Lead			2330	mg/kg	1.0	93	75	125			
Lab ID:	**H15020112-018AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150225A			02/26/15 00:24	
Arsenic			72.2	mg/kg	1.0	94	75	125			
Lead			54.9	mg/kg	1.0	89	75	125			
Lab ID:	**H15020112-018AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150225A			02/26/15 00:29	
Arsenic			70.5	mg/kg	1.0	91	75	125	2.3	20	
Lead			53.2	mg/kg	1.0	86	75	125	3.1	20	
Method:	**SW6020**									Batch: 28053	
Lab ID:	**MB-28053**	2	Method Blank				Run: ICPMS204-B_150225A			02/26/15 00:48	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28053**	2	Laboratory Control Sample				Run: ICPMS204-B_150225A			02/26/15 00:53	
Arsenic			305	mg/kg	1.0	89	72.3	106.4			
Lead			180	mg/kg	1.0	96	75.9	108.6			
Lab ID:	**LFB-28053**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150225A			02/26/15 00:57	
Arsenic			48.2	mg/kg	1.0	97	80	120			
Lead			47.1	mg/kg	1.0	94	80	120			
Lab ID:	**H15020112-036APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150225A			02/26/15 02:14	
Arsenic			2380	mg/kg	1.0	94	75	125			
Lead			2400	mg/kg	1.0	95	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020112

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 28053
Lab ID:	**H15020112-036AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150225A				02/26/15 02:19
Arsenic			64.8	mg/kg	1.0	92	75	125			
Lead			74.6	mg/kg	1.0	88	75	125			
Lab ID:	**H15020112-036AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150225A				02/26/15 02:24
Arsenic			66.0	mg/kg	1.0	95	75	125	1.9	20	
Lead			76.3	mg/kg	1.0	91	75	125	2.2	20	
Method:	**SW6020**										Batch: 28054
Lab ID:	**MB-28054**	3	Method Blank				Run: ICPMS204-B_150225A				02/26/15 02:33
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-28054**	3	Laboratory Control Sample				Run: ICPMS204-B_150225A				02/26/15 02:38
Arsenic			291	mg/kg	1.0	85	72.3	106.4			
Cadmium			116	mg/kg	1.0	84	73	105.1			
Lead			171	mg/kg	1.0	91	75.9	108.6			
Lab ID:	**LFB-28054**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150225A				02/26/15 02:43
Arsenic			48.5	mg/kg	1.0	97	80	120			
Cadmium			24.7	mg/kg	1.0	99	80	120			
Lead			47.1	mg/kg	1.0	94	80	120			
Lab ID:	**H15020112-046APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150225A				02/26/15 03:36
Arsenic			2380	mg/kg	1.0	94	75	125			
Cadmium			1150	mg/kg	1.0	92	75	125			
Lead			2440	mg/kg	1.0	96	75	125			
Lab ID:	**H15020112-046AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150225A				02/26/15 03:40
Arsenic			69.7	mg/kg	1.0	93	75	125			
Cadmium			24.3	mg/kg	1.0	91	75	125			
Lead			91.0	mg/kg	1.0	89	75	125			
Lab ID:	**H15020112-046AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150225A				02/26/15 03:45
Arsenic			68.0	mg/kg	1.0	90	75	125	2.5	20	
Cadmium			24.4	mg/kg	1.0	92	75	125	0.6	20	
Lead			90.2	mg/kg	1.0	87	75	125	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020112

Login completed by: Austin H. Nearpass
Reviewed by: BL2000\rwilliams
Reviewed Date: 2/11/2015

Date Received: 2/6/2015
Received by: AHN
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	3.8°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample #39, 40, 42, & 44 on the COC are listed at the end of the work order. An 2/9/15

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-126-1824	1634	1/29/15	Soil	A	B		1
4-126-2430	1633	1/29/15	Soil	A	B		1
4-126-3036	1632	1/29/15	Soil	A	B		1
4-131-0006	1542	1/29/15	Soil	A	B		1
4-131-0612	1541	1/29/15	Soil	A	B		1
4-132-0612	1516	1/29/15	Soil	A	B		1
4-132-1218	1515	1/29/15	Soil	A	B		1
4-132-1824	1514	1/29/15	Soil	A	B		1
4-133-0006	1448	1/29/15	Soil	A	B		1
4-133-0612	1447	1/29/15	Soil	A	B		1
4-134-0612	1426	1/29/15	Soil	A	B		1
4-134-1218	1425	1/29/15	Soil	A	B		1
4-134-1824	1424	1/29/15	Soil	A	B		1
4-135-3642	1601	1/29/15	Soil	A	B		1
4-135-4248	1600	1/29/15	Soil	A	B		1
4-135-4854	1620	1/29/15	Soil	A	B		1
4-142-0006	1407	1/29/15	Soil	A	B		1
4-142-0612	1406	1/29/15	Soil	A	B		1
4-147-0006	928	1/29/15	Soil	A	B		1
4-147-0612	927	1/29/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H5020112

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/6/15 1235

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 3.8 lbs on ice

Date/Time: hand del 2/6/15 12:35

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
4-147-1218	925	1/29/15	Soil	A	B		1
4-147-1218d	926		Soil	A	B		1
4-148-0612	1046		Soil	A	B		1
4-148-1218	1045		Soil	A	B		1
4-148-1824	1044		Soil	A	B		1
4-149-1218	910		Soil	A	B		1
4-149-1824	909		Soil	A	B		1
4-149-2430	908		Soil	A	B		1
4-149e-0612	1014		Soil	A	B		1
4-149e-1218	1013		Soil	A	B		1
4-149e-1824	1012		Soil	A	B		1
4-161e2-1824	812		Soil	A	B		1
4-161e2-2430	811		Soil	A	B		1
4-161e2-3036	810		Soil	A	B		1
4-161e2n-1824	1202		Soil	A	B		1
4-161e2n-3036	1200		Soil	A	B		1
4-161e2n2-1218	1305		Soil	A	B		1
4-161e2n2-1824	1304		Soil	A	B		1
4-161e2n2-2430	1303		Soil	A	B		1
4-161e3-0006	1137		Soil	A	B		1

H15020112

Preservatives Used:
1 - Ice

4-202-4854
A - Total As, Cd, Cu, Pb, Zn *B - pH*

831

Relinquished By (sign): (1) [signature]
Date/Time: 2/6/15 1235

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 3.8 TB on ice

Date/Time: hand del 2/6/15 12:35

COC01_29_15 EL.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-161e3-0612	1136	1/29/15	Soil	A	B		1
4-161e3-1218	1135	1/29/15	Soil	A	B		1
4-161e3n-0006	1228	1/29/15	Soil	A	B		1
4-161e3n-0612	1227	1/29/15	Soil	A	B		1
4-161e3n-1218	1226	1/29/15	Soil	A	B		1
4-161EZN	1201	1/29/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

H15020112

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 2/6/15 1235

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 3.8 Tb on ice

Date/Time: hand del 2/6/15 12:35

COC01_29_15 EL.xls

ANALYTICAL SUMMARY REPORT

February 23, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15020002

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 60 samples for MT DEQ-Federal Superfund on 1/30/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15020002-001	4-273-1218	01/22/15 10:15	01/30/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15020002-002	4-273-1824	01/22/15 10:14	01/30/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15020002-003	4-273-2430	01/22/15 10:13	01/30/15	Soil	Same As Above
H15020002-004	4-273W-1218D	01/22/15 16:06	01/30/15	Soil	Same As Above
H15020002-005	4-273W-1824	01/22/15 16:04	01/30/15	Soil	Same As Above
H15020002-006	4-273W-2430	01/22/15 16:03	01/30/15	Soil	Same As Above
H15020002-007	4-274-0006	01/22/15 9:38	01/30/15	Soil	Same As Above
H15020002-008	4-274-0612	01/22/15 9:37	01/30/15	Soil	Same As Above
H15020002-009	4-274-1218	01/22/15 9:35	01/30/15	Soil	Same As Above
H15020002-010	4-275-1218	01/22/15 9:25	01/30/15	Soil	Same As Above
H15020002-011	4-275-1824	01/22/15 9:24	01/30/15	Soil	Same As Above
H15020002-012	4-275-2430	01/22/15 9:23	01/30/15	Soil	Same As Above
H15020002-013	4-282-1824	01/22/15 10:54	01/30/15	Soil	Same As Above
H15020002-014	4-282-2430	01/22/15 10:53	01/30/15	Soil	Same As Above
H15020002-015	4-282-3036	01/22/15 10:52	01/30/15	Soil	Same As Above
H15020002-016	4-282W-1218	01/22/15 15:35	01/30/15	Soil	Same As Above
H15020002-017	4-282W-1824	01/22/15 15:34	01/30/15	Soil	Same As Above
H15020002-018	4-282W2-0006	01/22/15 16:43	01/30/15	Soil	Same As Above
H15020002-019	4-282W2-0612	01/22/15 16:42	01/30/15	Soil	Same As Above
H15020002-020	4-282W2-1218	01/22/15 16:41	01/30/15	Soil	Same As Above
H15020002-021	4-283-1218	01/22/15 9:10	01/30/15	Soil	Same As Above
H15020002-022	4-283-1824	01/22/15 9:09	01/30/15	Soil	Same As Above
H15020002-023	4-283-2430	01/22/15 9:08	01/30/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020002-024	4-291-1218	01/22/15 16:25	01/30/15	Soil	Same As Above
H15020002-025	4-291-1824	01/22/15 16:24	01/30/15	Soil	Same As Above
H15020002-026	4-291-2430	01/22/15 16:23	01/30/15	Soil	Same As Above
H15020002-027	4-292-1824	01/22/15 15:14	01/30/15	Soil	Same As Above
H15020002-028	4-292-2430	01/22/15 15:13	01/30/15	Soil	Same As Above
H15020002-029	4-292-3036	01/22/15 15:12	01/30/15	Soil	Same As Above
H15020002-030	4-293-1218	01/22/15 11:20	01/30/15	Soil	Same As Above
H15020002-031	4-293-1824	01/22/15 11:19	01/30/15	Soil	Same As Above
H15020002-032	4-293-2430	01/22/15 11:18	01/30/15	Soil	Same As Above
H15020002-033	4-296-1824	01/22/15 8:24	01/30/15	Soil	Same As Above
H15020002-034	4-296-2430	01/22/15 8:23	01/30/15	Soil	Same As Above
H15020002-035	4-296-3036	01/22/15 8:22	01/30/15	Soil	Same As Above
H15020002-036	4-301-0006	01/22/15 15:07	01/30/15	Soil	Same As Above
H15020002-037	4-301-0612	01/22/15 15:06	01/30/15	Soil	Same As Above
H15020002-038	4-301-1218	01/22/15 15:05	01/30/15	Soil	Same As Above
H15020002-039	4-302-0612	01/22/15 11:51	01/30/15	Soil	Same As Above
H15020002-040	4-302-1218	01/22/15 11:50	01/30/15	Soil	Same As Above
H15020002-041	4-302-1824	01/22/15 11:49	01/30/15	Soil	Same As Above
H15020002-042	4-306-3642	01/22/15 7:56	01/30/15	Soil	Same As Above
H15020002-043	4-306-4248	01/22/15 7:55	01/30/15	Soil	Same As Above
H15020002-044	4-312-0612	01/22/15 12:07	01/30/15	Soil	Same As Above
H15020002-045	4-312-1218	01/22/15 12:05	01/30/15	Soil	Same As Above
H15020002-046	4-312-1218D	01/22/15 12:06	01/30/15	Soil	Same As Above
H15020002-047	4-321-0612	01/22/15 12:26	01/30/15	Soil	Same As Above
H15020002-048	4-321-1218	01/22/15 12:25	01/30/15	Soil	Same As Above
H15020002-049	4-321-1824	01/22/15 12:24	01/30/15	Soil	Same As Above
H15020002-050	4-330-0612	01/22/15 14:26	01/30/15	Soil	Same As Above
H15020002-051	4-330-1218	01/22/15 14:25	01/30/15	Soil	Same As Above
H15020002-052	4-330-1824	01/22/15 14:24	01/30/15	Soil	Same As Above
H15020002-053	4-331-1218	01/22/15 14:00	01/30/15	Soil	Same As Above
H15020002-054	4-331-1824	01/22/15 13:59	01/30/15	Soil	Same As Above
H15020002-055	4-331-2430	01/22/15 13:58	01/30/15	Soil	Same As Above
H15020002-056	4-273W-1218	01/22/15 16:05	01/30/15	Soil	Same As Above
H15020002-057	4-274-1218D	01/22/15 9:36	01/30/15	Soil	Same As Above
H15020002-058	4-273W2-0612	01/22/15 16:56	01/30/15	Soil	Same As Above
H15020002-059	4-273W2-1218	01/22/15 16:55	01/30/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15020002-060	4-273W2-1824	01/22/15 16:54 01/30/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020002

Report Date: 02/23/15
Date Received: 01/30/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020002-001	4-273-1218		7.6	904	11	6400	664	3010
H15020002-002	4-273-1824		7.6	57	< 1	169	31	268
H15020002-003	4-273-2430		7.5	16	< 1	68	19	91
H15020002-004	4-273W-1218D		7.7	344	4	1520	285	1410
H15020002-005	4-273W-1824		7.8	16	< 1	69	17	96
H15020002-006	4-273W-2430		7.3	6	< 1	24	12	56
H15020002-007	4-274-0006		7.9	165	3	564	119	510
H15020002-008	4-274-0612		8.1	58	< 1	215	40	193
H15020002-009	4-274-1218		8.0	23	< 1	221	11	137
H15020002-010	4-275-1218		7.7	8	11	4780	15	2530
H15020002-011	4-275-1824		7.7	4	1	201	9	424
H15020002-012	4-275-2430		7.8	8	< 1	57	16	134
H15020002-013	4-282-1824		7.7	657	12	4780	620	2270
H15020002-014	4-282-2430		7.5	101	< 1	332	73	251
H15020002-015	4-282-3036		7.3	14	< 1	100	28	108
H15020002-016	4-282W-1218		7.6	716	11	6290	849	2490
H15020002-017	4-282W-1824		7.5	59	< 1	177	23	474
H15020002-018	4-282W2-0006		7.8	233	10	1480	258	1740
H15020002-019	4-282W2-0612		7.0	8	< 1	31	12	61
H15020002-020	4-282W2-1218		6.4	10	< 1	20	9	38
H15020002-021	4-283-1218		7.7	1020	11	10900	1260	3230
H15020002-022	4-283-1824		7.6	20	< 1	104	20	111
H15020002-023	4-283-2430		7.3	7	< 1	30	13	79
H15020002-024	4-291-1218		7.6	415	7	2350	335	1820
H15020002-025	4-291-1824		7.5	23	< 1	73	17	132
H15020002-026	4-291-2430		6.8	9	< 1	35	16	75
H15020002-027	4-292-1824		7.7	253	3	1760	228	723
H15020002-028	4-292-2430		7.4	28	< 1	44	15	92
H15020002-029	4-292-3036		7.4	10	< 1	52	19	86
H15020002-030	4-293-1218		7.7	485	7	7090	1050	1980
H15020002-031	4-293-1824		7.7	27	< 1	197	32	158
H15020002-032	4-293-2430		7.0	11	< 1	45	25	102
H15020002-033	4-296-1824		7.2	1900	11	2000	1510	2950
H15020002-034	4-296-2430		7.0	73	5	336	435	1260
H15020002-035	4-296-3036		6.8	43	2	86	271	418
H15020002-036	4-301-0006		7.8	675	8	3650	528	2350
H15020002-037	4-301-0612		7.6	45	< 1	128	22	111
H15020002-038	4-301-1218		6.8	8	< 1	35	14	70
H15020002-039	4-302-0612		7.6	900	10	5110	596	2750
H15020002-040	4-302-1218		7.3	23	< 1	113	29	129

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15020002

Report Date: 02/23/15
Date Received: 01/30/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15020002-041	4-302-1824		7.2	11	< 1	72	25	101
H15020002-042	4-306-3642		7.3	255	5	1630	194	1350
H15020002-043	4-306-4248		7.4	344	9	3040	190	2290
H15020002-044	4-312-0612		7.6	918	11	5180	697	2600
H15020002-045	4-312-1218		7.4	23	< 1	146	92	189
H15020002-046	4-312-1218D		7.2	15	< 1	116	74	131
H15020002-047	4-321-0612		7.5	557	7	2540	394	1650
H15020002-048	4-321-1218		6.9	168	2	621	112	426
H15020002-049	4-321-1824		6.8	15	< 1	71	21	101
H15020002-050	4-330-0612		7.8	347	5	1990	291	1470
H15020002-051	4-330-1218		7.5	78	2	639	107	441
H15020002-052	4-330-1824		7.4	24	< 1	199	40	143
H15020002-053	4-331-1218		7.6	738	14	14600	1190	3200
H15020002-054	4-331-1824		7.4	19	< 1	114	28	145
H15020002-055	4-331-2430		7.0	13	< 1	41	20	82
H15020002-056	4-273W-1218		7.7	4	< 1	22	4	15
H15020002-057	4-274-1218D		7.9	17	< 1	47	14	71
H15020002-058	4-273W2-0612		7.8	580	9	3750	494	2260
H15020002-059	4-273W2-1218		7.5	10	< 1	45	17	86
H15020002-060	4-273W2-1824		7.3	5	< 1	28	15	75

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150213A		
Lab ID: ICV_1_150210_1	Initial Calibration Verification Standard									02/11/15 08:54
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150210_1	Initial Calibration Verification Standard									02/11/15 09:17
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150210_1	Initial Calibration Verification Standard									02/11/15 09:42
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150210_1	Initial Calibration Verification Standard									02/11/15 10:13
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150211_1	Continuing Calibration Verification Standard									02/12/15 06:44
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150211_1	Continuing Calibration Verification Standard									02/12/15 06:44
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150211_1	Initial Calibration Verification Standard									02/12/15 06:45
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150211_1	Continuing Calibration Verification Standard									02/12/15 06:54
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150211_1	Continuing Calibration Verification Standard									02/12/15 07:07
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150211_1	Continuing Calibration Verification Standard									02/12/15 07:07
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150211_1	Initial Calibration Verification Standard									02/12/15 07:08
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150211_1	Continuing Calibration Verification Standard									02/12/15 07:16
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150211_1	Continuing Calibration Verification Standard									02/12/15 07:30
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150211_1	Continuing Calibration Verification Standard									02/12/15 07:31
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150211_1	Initial Calibration Verification Standard									02/12/15 07:31
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150211_1	Continuing Calibration Verification Standard									02/12/15 07:41
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150212_1	Initial Calibration Verification Standard									02/13/15 10:43
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150213A		
Lab ID: ICV_1_150212_1		Initial Calibration Verification Standard							02/13/15 10:45	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150212_1		Initial Calibration Verification Standard							02/13/15 06:41	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 28026	
Lab ID: LCS-28026		Laboratory Control Sample				Run: SOIL PH METER_150213A			02/12/15 06:46	
pH, sat. paste		7.60	s.u.	0.10	102	95	105			
Lab ID: H15020002-010ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/12/15 06:53	
pH, sat. paste		7.66	s.u.	0.10				0.0	30	
Lab ID: H15020002-020ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/12/15 07:01	
pH, sat. paste		6.44	s.u.	0.10				0.2	30	
Method: ASAM10-3.2									Batch: 28027	
Lab ID: LCS-28027		Laboratory Control Sample				Run: SOIL PH METER_150213A			02/12/15 07:09	
pH, sat. paste		7.58	s.u.	0.10	101	95	105			
Lab ID: H15020002-030ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/12/15 07:16	
pH, sat. paste		7.67	s.u.	0.10				0.1	30	
Lab ID: H15020002-040ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/12/15 07:24	
pH, sat. paste		7.25	s.u.	0.10				0.1	30	
Method: ASAM10-3.2									Batch: 28028	
Lab ID: LCS-28028		Laboratory Control Sample				Run: SOIL PH METER_150213A			02/12/15 07:32	
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H15020002-050ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/12/15 07:41	
pH, sat. paste		7.74	s.u.	0.10				0.1	30	
Lab ID: H15020002-060ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/12/15 07:48	
pH, sat. paste		7.27	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150212B	
Lab ID: ICV	5	Initial Calibration Verification Standard							02/12/15 13:25	
Arsenic		0.788	mg/L	0.0085	98	90	110			
Cadmium		0.387	mg/L	0.0010	97	90	110			
Copper		0.791	mg/L	0.010	99	90	110			
Lead		0.761	mg/L	0.010	95	90	110			
Zinc		0.787	mg/L	0.010	98	90	110			
Lab ID: ICSA	5	Interference Check Sample A							02/12/15 13:40	
Arsenic		-0.00503	mg/L	0.0085		0	0			
Cadmium		0.000790	mg/L	0.0010		0	0			
Copper		-0.00119	mg/L	0.010		0	0			
Lead		-0.0208	mg/L	0.010		0	0			
Zinc		-0.00242	mg/L	0.010		0	0			
Lab ID: ICSAB	5	Interference Check Sample AB							02/12/15 13:45	
Arsenic		0.968	mg/L	0.0085	97	80	120			
Cadmium		0.896	mg/L	0.0010	90	80	120			
Copper		0.512	mg/L	0.010	102	80	120			
Lead		0.890	mg/L	0.010	89	80	120			
Zinc		0.980	mg/L	0.010	98	80	120			
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/12/15 22:42	
Arsenic		2.49	mg/L	0.0085	100	90	110			
Cadmium		2.47	mg/L	0.0010	99	90	110			
Copper		2.50	mg/L	0.010	100	90	110			
Lead		2.47	mg/L	0.010	99	90	110			
Zinc		2.47	mg/L	0.010	99	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/12/15 22:46	
Arsenic		0.0126	mg/L	0.0085						
Cadmium		-0.000100	mg/L	0.0010						
Copper		0.00252	mg/L	0.010						
Lead		-0.00738	mg/L	0.010						
Zinc		0.000270	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/12/15 23:27	
Arsenic		2.49	mg/L	0.0085	100	90	110			
Cadmium		2.47	mg/L	0.0010	99	90	110			
Copper		2.52	mg/L	0.010	101	90	110			
Lead		2.46	mg/L	0.010	99	90	110			
Zinc		2.46	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/12/15 23:31	
Arsenic		0.0176	mg/L	0.0085						
Cadmium		-0.000120	mg/L	0.0010						
Copper		-0.00227	mg/L	0.010						
Lead		-0.0105	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150212B	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/12/15 23:31	
Zinc			0.000510	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/13/15 00:12	
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.49	mg/L	0.0010	100	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/13/15 00:16	
Arsenic			0.0112	mg/L	0.0085						
Cadmium			0.000200	mg/L	0.0010						
Copper			-0.000260	mg/L	0.010						
Lead			0.0113	mg/L	0.010						
Zinc			0.000240	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/13/15 00:41	
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.51	mg/L	0.0010	101	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/13/15 00:45	
Arsenic			0.0154	mg/L	0.0085						
Cadmium			-0.000340	mg/L	0.0010						
Copper			0.00430	mg/L	0.010						
Lead			-0.00833	mg/L	0.010						
Zinc			0.000320	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150213B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/13/15 12:37
Arsenic			0.780	mg/L	0.0085	98	90	110			
Cadmium			0.389	mg/L	0.0010	97	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.785	mg/L	0.010	98	90	110			
Zinc			0.795	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/13/15 12:52
Arsenic			0.00552	mg/L	0.0085		0	0			
Cadmium			0.000250	mg/L	0.0010		0	0			
Copper			0.00165	mg/L	0.010		0	0			
Lead			-0.0167	mg/L	0.010		0	0			
Zinc			-0.00231	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/13/15 12:56
Arsenic			0.963	mg/L	0.0085	96	80	120			
Cadmium			0.906	mg/L	0.0010	91	80	120			
Copper			0.499	mg/L	0.010	100	80	120			
Lead			0.891	mg/L	0.010	89	80	120			
Zinc			0.987	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/13/15 17:40
Arsenic			2.47	mg/L	0.0085	99	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.48	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/13/15 17:44
Arsenic			-0.00579	mg/L	0.0085						
Cadmium			0.000120	mg/L	0.0010						
Copper			-0.00681	mg/L	0.010						
Lead			-0.0265	mg/L	0.010						
Zinc			-0.000860	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/13/15 18:24
Arsenic			2.49	mg/L	0.0085	100	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.55	mg/L	0.010	102	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/13/15 18:28
Arsenic			-0.0107	mg/L	0.0085						
Cadmium			0.000220	mg/L	0.0010						
Copper			-0.00600	mg/L	0.010						
Lead			-0.00139	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150213B	
Lab ID: CCB	5	Continuing Calibration Blank							02/13/15 18:28	
Zinc		0.000520	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/13/15 19:08	
Arsenic		2.41	mg/L	0.0085	96	90	110			
Cadmium		2.39	mg/L	0.0010	96	90	110			
Copper		2.50	mg/L	0.010	100	90	110			
Lead		2.40	mg/L	0.010	96	90	110			
Zinc		2.41	mg/L	0.010	96	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/13/15 19:12	
Arsenic		0.000650	mg/L	0.0085						
Cadmium		-0.000140	mg/L	0.0010						
Copper		-0.00451	mg/L	0.010						
Lead		-0.0131	mg/L	0.010						
Zinc		-0.000690	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/13/15 19:53	
Arsenic		2.45	mg/L	0.0085	98	90	110			
Cadmium		2.43	mg/L	0.0010	97	90	110			
Copper		2.54	mg/L	0.010	102	90	110			
Lead		2.42	mg/L	0.010	97	90	110			
Zinc		2.44	mg/L	0.010	97	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/13/15 19:56	
Arsenic		-0.00900	mg/L	0.0085						
Cadmium		0.000170	mg/L	0.0010						
Copper		-0.00127	mg/L	0.010						
Lead		-0.00847	mg/L	0.010						
Zinc		0.000740	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/13/15 20:37	
Arsenic		2.48	mg/L	0.0085	99	90	110			
Cadmium		2.44	mg/L	0.0010	98	90	110			
Copper		2.56	mg/L	0.010	102	90	110			
Lead		2.47	mg/L	0.010	99	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/13/15 20:41	
Arsenic		0.00477	mg/L	0.0085						
Cadmium		0.000300	mg/L	0.0010						
Copper		-0.00579	mg/L	0.010						
Lead		-0.0126	mg/L	0.010						
Zinc		0.000310	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150217A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							02/17/15 09:38	
Arsenic			0.789	mg/L	0.0085	99	90	110			
Cadmium			0.384	mg/L	0.0010	96	90	110			
Copper			0.802	mg/L	0.010	100	90	110			
Lead			0.779	mg/L	0.010	97	90	110			
Zinc			0.788	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/17/15 09:53	
Arsenic			0.0203	mg/L	0.0085		0	0			
Cadmium			0.000150	mg/L	0.0010		0	0			
Copper			-0.00222	mg/L	0.010		0	0			
Lead			-0.00710	mg/L	0.010		0	0			
Zinc			0.00330	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/17/15 09:57	
Arsenic			0.976	mg/L	0.0085	98	80	120			
Cadmium			0.879	mg/L	0.0010	88	80	120			
Copper			0.497	mg/L	0.010	99	80	120			
Lead			0.860	mg/L	0.010	86	80	120			
Zinc			0.962	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/17/15 11:11	
Arsenic			2.47	mg/L	0.0085	99	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.45	mg/L	0.010	98	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/17/15 11:15	
Arsenic			0.0236	mg/L	0.0085						
Cadmium			0.000260	mg/L	0.0010						
Copper			0.00468	mg/L	0.010						
Lead			0.000180	mg/L	0.010						
Zinc			0.000180	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/17/15 11:55	
Arsenic			2.47	mg/L	0.0085	99	90	110			
Cadmium			2.41	mg/L	0.0010	96	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.38	mg/L	0.010	95	90	110			
Zinc			2.38	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/17/15 11:58	
Arsenic			0.0110	mg/L	0.0085						
Cadmium			0.000200	mg/L	0.0010						
Copper			0.00262	mg/L	0.010						
Lead			-0.0104	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150217A	
Lab ID: CCB	5	Continuing Calibration Blank							02/17/15 11:58	
Zinc		0.00108	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150219A		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/20/15 00:29	
Arsenic			0.0497	mg/L	0.0050	99	90	110			
Lead			0.0486	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/20/15 00:38	
Arsenic			1.65E-05	mg/L	0.0050						
Lead			-1.50E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/20/15 01:27	
Arsenic			0.0493	mg/L	0.0050	99	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/20/15 01:35	
Arsenic			2.70E-06	mg/L	0.0050						
Lead			-2.90E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/20/15 02:32	
Arsenic			0.0498	mg/L	0.0050	100	90	110			
Lead			0.0484	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/20/15 02:41	
Arsenic			1.11E-05	mg/L	0.0050						
Lead			2.00E-07	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/20/15 03:29	
Arsenic			0.0504	mg/L	0.0050	101	90	110			
Lead			0.0483	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/20/15 03:38	
Arsenic			2.44E-05	mg/L	0.0050						
Lead			2.90E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/20/15 04:31	
Arsenic			0.0493	mg/L	0.0050	99	90	110			
Lead			0.0486	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/20/15 04:40	
Arsenic			2.31E-05	mg/L	0.0050						
Lead			-1.90E-06	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/20/15 05:10	
Arsenic			0.0491	mg/L	0.0050	98	90	110			
Lead			0.0479	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/20/15 05:19	
Arsenic			4.25E-05	mg/L	0.0050						
Lead			7.00E-07	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27970	
Lab ID:	**MB-27970**	5	Method Blank				Run: ICP2-HE_150212B			02/12/15 22:58	
Arsenic			0.6	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.6	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LFB-27970**	5	Laboratory Fortified Blank				Run: ICP2-HE_150212B			02/12/15 23:02	
Arsenic			49.7	mg/kg	1.0	98	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			49.3	mg/kg	1.0	97	80	120			
Lead			47.4	mg/kg	1.0	95	80	120			
Zinc			49.0	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27970**	5	Laboratory Control Sample				Run: ICP2-HE_150212B			02/12/15 23:05	
Arsenic			284	mg/kg	3.7	83	72.3	106.4			
Cadmium			118	mg/kg	1.0	86	73	105.1			
Copper			243	mg/kg	2.2	87	77.5	109.6			
Lead			178	mg/kg	6.5	95	75.9	108.6			
Zinc			187	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H15020002-017APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150212B			02/13/15 00:30	
Arsenic			283	mg/kg	1.8	89	75	125			
Cadmium			107	mg/kg	1.0	84	75	125			
Copper			400	mg/kg	1.1	88	75	125			
Lead			246	mg/kg	3.2	87	75	125			
Zinc			682	mg/kg	1.0	83	75	125			
Lab ID:	**H15020002-017AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150212B			02/13/15 00:34	
Arsenic			107	mg/kg	1.7	97	75	125			
Cadmium			22.4	mg/kg	1.0	88	75	125			
Copper			227	mg/kg	1.1	103	75	125			
Lead			66.0	mg/kg	3.1	83	75	125			
Zinc			519	mg/kg	1.0		75	125			A
Lab ID:	**H15020002-017AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150212B			02/13/15 00:38	
Arsenic			105	mg/kg	1.8	93	75	125	1.3	20	
Cadmium			22.9	mg/kg	1.0	89	75	125	2.0	20	
Copper			219	mg/kg	1.1	85	75	125	3.7	20	
Lead			69.0	mg/kg	3.1	89	75	125	4.5	20	
Zinc			511	mg/kg	1.0		75	125	1.6	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27971
Lab ID:	**MB-27971**	5	Method Blank				Run: ICP2-HE_150213B			02/13/15 17:18	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27971**	5	Laboratory Fortified Blank				Run: ICP2-HE_150213B			02/13/15 17:22	
Arsenic			48.1	mg/kg	1.0	96	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			49.7	mg/kg	1.0	99	80	120			
Lead			48.0	mg/kg	1.0	96	80	120			
Zinc			48.7	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27971**	5	Laboratory Control Sample				Run: ICP2-HE_150213B			02/13/15 17:25	
Arsenic			295	mg/kg	3.5	86	72.3	106.4			
Cadmium			124	mg/kg	1.0	91	73	105.1			
Copper			265	mg/kg	2.1	95	77.5	109.6			
Lead			182	mg/kg	6.1	98	75.9	108.6			
Zinc			197	mg/kg	1.0	93	74.2	109.9			
Lab ID:	**H15020002-034APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150213B			02/13/15 18:50	
Arsenic			301	mg/kg	1.9	89	75	125			
Cadmium			114	mg/kg	1.0	85	75	125			
Copper			579	mg/kg	1.1	94	75	125			
Lead			660	mg/kg	3.3	87	75	125			
Zinc			1490	mg/kg	1.0		75	125			A
Lab ID:	**H15020002-034AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150213B			02/13/15 18:54	
Arsenic			119	mg/kg	1.8	91	75	125			
Cadmium			27.6	mg/kg	1.0	89	75	125			
Copper			384	mg/kg	1.1		75	125			A
Lead			480	mg/kg	3.2		75	125			A
Zinc			1280	mg/kg	1.0		75	125			A
Lab ID:	**H15020002-034AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150213B			02/13/15 18:57	
Arsenic			119	mg/kg	1.8	91	75	125	0.4	20	
Cadmium			27.9	mg/kg	1.0	91	75	125	1.1	20	
Copper			393	mg/kg	1.1		75	125	2.2	20	A
Lead			485	mg/kg	3.2		75	125	1.1	20	A
Zinc			1310	mg/kg	1.0		75	125	1.8	20	A
Method:	**SW6010B**										Batch: 27973
Lab ID:	**MB-27973**	5	Method Blank				Run: ICP2-HE_150213B			02/13/15 19:01	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27973
Lab ID:	**MB-27973**	5	Method Blank				Run: ICP2-HE_150213B			02/13/15 19:01	
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27973**	5	Laboratory Fortified Blank				Run: ICP2-HE_150213B			02/13/15 19:05	
Arsenic			47.4	mg/kg	1.0	95	80	120			
Cadmium			23.1	mg/kg	1.0	93	80	120			
Copper			48.7	mg/kg	1.0	97	80	120			
Lead			46.9	mg/kg	1.0	94	80	120			
Zinc			47.5	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27973**	5	Laboratory Control Sample				Run: ICP2-HE_150213B			02/13/15 19:16	
Arsenic			281	mg/kg	3.4	82	72.3	106.4			
Cadmium			118	mg/kg	1.0	86	73	105.1			
Copper			250	mg/kg	2.1	89	77.5	109.6			
Lead			170	mg/kg	6.0	91	75.9	108.6			
Zinc			188	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H15020002-060APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150213B			02/13/15 20:18	
Arsenic			223	mg/kg	1.8	88	75	125			
Cadmium			104	mg/kg	1.0	83	75	125			
Copper			250	mg/kg	1.1	89	75	125			
Lead			226	mg/kg	3.2	86	75	125			
Zinc			291	mg/kg	1.0	86	75	125			
Lab ID:	**H15020002-060AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150213B			02/13/15 20:22	
Arsenic			44.9	mg/kg	1.7	87	75	125			
Cadmium			20.5	mg/kg	1.0	84	75	125			
Copper			75.8	mg/kg	1.1	99	75	125			
Lead			57.4	mg/kg	3.1	95	75	125			
Zinc			120	mg/kg	1.0	94	75	125			
Lab ID:	**H15020002-060AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150213B			02/13/15 20:26	
Arsenic			46.7	mg/kg	1.7	91	75	125	4.0	20	
Cadmium			20.6	mg/kg	1.0	85	75	125	0.8	20	
Copper			73.5	mg/kg	1.1	94	75	125	3.0	20	
Lead			63.8	mg/kg	3.1	108	75	125	11	20	
Zinc			122	mg/kg	1.0	97	75	125	1.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27972
Lab ID:	**MB-27972**	5	Method Blank				Run: ICP2-HE_150217A			02/17/15 10:12	
Arsenic			0.8	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27972**	5	Laboratory Fortified Blank				Run: ICP2-HE_150217A			02/17/15 10:16	
Arsenic			48.9	mg/kg	1.0	96	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			
Copper			50.0	mg/kg	1.0	100	80	120			
Lead			46.8	mg/kg	1.0	94	80	120			
Zinc			48.9	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27972**	5	Laboratory Control Sample				Run: ICP2-HE_150217A			02/17/15 10:20	
Arsenic			305	mg/kg	3.8	89	72.3	106.4			
Cadmium			123	mg/kg	1.0	90	73	105.1			
Copper			261	mg/kg	2.3	93	77.5	109.6			
Lead			171	mg/kg	6.6	91	75.9	108.6			
Zinc			197	mg/kg	1.0	92	74.2	109.9			
Lab ID:	**H15020002-051APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150217A			02/17/15 11:44	
Arsenic			308	mg/kg	1.9	86	75	125			
Cadmium			111	mg/kg	1.0	81	75	125			
Copper			866	mg/kg	1.2	85	75	125			
Lead			327	mg/kg	3.4	82	75	125			
Zinc			664	mg/kg	1.0	83	75	125			
Lab ID:	**H15020002-051AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150217A			02/17/15 11:48	
Arsenic			122	mg/kg	1.9	84	75	125			
Cadmium			24.2	mg/kg	1.0	84	75	125			
Copper			684	mg/kg	1.2		75	125			A
Lead			149	mg/kg	3.4	80	75	125			
Zinc			476	mg/kg	1.0		75	125			A
Lab ID:	**H15020002-051AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150217A			02/17/15 11:51	
Arsenic			123	mg/kg	1.9	86	75	125	0.2	20	
Cadmium			24.5	mg/kg	1.0	86	75	125	1.4	20	
Copper			720	mg/kg	1.1		75	125	5.0	20	A
Lead			154	mg/kg	3.3	89	75	125	3.0	20	
Zinc			498	mg/kg	1.0		75	125	4.5	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150219A	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							02/19/15 09:34	
Arsenic			0.0586	mg/L	0.0010	98	90	110			
Lead			0.0568	mg/L	0.0010	95	90	110			
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							02/19/15 22:13	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Lead			0.0580	mg/L	0.0010	97	90	110			
Method:	**SW6020**									Batch: 27970	
Lab ID:	**MB-27970**	2	Method Blank				Run: ICPMS204-B_150219A			02/19/15 22:44	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27970**	2	Laboratory Control Sample				Run: ICPMS204-B_150219A			02/19/15 22:48	
Arsenic			295	mg/kg	1.0	86	72.3	106.4			
Lead			173	mg/kg	1.0	92	75.9	108.6			
Lab ID:	**LFB-27970**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150219A			02/19/15 22:53	
Arsenic			50.1	mg/kg	1.0	100	80	120			
Lead			46.8	mg/kg	1.0	94	80	120			
Lab ID:	**H15020002-017APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150219A			02/19/15 23:59	
Arsenic			2390	mg/kg	1.0	95	75	125			
Lead			2220	mg/kg	1.0	90	75	125			
Lab ID:	**H15020002-017AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150219A			02/20/15 00:03	
Arsenic			111	mg/kg	1.0	108	75	125			
Lead			69.5	mg/kg	1.0	96	75	125			
Lab ID:	**H15020002-017AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150219A			02/20/15 00:07	
Arsenic			108	mg/kg	1.0	100	75	125	2.8	20	
Lead			69.0	mg/kg	1.0	94	75	125	0.7	20	
Method:	**SW6020**									Batch: 27971	
Lab ID:	**MB-27971**	2	Method Blank				Run: ICPMS204-B_150219A			02/20/15 00:16	
Arsenic			0.3	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27971**	2	Laboratory Control Sample				Run: ICPMS204-B_150219A			02/20/15 00:20	
Arsenic			299	mg/kg	1.0	87	72.3	106.4			
Lead			179	mg/kg	1.0	96	75.9	108.6			
Lab ID:	**LFB-27971**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150219A			02/20/15 00:25	
Arsenic			49.7	mg/kg	1.0	99	80	120			
Lead			47.2	mg/kg	1.0	94	80	120			
Lab ID:	**H15020002-034APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150219A			02/20/15 01:49	
Arsenic			2490	mg/kg	1.0	96	75	125			
Lead			2720	mg/kg	1.0	91	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27971
Lab ID:	**H15020002-034APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150219A				02/20/15 01:49
Lab ID:	**H15020002-034AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150219A				02/20/15 01:53
Arsenic			123	mg/kg	1.0	87	75	125			
Lead			488	mg/kg	1.0		75	125			A
Lab ID:	**H15020002-034AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150219A				02/20/15 01:57
Arsenic			128	mg/kg	1.0	99	75	125	4.2	20	
Lead			503	mg/kg	1.0		75	125	3.0	20	A
Method:	**SW6020**										Batch: 27972
Lab ID:	**MB-27972**	2	Method Blank				Run: ICPMS204-B_150219A				02/20/15 02:06
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27972**	2	Laboratory Control Sample				Run: ICPMS204-B_150219A				02/20/15 02:10
Arsenic			307	mg/kg	1.0	90	72.3	106.4			
Lead			177	mg/kg	1.0	94	75.9	108.6			
Lab ID:	**LFB-27972**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150219A				02/20/15 02:15
Arsenic			50.4	mg/kg	1.0	101	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Lab ID:	**H15020002-051APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150219A				02/20/15 03:16
Arsenic			2490	mg/kg	1.0	92	75	125			
Lead			2340	mg/kg	1.0	85	75	125			
Lab ID:	**H15020002-051AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150219A				02/20/15 03:20
Arsenic			139	mg/kg	1.0	104	75	125			
Lead			171	mg/kg	1.0	98	75	125			
Lab ID:	**H15020002-051AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150219A				02/20/15 03:25
Arsenic			131	mg/kg	1.0	91	75	125	5.6	20	
Lead			162	mg/kg	1.0	82	75	125	5.4	20	
Method:	**SW6020**										Batch: 27973
Lab ID:	**MB-27973**	2	Method Blank				Run: ICPMS204-B_150219A				02/20/15 03:42
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27973**	2	Laboratory Control Sample				Run: ICPMS204-B_150219A				02/20/15 03:47
Arsenic			303	mg/kg	1.0	88	72.3	106.4			
Lead			180	mg/kg	1.0	96	75.9	108.6			
Lab ID:	**LFB-27973**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150219A				02/20/15 04:09
Arsenic			48.9	mg/kg	1.0	98	80	120			
Lead			46.4	mg/kg	1.0	93	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15020002

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 27973
Lab ID: H15020002-060APDS	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150219A				02/20/15 04:58
Arsenic		2310	mg/kg	1.0	95	75	125			
Lead		2190	mg/kg	1.0	90	75	125			
Lab ID: H15020002-060AMS	2	Sample Matrix Spike				Run: ICPMS204-B_150219A				02/20/15 05:02
Arsenic		53.1	mg/kg	1.0	99	75	125			
Lead		63.0	mg/kg	1.0	99	75	125			
Lab ID: H15020002-060AMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150219A				02/20/15 05:06
Arsenic		52.2	mg/kg	1.0	97	75	125	1.7	20	
Lead		60.8	mg/kg	1.0	94	75	125	3.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15020002

Login completed by: Austin H. Nearpass
Reviewed by: BL2000\rwilliams
Reviewed Date: 2/4/2015

Date Received: 1/30/2015
Received by: AHN
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	comments °C No Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 4.5°C, Cooler 2 at 8.7°C, Cooler 3 at 5.0°C. an 2/2/15

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-273-1218	1015	1/22/15	Soil	A	B		1
4-273-1824	1014	1/22/15	Soil	A	B		1
4-273-2430	1013	1/22/15	Soil	A	B		1
4-273W-1218D	1606	1/22/15	Soil	A	B		1
4-273W-1824	1604	1/22/15	Soil	A	B		1
4-273W-2430	1603	1/22/15	Soil	A	B		1
4-274-0006	938	1/22/15	Soil	A	B		1
4-274-0612	937	1/22/15	Soil	A	B		1
4-274-1218	935	1/22/15	Soil	A	B		1
4-275-1218	925	1/22/15	Soil	A	B		1
4-275-1824	924	1/22/15	Soil	A	B		1
4-275-2430	923	1/22/15	Soil	A	B		1
4-282-1824	1054	1/22/15	Soil	A	B		1
4-282-2430	1053	1/22/15	Soil	A	B		1
4-282-3036	1052	1/22/15	Soil	A	B		1
4-282W-1218	1535	1/22/15	Soil	A	B		1
4-282W-1824	1534	1/22/15	Soil	A	B		1
4-282W2-0006	1643	1/22/15	Soil	A	B		1
4-282W2-0612	1642	1/22/15	Soil	A	B		1
4-282W2-1218	1641	1/22/15	Soil	A	B		1

H15020002

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 01/30/15 1400

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1= 4.5
C2= 8.7
C3= 5.0

Date/Time: ~~Ice~~ hand del
1/30/15 1400

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-283-1218	910	1/22/15	Soil	A	B		1
4-283-1824	909	1/22/15	Soil	A	B		1
4-283-2430	908	1/22/15	Soil	A	B		1
4-291-1218	1625	1/22/15	Soil	A	B		1
4-291-1824	1624	1/22/15	Soil	A	B		1
4-291-2430	1623	1/22/15	Soil	A	B		1
4-292-1824	1514	1/22/15	Soil	A	B		1
4-292-2430	1513	1/22/15	Soil	A	B		1
4-292-3036	1512	1/22/15	Soil	A	B		1
4-293-1218	1120	1/22/15	Soil	A	B		1
4-293-1824	1119	1/22/15	Soil	A	B		1
4-293-2430	1118	1/22/15	Soil	A	B		1
4-296-1824	824	1/22/15	Soil	A	B		1
4-296-2430	823	1/22/15	Soil	A	B		1
4-296-3036	822	1/22/15	Soil	A	B		1
4-301-0006	1507	1/22/15	Soil	A	B		1
4-301-0612	1506	1/22/15	Soil	A	B		1
4-301-1218	1505	1/22/15	Soil	A	B		1
4-302-0612	1151	1/22/15	Soil	A	B		1
4-302-1218	1150	1/22/15	Soil	A	B		1

H15020002

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 01/30/15 1400

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 = 4.5
C2 = 8.7 TB
C3 = 5.0 ice

Date/Time: hmd dol 1/30/15 1400

COC012215 EL.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
4-302-1824	1149	1/22/15	Soil	A	B		1
4-306-3642	756	1/22/15	Soil	A	B		1
4-306-4248	755	1/22/15	Soil	A	B		1
4-312-0612 •	1207	1/22/15	Soil	A	B		1
4-312-1218	1205	1/22/15	Soil	A	B		1
4-312-1218D	1206	1/22/15	Soil	A	B		1
4-321-0612	1226	1/22/15	Soil	A	B		1
4-321-1218	1225	1/22/15	Soil	A	B		1
4-321-1824	1224	1/22/15	Soil	A	B		1
4-330-0612	1426	1/22/15	Soil	A	B		1
4-330-1218	1425	1/22/15	Soil	A	B		1
4-330-1824	1424	1/22/15	Soil	A	B		1
4-331-1218	1400	1/22/15	Soil	A	B		1
4-331-1824	1359	1/22/15	Soil	A	B		1
4-331-2430	1358	1/22/15	Soil	A	B		1
4-273W-1218 •	1605	1/22/15	Soil	A	B		1
4-274-1218D •	0936	1/22/15	Soil	A	B		1
4-273W2-0612	1656	1/22/15	Soil	A	B		1
4-273W2-1218 •	1655	1/22/15	Soil	A	B		1
4-273W2-1824	1654	1/22/15	Soil	A	B		1

H15020002

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) _____
Date/Time: 01/30/15 1400

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): _____
C1 = 4.5
C2 = 8.7
C3 = 5.0
TB
Date/Time: hand del
1/30/15 1400

COC012215 EL.xls

ANALYTICAL SUMMARY REPORT

February 23, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010409

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 69 samples for MT DEQ-Federal Superfund on 1/30/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010409-001	4-231-W2-0006	01/19/15 12:33	01/30/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010409-002	4-231W2-0612	01/19/15 12:32	01/30/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010409-003	4-231W2-1218	01/19/15 12:31	01/30/15	Soil	Same As Above
H15010409-004	4-232-0612	01/19/15 8:11	01/30/15	Soil	Same As Above
H15010409-005	4-232-1218	01/19/15 8:10	01/30/15	Soil	Same As Above
H15010409-006	4-232-1824	01/19/15 8:09	01/30/15	Soil	Same As Above
H15010409-007	4-235-3036	01/19/15 8:27	01/30/15	Soil	Same As Above
H15010409-008	4-235-3642	01/19/15 8:26	01/30/15	Soil	Same As Above
H15010409-009	4-235-4248	01/19/15 8:25	01/30/15	Soil	Same As Above
H15010409-010	4-240-2430	01/19/15 10:53	01/30/15	Soil	Same As Above
H15010409-011	4-240-3036	01/19/15 10:52	01/30/15	Soil	Same As Above
H15010409-012	4-240-3642	01/19/15 10:51	01/30/15	Soil	Same As Above
H15010409-013	4-242-1218	01/19/15 11:16	01/30/15	Soil	Same As Above
H15010409-014	4-242-1824	01/19/15 11:14	01/30/15	Soil	Same As Above
H15010409-015	4-242-1824D	01/19/15 11:15	01/30/15	Soil	Same As Above
H15010409-016	4-243-1824	01/19/15 12:19	01/30/15	Soil	Same As Above
H15010409-017	4-243-2430	01/19/15 12:18	01/30/15	Soil	Same As Above
H15010409-018	4-243-3036	01/19/15 12:17	01/30/15	Soil	Same As Above
H15010409-019	4-246-4854	01/19/15 9:02	01/30/15	Soil	Same As Above
H15010409-020	4-246-5460	01/19/15 9:01	01/30/15	Soil	Same As Above
H15010409-021	4-251-1824	01/19/15 10:14	01/30/15	Soil	Same As Above
H15010409-022	4-251-2430	01/19/15 10:13	01/30/15	Soil	Same As Above
H15010409-023	4-251-3036	01/19/15 10:12	01/30/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010409-024	4-252-1824	01/19/15 10:34	01/30/15	Soil	Same As Above
H15010409-025	4-252-2430	01/19/15 10:33	01/30/15	Soil	Same As Above
H15010409-026	4-252-3036	01/19/15 10:32	01/30/15	Soil	Same As Above
H15010409-027	4-253-0006	01/19/15 11:47	01/30/15	Soil	Same As Above
H15010409-028	4-253-0612	01/19/15 11:46	01/30/15	Soil	Same As Above
H15010409-029	4-253-1218	01/19/15 11:45	01/30/15	Soil	Same As Above
H15010409-030	4-261-0612	01/19/15 9:46	01/30/15	Soil	Same As Above
H15010409-031	4-261-1218	01/19/15 9:45	01/30/15	Soil	Same As Above
H15010409-032	4-261-1824	01/19/15 9:44	01/30/15	Soil	Same As Above
H15010409-033	4-262-0612	01/19/15 9:57	01/30/15	Soil	Same As Above
H15010409-034	4-262-1218	01/19/15 9:56	01/30/15	Soil	Same As Above
H15010409-035	4-262-1824	01/19/15 9:54	01/30/15	Soil	Same As Above
H15010409-036	4-263-1218	01/19/15 13:00	01/30/15	Soil	Same As Above
H15010409-037	4-263-1824	01/19/15 12:59	01/30/15	Soil	Same As Above
H15010409-038	4-263-2430	01/19/15 12:58	01/30/15	Soil	Same As Above
H15010409-039	4-263W-0612	01/19/15 15:22	01/30/15	Soil	Same As Above
H15010409-040	4-263W-1218	01/19/15 15:21	01/30/15	Soil	Same As Above
H15010409-041	4-263W-1824	01/19/15 15:20	01/30/15	Soil	Same As Above
H15010409-042	4-271-0612	01/19/15 14:02	01/30/15	Soil	Same As Above
H15010409-043	4-271-1218	01/19/15 14:00	01/30/15	Soil	Same As Above
H15010409-044	4-271-1218D	01/19/15 14:01	01/30/15	Soil	Same As Above
H15010409-045	4-271W-0006	01/19/15 15:48	01/30/15	Soil	Same As Above
H15010409-046	4-271W-0612	01/19/15 15:47	01/30/15	Soil	Same As Above
H15010409-047	4-272-1824	01/19/15 13:24	01/30/15	Soil	Same As Above
H15010409-048	4-272-2430	01/19/15 13:23	01/30/15	Soil	Same As Above
H15010409-049	4-272-3036	01/19/15 13:22	01/30/15	Soil	Same As Above
H15010409-050	4-280-0612	01/19/15 14:26	01/30/15	Soil	Same As Above
H15010409-051	4-280-1218	01/19/15 14:25	01/30/15	Soil	Same As Above
H15010409-052	4-280-1824	01/19/15 14:24	01/30/15	Soil	Same As Above
H15010409-053	4-281-0612	01/19/15 15:04	01/30/15	Soil	Same As Above
H15010409-054	4-281-1218	01/19/15 15:03	01/30/15	Soil	Same As Above
H15010409-055	4-281-1824	01/19/15 15:02	01/30/15	Soil	Same As Above
H15010409-056	4-289-0612	01/19/15 14:46	01/30/15	Soil	Same As Above
H15010409-057	4-289-1218	01/19/15 14:45	01/30/15	Soil	Same As Above
H15010409-058	4-289-1824	01/19/15 14:44	01/30/15	Soil	Same As Above
H15010409-059	4-298-1824	01/19/15 16:59	01/30/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010409-060	4-298-2430	01/19/15 16:58	01/30/15	Soil	Same As Above
H15010409-061	4-298-3036	01/19/15 16:57	01/30/15	Soil	Same As Above
H15010409-062	4-299-0006	01/19/15 16:12	01/30/15	Soil	Same As Above
H15010409-063	4-299-0612	01/19/15 16:11	01/30/15	Soil	Same As Above
H15010409-064	4-309-3036	01/19/15 16:32	01/30/15	Soil	Same As Above
H15010409-065	4-309-3036D	01/19/15 16:33	01/30/15	Soil	Same As Above
H15010409-066	4-309-3642	01/19/15 16:31	01/30/15	Soil	Same As Above
H15010409-067	4-309-4248	01/19/15 16:30	01/30/15	Soil	Same As Above
H15010409-068	4-309-4854	01/19/15 16:45	01/30/15	Soil	Same As Above
H15010409-069	4-262-1824D	01/19/15 9:55	01/30/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010409

Report Date: 02/23/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010409

Report Date: 02/23/15
Date Received: 01/30/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Client Sample ID		Results	Results	Results	Results	Results	Results
H15010409-001	4-231-W2-0006		7.8	764	8	3950	616	2550
H15010409-002	4-231W2-0612		7.8	146	2	712	113	546
H15010409-003	4-231W2-1218		7.6	7	< 1	55	25	90
H15010409-004	4-232-0612		7.3	822	7	9460	1450	2410
H15010409-005	4-232-1218		7.9	9	< 1	45	13	52
H15010409-006	4-232-1824		7.6	3	< 1	15	10	40
H15010409-007	4-235-3036		6.1	2	< 1	19	10	52
H15010409-008	4-235-3642		6.5	3	< 1	16	9	48
H15010409-009	4-235-4248		6.1	33	1	435	30	2080
H15010409-010	4-240-2430		7.4	161	7	2340	437	1640
H15010409-011	4-240-3036		7.3	4	< 1	29	14	65
H15010409-012	4-240-3642		7.4	13	< 1	88	24	147
H15010409-013	4-242-1218		7.6	1150	17	11000	1180	4680
H15010409-014	4-242-1824		7.7	12	< 1	101	25	288
H15010409-015	4-242-1824D		7.7	7	< 1	52	18	302
H15010409-016	4-243-1824		7.7	847	14	8940	1050	3670
H15010409-017	4-243-2430		7.5	7	< 1	56	18	161
H15010409-018	4-243-3036		7.3	9	< 1	49	13	133
H15010409-019	4-246-4854		6.6	196	11	3200	138	3470
H15010409-020	4-246-5460		7.3	51	5	564	65	836
H15010409-021	4-251-1824		7.4	1610	19	7380	1070	4580
H15010409-022	4-251-2430		6.5	25	< 1	71	19	103
H15010409-023	4-251-3036		5.8	15	< 1	55	14	88
H15010409-024	4-252-1824		7.6	406	6	2270	356	2040
H15010409-025	4-252-2430		6.4	27	3	168	22	1200
H15010409-026	4-252-3036		7.2	17	< 1	66	24	166
H15010409-027	4-253-0006		7.6	541	7	3340	451	2270
H15010409-028	4-253-0612		7.7	50	1	346	71	321
H15010409-029	4-253-1218		7.7	16	< 1	30	11	56
H15010409-030	4-261-0612		7.7	442	6	3030	453	1710
H15010409-031	4-261-1218		7.5	14	< 1	104	19	120
H15010409-032	4-261-1824		7.3	20	< 1	115	33	141
H15010409-033	4-262-0612		7.8	535	5	1970	449	1300
H15010409-034	4-262-1218		7.2	11	< 1	47	15	61
H15010409-035	4-262-1824		7.3	5	< 1	16	9	38
H15010409-036	4-263-1218		7.7	46	< 1	327	57	286
H15010409-037	4-263-1824		7.6	6	< 1	44	19	91
H15010409-038	4-263-2430		7.5	13	< 1	84	27	114
H15010409-039	4-263W-0612		7.7	289	4	1600	273	1300
H15010409-040	4-263W-1218		7.9	11	< 1	45	18	76

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010409

Report Date: 02/23/15
Date Received: 01/30/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Client Sample ID		Results	Results	Results	Results	Results	Results
H15010409-041	4-263W-1824		7.9	8	< 1	37	13	64
H15010409-042	4-271-0612		7.9	542	6	3100	421	1920
H15010409-043	4-271-1218		7.8	32	< 1	167	26	194
H15010409-044	4-271-1218D		7.8	12	< 1	50	15	79
H15010409-045	4-271W-0006		7.9	139	3	736	162	625
H15010409-046	4-271W-0612		7.8	127	2	622	135	531
H15010409-047	4-272-1824		7.5	624	9	2420	358	1800
H15010409-048	4-272-2430		6.2	561	7	5520	1290	2110
H15010409-049	4-272-3036		6.7	12	< 1	64	26	103
H15010409-050	4-280-0612		7.7	524	4	1870	429	1460
H15010409-051	4-280-1218		7.8	47	1	337	47	470
H15010409-052	4-280-1824		7.8	89	< 1	385	74	362
H15010409-053	4-281-0612		7.7	680	9	3990	654	2240
H15010409-054	4-281-1218		7.7	427	5	2890	536	1610
H15010409-055	4-281-1824		7.1	30	< 1	96	26	140
H15010409-056	4-289-0612		7.8	363	4	1580	314	1430
H15010409-057	4-289-1218		7.9	27	1	118	24	1040
H15010409-058	4-289-1824		8.0	9	< 1	49	22	131
H15010409-059	4-298-1824		7.3	29	6	2850	21	874
H15010409-060	4-298-2430		6.8	13	2	205	15	1600
H15010409-061	4-298-3036		7.7	3	< 1	56	8	162
H15010409-062	4-299-0006		7.8	71	2	576	97	561
H15010409-063	4-299-0612		7.6	27	< 1	202	46	238
H15010409-064	4-309-3036		7.2	179	5	1890	242	1870
H15010409-065	4-309-3036D		6.7	308	6	2090	264	2210
H15010409-066	4-309-3642		7.0	179	6	1800	255	2080
H15010409-067	4-309-4248		7.5	151	5	1010	386	1460
H15010409-068	4-309-4854		6.8	209	6	1370	198	1900
H15010409-069	4-262-1824D		7.4	5	< 1	26	12	49

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150213A		
Lab ID: CCV_1_150210_1		Continuing Calibration Verification Standard							02/11/15 08:53	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150210_1		Continuing Calibration Verification Standard							02/11/15 08:53	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150210_1		Initial Calibration Verification Standard							02/11/15 08:54	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150210_1		Continuing Calibration Verification Standard							02/11/15 09:03	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150210_1		Continuing Calibration Verification Standard							02/11/15 09:15	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150210_1		Continuing Calibration Verification Standard							02/11/15 09:16	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150210_1		Initial Calibration Verification Standard							02/11/15 09:17	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150210_1		Continuing Calibration Verification Standard							02/11/15 09:26	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150210_1		Continuing Calibration Verification Standard							02/11/15 09:41	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150210_1		Continuing Calibration Verification Standard							02/11/15 09:41	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150210_1		Initial Calibration Verification Standard							02/11/15 09:42	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150210_1		Continuing Calibration Verification Standard							02/11/15 09:51	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150210_1		Continuing Calibration Verification Standard							02/11/15 10:11	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150210_1		Continuing Calibration Verification Standard							02/11/15 10:12	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150210_1		Initial Calibration Verification Standard							02/11/15 10:13	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150211_1		Initial Calibration Verification Standard							02/12/15 06:45	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150211_1		Initial Calibration Verification Standard							02/12/15 07:08	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150213A		
Lab ID: ICV_1_150211_1		Initial Calibration Verification Standard							02/12/15 07:31	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150212_1		Initial Calibration Verification Standard							02/13/15 10:43	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150212_1		Initial Calibration Verification Standard							02/13/15 10:45	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150212_1		Initial Calibration Verification Standard							02/13/15 06:41	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 28003
Lab ID: LCS-28003		Laboratory Control Sample				Run: SOIL PH METER_150213A			02/11/15 08:55	
pH, sat. paste		7.58	s.u.	0.10	101	95	105			
Lab ID: H15010409-010ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/11/15 09:03	
pH, sat. paste		7.39	s.u.	0.10				0.3	30	
Lab ID: H15010409-020ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/11/15 09:11	
pH, sat. paste		7.29	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 28004
Lab ID: LCS-28004		Laboratory Control Sample				Run: SOIL PH METER_150213A			02/11/15 09:17	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15010409-030ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/11/15 09:25	
pH, sat. paste		7.66	s.u.	0.10				0.0	30	
Lab ID: H15010409-040ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/11/15 09:34	
pH, sat. paste		7.90	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 28005
Lab ID: LCS-28005		Laboratory Control Sample				Run: SOIL PH METER_150213A			02/11/15 09:43	
pH, sat. paste		7.58	s.u.	0.10	101	95	105			
Lab ID: H15010409-050ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/11/15 09:50	
pH, sat. paste		7.72	s.u.	0.10				0.0	30	
Lab ID: H15010409-060ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/11/15 10:06	
pH, sat. paste		6.84	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 28006
Lab ID: LCS-28006		Laboratory Control Sample				Run: SOIL PH METER_150213A			02/11/15 10:13	
pH, sat. paste		7.60	s.u.	0.10	102	95	105			
Lab ID: H15010409-069ADUP		Sample Duplicate				Run: SOIL PH METER_150213A			02/11/15 10:22	
pH, sat. paste		7.38	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150210B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/10/15 10:17
Arsenic			0.784	mg/L	0.0085	98	90	110			
Cadmium			0.383	mg/L	0.0010	96	90	110			
Copper			0.797	mg/L	0.010	100	90	110			
Lead			0.783	mg/L	0.010	98	90	110			
Zinc			0.781	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/10/15 10:32
Arsenic			0.00617	mg/L	0.0085		0	0			
Cadmium			0.000420	mg/L	0.0010		0	0			
Copper			-0.00314	mg/L	0.010		0	0			
Lead			-0.00108	mg/L	0.010		0	0			
Zinc			0.00420	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/10/15 10:36
Arsenic			0.966	mg/L	0.0085	97	80	120			
Cadmium			0.887	mg/L	0.0010	89	80	120			
Copper			0.511	mg/L	0.010	102	80	120			
Lead			0.919	mg/L	0.010	92	80	120			
Zinc			0.964	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/10/15 19:37
Arsenic			2.53	mg/L	0.0085	101	90	110			
Cadmium			2.54	mg/L	0.0010	101	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.48	mg/L	0.010	99	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/10/15 19:41
Arsenic			-0.00473	mg/L	0.0085						
Cadmium			0.000140	mg/L	0.0010						
Copper			0.00334	mg/L	0.010						
Lead			0.00150	mg/L	0.010						
Zinc			-0.000410	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/10/15 20:21
Arsenic			2.53	mg/L	0.0085	101	90	110			
Cadmium			2.54	mg/L	0.0010	102	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/10/15 20:25
Arsenic			-0.00658	mg/L	0.0085						
Cadmium			0.000390	mg/L	0.0010						
Copper			0.00163	mg/L	0.010						
Lead			-0.00260	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150210B	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/10/15 20:25	
Zinc			-0.000800	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/10/15 21:06	
Arsenic			2.57	mg/L	0.0085	103	90	110			
Cadmium			2.58	mg/L	0.0010	103	90	110			
Copper			2.55	mg/L	0.010	102	90	110			
Lead			2.57	mg/L	0.010	103	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/10/15 21:09	
Arsenic			-0.000660	mg/L	0.0085						
Cadmium			0.000700	mg/L	0.0010						
Copper			-0.00190	mg/L	0.010						
Lead			-0.0120	mg/L	0.010						
Zinc			-0.00146	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/10/15 21:50	
Arsenic			2.57	mg/L	0.0085	103	90	110			
Cadmium			2.57	mg/L	0.0010	103	90	110			
Copper			2.56	mg/L	0.010	102	90	110			
Lead			2.51	mg/L	0.010	100	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/10/15 21:54	
Arsenic			0.00112	mg/L	0.0085						
Cadmium			0.000470	mg/L	0.0010						
Copper			0.00653	mg/L	0.010						
Lead			0.00434	mg/L	0.010						
Zinc			0.000100	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/10/15 22:34	
Arsenic			2.59	mg/L	0.0085	104	90	110			
Cadmium			2.61	mg/L	0.0010	104	90	110			
Copper			2.57	mg/L	0.010	103	90	110			
Lead			2.59	mg/L	0.010	103	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/10/15 22:38	
Arsenic			0.000760	mg/L	0.0085						
Cadmium			0.000270	mg/L	0.0010						
Copper			0.00483	mg/L	0.010						
Lead			-0.00462	mg/L	0.010						
Zinc			0.000490	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/10/15 23:01	
Arsenic			2.47	mg/L	0.0085	99	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150210B	
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/10/15 23:01	
Cadmium		2.44	mg/L	0.0010	98	90	110			
Copper		2.52	mg/L	0.010	101	90	110			
Lead		2.43	mg/L	0.010	97	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/10/15 23:04	
Arsenic		-0.00203	mg/L	0.0085						
Cadmium		0.000590	mg/L	0.0010						
Copper		0.00771	mg/L	0.010						
Lead		0.0213	mg/L	0.010						
Zinc		0.00190	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/10/15 23:45	
Arsenic		2.46	mg/L	0.0085	98	90	110			
Cadmium		2.45	mg/L	0.0010	98	90	110			
Copper		2.53	mg/L	0.010	101	90	110			
Lead		2.45	mg/L	0.010	98	90	110			
Zinc		2.46	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/10/15 23:49	
Arsenic		-0.000430	mg/L	0.0085						
Cadmium		0.000480	mg/L	0.0010						
Copper		0.00622	mg/L	0.010						
Lead		-0.000610	mg/L	0.010						
Zinc		0.000730	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/11/15 00:29	
Arsenic		2.49	mg/L	0.0085	99	90	110			
Cadmium		2.46	mg/L	0.0010	98	90	110			
Copper		2.51	mg/L	0.010	100	90	110			
Lead		2.46	mg/L	0.010	99	90	110			
Zinc		2.50	mg/L	0.010	100	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/11/15 00:33	
Arsenic		-0.00742	mg/L	0.0085						
Cadmium		0.000480	mg/L	0.0010						
Copper		-0.00349	mg/L	0.010						
Lead		-0.00130	mg/L	0.010						
Zinc		0.00123	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/11/15 01:14	
Arsenic		2.42	mg/L	0.0085	97	90	110			
Cadmium		2.37	mg/L	0.0010	95	90	110			
Copper		2.52	mg/L	0.010	101	90	110			
Lead		2.38	mg/L	0.010	95	90	110			
Zinc		2.46	mg/L	0.010	98	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150210B	
Lab ID: CCB	5	Continuing Calibration Blank							02/11/15 01:17	
Arsenic		-0.00520	mg/L	0.0085						
Cadmium		0.000660	mg/L	0.0010						
Copper		-0.00131	mg/L	0.010						
Lead		0.00978	mg/L	0.010						
Zinc		0.00109	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/11/15 01:58	
Arsenic		2.40	mg/L	0.0085	96	90	110			
Cadmium		2.37	mg/L	0.0010	95	90	110			
Copper		2.50	mg/L	0.010	100	90	110			
Lead		2.40	mg/L	0.010	96	90	110			
Zinc		2.46	mg/L	0.010	99	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/11/15 02:02	
Arsenic		-0.00883	mg/L	0.0085						
Cadmium		0.000600	mg/L	0.0010						
Copper		0.000570	mg/L	0.010						
Lead		-0.00787	mg/L	0.010						
Zinc		0.00141	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/11/15 02:42	
Arsenic		2.41	mg/L	0.0085	96	90	110			
Cadmium		2.36	mg/L	0.0010	94	90	110			
Copper		2.50	mg/L	0.010	100	90	110			
Lead		2.38	mg/L	0.010	95	90	110			
Zinc		2.46	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/11/15 02:46	
Arsenic		-0.00707	mg/L	0.0085						
Cadmium		0.000520	mg/L	0.0010						
Copper		-0.000110	mg/L	0.010						
Lead		-0.0192	mg/L	0.010						
Zinc		0.00178	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150219A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/19/15 10:34
Arsenic			0.779	mg/L	0.0085	97	90	110			
Cadmium			0.380	mg/L	0.0010	95	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.743	mg/L	0.010	93	90	110			
Zinc			0.783	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/19/15 10:49
Arsenic			-0.00202	mg/L	0.0085		0	0			
Cadmium			0.00538	mg/L	0.0010		0	0			
Copper			0.000620	mg/L	0.010		0	0			
Lead			-0.0373	mg/L	0.010		0	0			
Zinc			0.00216	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/19/15 10:53
Arsenic			0.965	mg/L	0.0085	96	80	120			
Cadmium			0.897	mg/L	0.0010	90	80	120			
Copper			0.514	mg/L	0.010	103	80	120			
Lead			0.893	mg/L	0.010	89	80	120			
Zinc			0.980	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/19/15 16:25
Arsenic			2.40	mg/L	0.0085	96	90	110			
Cadmium			2.39	mg/L	0.0010	95	90	110			
Copper			2.51	mg/L	0.010	101	90	110			
Lead			2.35	mg/L	0.010	94	90	110			
Zinc			2.42	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/19/15 16:28
Arsenic			-0.00386	mg/L	0.0085						
Cadmium			0.000950	mg/L	0.0010						
Copper			-0.00107	mg/L	0.010						
Lead			0.0122	mg/L	0.010						
Zinc			0.000480	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/19/15 17:08
Arsenic			2.41	mg/L	0.0085	96	90	110			
Cadmium			2.39	mg/L	0.0010	96	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.40	mg/L	0.010	96	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/19/15 17:12
Arsenic			-0.00426	mg/L	0.0085						
Cadmium			0.000790	mg/L	0.0010						
Copper			-0.000490	mg/L	0.010						
Lead			0.00235	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150219A	
Lab ID: CCB	5	Continuing Calibration Blank							02/19/15 17:12	
Zinc		0.000450	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: SUB-B238430	
Lab ID: QCS	2	Initial Calibration Verification Standard							02/17/15 10:13	
Arsenic		0.0498	mg/L	0.0050	100	90	110			
Lead		0.0498	mg/L	0.010	100	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27966
Lab ID:	**MB-27966**	5	Method Blank				Run: ICP2-HE_150210B				02/10/15 19:30
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.9	mg/kg	0.09						
Lab ID:	**LFB-27966**	5	Laboratory Fortified Blank				Run: ICP2-HE_150210B				02/10/15 19:34
Arsenic			48.4	mg/kg	1.0	97	80	120			
Cadmium			24.1	mg/kg	1.0	96	80	120			
Copper			49.5	mg/kg	1.0	99	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Zinc			49.6	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27966**	5	Laboratory Control Sample				Run: ICP2-HE_150210B				02/10/15 19:45
Arsenic			328	mg/kg	3.7	96	72.3	106.4			
Cadmium			139	mg/kg	1.0	101	73	105.1			
Copper			284	mg/kg	2.2	101	77.5	109.6			
Lead			191	mg/kg	6.5	102	75.9	108.6			
Zinc			214	mg/kg	1.0	100	74.2	109.9			
Lab ID:	**H15010409-017APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150210B				02/10/15 20:58
Arsenic			249	mg/kg	1.9	91	75	125			
Cadmium			116	mg/kg	1.0	88	75	125			
Copper			291	mg/kg	1.2	90	75	125			
Lead			251	mg/kg	3.3	89	75	125			
Zinc			395	mg/kg	1.0	89	75	125			
Lab ID:	**H15010409-017AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150210B				02/10/15 21:02
Arsenic			59.6	mg/kg	1.9	98	75	125			
Cadmium			23.5	mg/kg	1.0	91	75	125			
Copper			106	mg/kg	1.1	97	75	125			
Lead			59.2	mg/kg	3.3	79	75	125			
Zinc			210	mg/kg	1.0	96	75	125			
Lab ID:	**H15010409-017AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150210B				02/10/15 21:13
Arsenic			56.8	mg/kg	1.8	95	75	125	4.8	20	
Cadmium			23.2	mg/kg	1.0	93	75	125	1.2	20	
Copper			103	mg/kg	1.1	94	75	125	2.9	20	
Lead			66.4	mg/kg	3.2	96	75	125	11	20	
Zinc			212	mg/kg	1.0	102	75	125	0.6	20	
Method:	**SW6010B**										Batch: 27967
Lab ID:	**MB-27967**	5	Method Blank				Run: ICP2-HE_150210B				02/10/15 21:17
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.2	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27967
Lab ID:	**MB-27967**	5	Method Blank				Run: ICP2-HE_150210B				02/10/15 21:17
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27967**	5	Laboratory Fortified Blank				Run: ICP2-HE_150210B				02/10/15 21:21
Arsenic			48.8	mg/kg	1.0	98	80	120			
Cadmium			24.5	mg/kg	1.0	98	80	120			
Copper			49.6	mg/kg	1.0	99	80	120			
Lead			49.1	mg/kg	1.0	98	80	120			
Zinc			49.1	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27967**	5	Laboratory Control Sample				Run: ICP2-HE_150210B				02/10/15 21:24
Arsenic			298	mg/kg	3.7	87	72.3	106.4			
Cadmium			129	mg/kg	1.0	94	73	105.1			
Copper			267	mg/kg	2.2	95	77.5	109.6			
Lead			182	mg/kg	6.5	97	75.9	108.6			
Zinc			203	mg/kg	1.0	95	74.2	109.9			
Lab ID:	**H15010409-034APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150210B				02/10/15 23:15
Arsenic			245	mg/kg	1.9	89	75	125			
Cadmium			113	mg/kg	1.0	86	75	125			
Copper			286	mg/kg	1.2	91	75	125			
Lead			243	mg/kg	3.3	85	75	125			
Zinc			295	mg/kg	1.0	89	75	125			
Lab ID:	**H15010409-034AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150210B				02/10/15 23:19
Arsenic			57.6	mg/kg	1.9	92	75	125			
Cadmium			22.9	mg/kg	1.0	89	75	125			
Copper			100.0	mg/kg	1.1	103	75	125			
Lead			67.7	mg/kg	3.3	94	75	125			
Zinc			114	mg/kg	1.0	102	75	125			
Lab ID:	**H15010409-034AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150210B				02/10/15 23:23
Arsenic			58.7	mg/kg	1.9	94	75	125	2.0	20	
Cadmium			23.1	mg/kg	1.0	90	75	125	0.8	20	
Copper			98.8	mg/kg	1.1	101	75	125	1.2	20	
Lead			68.0	mg/kg	3.3	94	75	125	0.4	20	
Zinc			113	mg/kg	1.0	100	75	125	1.0	20	
Method:	**SW6010B**										Batch: 27968
Lab ID:	**MB-27968**	5	Method Blank				Run: ICP2-HE_150210B				02/10/15 23:26
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27968
Lab ID:	**LFB-27968**	5	Laboratory Fortified Blank				Run: ICP2-HE_150210B				02/10/15 23:30
Arsenic			47.2	mg/kg	1.0	94	80	120			
Cadmium			23.1	mg/kg	1.0	92	80	120			
Copper			48.3	mg/kg	1.0	97	80	120			
Lead			45.6	mg/kg	1.0	91	80	120			
Zinc			47.9	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27968**	5	Laboratory Control Sample				Run: ICP2-HE_150210B				02/10/15 23:34
Arsenic			275	mg/kg	3.5	80	72.3	106.4			
Cadmium			117	mg/kg	1.0	85	73	105.1			
Copper			243	mg/kg	2.1	87	77.5	109.6			
Lead			173	mg/kg	6.1	92	75.9	108.6			
Zinc			187	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H15010409-052APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150210B				02/11/15 01:03
Arsenic			305	mg/kg	1.8	86	75	125			
Cadmium			105	mg/kg	1.0	82	75	125			
Copper			608	mg/kg	1.1	88	75	125			
Lead			280	mg/kg	3.2	81	75	125			
Zinc			584	mg/kg	1.0	88	75	125			
Lab ID:	**H15010409-052AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150210B				02/11/15 01:06
Arsenic			128	mg/kg	1.7	80	75	125			
Cadmium			20.8	mg/kg	1.0	83	75	125			
Copper			425	mg/kg	1.1		75	125			A
Lead			109	mg/kg	3.1	71	75	125			S
Zinc			399	mg/kg	1.0		75	125			A
- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.											
Lab ID:	**H15010409-052AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150210B				02/11/15 01:10
Arsenic			126	mg/kg	1.8	74	75	125	2.2	20	S
Cadmium			21.3	mg/kg	1.0	84	75	125	2.5	20	
Copper			416	mg/kg	1.1		75	125	2.3	20	A
Lead			111	mg/kg	3.1	75	75	125	2.0	20	
Zinc			399	mg/kg	1.0		75	125	0.0	20	A
- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.											
Method:	**SW6010B**										Batch: 27969
Lab ID:	**MB-27969**	5	Method Blank				Run: ICP2-HE_150210B				02/11/15 01:21
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LFB-27969**	5	Laboratory Fortified Blank				Run: ICP2-HE_150210B				02/11/15 01:25
Arsenic			45.6	mg/kg	1.0	91	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27969
Lab ID:	**LFB-27969**	5	Laboratory Fortified Blank				Run: ICP2-HE_150210B				02/11/15 01:25
Cadmium			22.1	mg/kg	1.0	88	80	120			
Copper			47.7	mg/kg	1.0	95	80	120			
Lead			44.3	mg/kg	1.0	89	80	120			
Zinc			47.3	mg/kg	1.0	93	80	120			
Lab ID:	**LCS-27969**	5	Laboratory Control Sample				Run: ICP2-HE_150210B				02/11/15 01:29
Arsenic			260	mg/kg	1.8	76	72.3	106.4			
Cadmium			109	mg/kg	1.0	80	73	105.1			
Copper			245	mg/kg	1.1	87	77.5	109.6			
Lead			166	mg/kg	3.2	89	75.9	108.6			
Zinc			181	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H15010409-069APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150210B				02/11/15 03:20
Arsenic			227	mg/kg	1.8	89	75	125			
Cadmium			108	mg/kg	1.0	85	75	125			
Copper			254	mg/kg	1.1	90	75	125			
Lead			240	mg/kg	3.2	90	75	125			
Zinc			272	mg/kg	1.0	88	75	125			
Lab ID:	**H15010409-069AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150210B				02/11/15 03:23
Arsenic			48.1	mg/kg	1.8	90	75	125			
Cadmium			21.7	mg/kg	1.0	88	75	125			
Copper			71.3	mg/kg	1.1	91	75	125			
Lead			58.5	mg/kg	3.2	91	75	125			
Zinc			98.7	mg/kg	1.0	100	75	125			
Lab ID:	**H15010409-069AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150210B				02/11/15 03:27
Arsenic			48.5	mg/kg	1.7	93	75	125	0.8	20	
Cadmium			20.9	mg/kg	1.0	86	75	125	3.7	20	
Copper			70.7	mg/kg	1.1	91	75	125	0.8	20	
Lead			56.8	mg/kg	3.1	89	75	125	2.9	20	
Zinc			91.8	mg/kg	1.0	88	75	125	7.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 28054
Lab ID:	**MB-28054**	5	Method Blank				Run: ICP2-HE_150219A			02/19/15 16:17	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.1	mg/kg	0.09						
Lab ID:	**LFB-28054**	5	Laboratory Fortified Blank				Run: ICP2-HE_150219A			02/19/15 16:21	
Arsenic			47.0	mg/kg	1.0	94	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			49.4	mg/kg	1.0	99	80	120			
Lead			45.5	mg/kg	1.0	91	80	120			
Zinc			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-28054**	5	Laboratory Control Sample				Run: ICP2-HE_150219A			02/19/15 16:32	
Arsenic			259	mg/kg	1.8	76	72.3	106.4			
Cadmium			109	mg/kg	1.0	79	73	105.1			
Copper			244	mg/kg	1.1	87	77.5	109.6			
Lead			164	mg/kg	3.2	88	75.9	108.6			
Zinc			178	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H15010409-016APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150219A			02/19/15 16:43	
Arsenic			1020	mg/kg	1.8	70	75	125			S
Cadmium			116	mg/kg	1.0	81	75	125			
Copper			8850	mg/kg	1.1		75	125			A
Lead			1190	mg/kg	3.2		75	125			A
Zinc			3690	mg/kg	1.0		75	125			A
Lab ID:	**H15010409-016AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150219A			02/19/15 16:47	
Arsenic			873	mg/kg	1.8		75	125			A
Cadmium			35.2	mg/kg	1.0	85	75	125			
Copper			8840	mg/kg	1.1		75	125			A
Lead			1060	mg/kg	3.1		75	125			A
Zinc			3640	mg/kg	1.0		75	125			A
Lab ID:	**H15010409-016AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150219A			02/19/15 16:50	
Arsenic			853	mg/kg	1.7		75	125	2.2	20	A
Cadmium			33.7	mg/kg	1.0	80	75	125	4.2	20	
Copper			9140	mg/kg	1.1		75	125	3.3	20	A
Lead			1030	mg/kg	3.1		75	125	3.2	20	A
Zinc			3530	mg/kg	1.0		75	125	3.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Analytical Run: SUB-B238450	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/17/15 12:37	
Arsenic			0.77	mg/L	0.10	96	90	110			
Cadmium			0.39	mg/L	0.010	97	90	110			
Copper			0.76	mg/L	0.010	95	90	110			
Lead			0.75	mg/L	0.050	94	90	110			
Zinc			0.77	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/17/15 12:40	
Arsenic			-0.0030	mg/L	0.10						
Cadmium			0.0090	mg/L	0.010						
Copper			-0.0024	mg/L	0.010						
Lead			0.011	mg/L	0.050						
Zinc			0.0029	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/17/15 12:44	
Arsenic			0.92	mg/L	0.10	92	80	120			
Cadmium			0.83	mg/L	0.010	83	80	120			
Copper			0.46	mg/L	0.010	93	80	120			
Lead			0.85	mg/L	0.050	85	80	120			
Zinc			0.91	mg/L	0.010	91	80	120			
Method:	**SW6010B**									Batch: B_87036	
Lab ID:	**MB-87036**	5	Method Blank				Run: SUB-B238450			02/17/15 20:44	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.03						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	0.5						
Lab ID:	**LFB-87036**	5	Laboratory Fortified Blank				Run: SUB-B238450			02/17/15 20:47	
Arsenic			45	mg/kg	5.0	90	80	120			
Cadmium			23	mg/kg	5.0	90	80	120			
Copper			43	mg/kg	5.0	87	80	120			
Lead			44	mg/kg	5.0	87	80	120			
Zinc			44	mg/kg	5.0	88	80	120			
Lab ID:	**SRM-87036**	5	Standard Reference Material				Run: SUB-B238450			02/17/15 20:51	
Arsenic			270	mg/kg	5.0	78	72	120			
Cadmium			120	mg/kg	5.0	85	73	120			
Copper			220	mg/kg	5.0	80	77	120			
Lead			160	mg/kg	5.0	84	75	120			
Zinc			170	mg/kg	5.0	82	74	120			
Lab ID:	**B15021188-052ADIL**	5	Serial Dilution				Run: SUB-B238450			02/17/15 21:34	
Arsenic			96.4	mg/kg	1.8		0	0	9.8	10	
Cadmium			3.06	mg/kg	1.0		0	0	15	10	R
Copper			376	mg/kg	1.0		0	0	7.1	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_87036	
Lab ID:	**B15021188-052ADIL**	5	Serial Dilution				Run: SUB-B238450			02/17/15 21:34	
Lead			76.7	mg/kg	4.2		0	0	17	10	R
Zinc			387	mg/kg	2.5		0	0	13	10	R
Lab ID:	**B15021188-052APDS**	5	Post Digestion/Distillation Spike				Run: SUB-B238450			02/17/15 21:37	
Arsenic			130	mg/kg	1.0	83	75	125			
Cadmium			24.3	mg/kg	1.0	84	75	125			
Copper			390	mg/kg	1.0		75	125			A
Lead			103	mg/kg	1.0	74	75	125			S
Zinc			380	mg/kg	1.0		75	125			A
Lab ID:	**B15021188-052AMS3**	5	Sample Matrix Spike				Run: SUB-B238450			02/17/15 21:41	
Arsenic			130	mg/kg	1.0	86	75	125			
Cadmium			23.6	mg/kg	1.0	84	75	125			
Copper			395	mg/kg	1.0		75	125			A
Lead			102	mg/kg	1.0	75	75	125			
Zinc			380	mg/kg	1.0		75	125			A
Lab ID:	**B15021188-052AMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B238450			02/17/15 21:45	
Arsenic			125	mg/kg	1.0	76	75	125	4.1	20	
Cadmium			23.5	mg/kg	1.0	83	75	125	0.4	20	
Copper			373	mg/kg	1.0		75	125	5.6	20	A
Lead			100	mg/kg	1.0	71	75	125	2.0	20	S
Zinc			369	mg/kg	1.0		75	125	2.8	20	A
Method:	**SW6010B**									Batch: B_87038	
Lab ID:	**MB-87038**	5	Method Blank				Run: SUB-B238450			02/17/15 23:06	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.03						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.8						
Zinc			0.8	mg/kg	0.5						
Lab ID:	**LFB-87038**	5	Laboratory Fortified Blank				Run: SUB-B238450			02/17/15 23:09	
Arsenic			44	mg/kg	5.0	88	80	120			
Cadmium			22	mg/kg	5.0	88	80	120			
Copper			43	mg/kg	5.0	85	80	120			
Lead			44	mg/kg	5.0	87	80	120			
Zinc			44	mg/kg	5.0	86	80	120			
Lab ID:	**SRM-87038**	5	Standard Reference Material				Run: SUB-B238450			02/17/15 23:13	
Arsenic			280	mg/kg	5.0	83	72	120			
Cadmium			120	mg/kg	5.0	88	73	120			
Copper			240	mg/kg	5.0	86	77	120			
Lead			170	mg/kg	5.0	92	75	120			
Zinc			190	mg/kg	5.0	89	74	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_87038	
Lab ID:	**H15010409-034A**	5	Serial Dilution				Run: SUB-B238450			02/17/15 23:43	
Arsenic			12.3	mg/kg	1.9		0	0		10	N
Cadmium			0.563	mg/kg	1.0		0	0		10	N
Copper			45.6	mg/kg	1.0		0	0	4.3	10	
Lead			18.8	mg/kg	4.3		0	0		10	N
Zinc			63.5	mg/kg	2.5		0	0	9.8	10	
Lab ID:	**H15010409-034A**	5	Post Digestion/Distillation Spike				Run: SUB-B238450			02/17/15 23:46	
Arsenic			56.0	mg/kg	1.0	86	75	125			
Cadmium			22.8	mg/kg	1.0	85	75	125			
Copper			85.8	mg/kg	1.0	80	75	125			
Lead			58.8	mg/kg	1.0	83	75	125			
Zinc			101	mg/kg	1.0	83	75	125			
Lab ID:	**H15010409-034A**	5	Sample Matrix Spike				Run: SUB-B238450			02/17/15 23:50	
Arsenic			55.7	mg/kg	1.0	87	75	125			
Cadmium			22.5	mg/kg	1.0	86	75	125			
Copper			88.0	mg/kg	1.0	86	75	125			
Lead			58.0	mg/kg	1.0	83	75	125			
Zinc			103	mg/kg	1.0	89	75	125			
Lab ID:	**H15010409-034A**	5	Sample Matrix Spike Duplicate				Run: SUB-B238450			02/17/15 23:54	
Arsenic			55.9	mg/kg	1.0	87	75	125	0.3	20	
Cadmium			22.9	mg/kg	1.0	88	75	125	1.9	20	
Copper			88.0	mg/kg	1.0	86	75	125	0.0	20	
Lead			59.0	mg/kg	1.0	85	75	125	1.7	20	
Zinc			104	mg/kg	1.0	90	75	125	0.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B238430	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/17/15 10:13	
Arsenic			0.0498	mg/L	0.0010	100	90	110			
Cadmium			0.0258	mg/L	0.0010	103	90	110			
Copper			0.0502	mg/L	0.0010	100	90	110			
Lead			0.0498	mg/L	0.0010	100	90	110			
Zinc			0.0498	mg/L	0.0010	100	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/17/15 10:22	
Arsenic			4.52E-05	mg/L	0.0010						
Cadmium			0.000592	mg/L	0.0010						
Copper			0.000998	mg/L	0.0010						
Lead			0.000268	mg/L	0.0010						
Zinc			0.00101	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/17/15 10:27	
Arsenic			0.00903	mg/L	0.0010	90	70	130			
Cadmium			0.0103	mg/L	0.0010	103	70	130			
Copper			0.0181	mg/L	0.0010	91	70	130			
Lead			0.000273	mg/L	0.0010		0	0			
Zinc			0.00929	mg/L	0.0010	93	70	130			
Method:	**SW6020**									Batch: B_87039	
Lab ID:	**MB-87039**	5	Method Blank				Run: SUB-B238430			02/18/15 01:25	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	10						
Lab ID:	**LFB-87039**	5	Laboratory Fortified Blank				Run: SUB-B238430			02/18/15 01:30	
Arsenic			51.0	mg/kg	1.0	102	80	120			
Cadmium			26.4	mg/kg	1.0	106	80	120			
Copper			52.0	mg/kg	1.0	104	80	120			
Lead			51.5	mg/kg	1.0	103	80	120			
Zinc			51.3	mg/kg	11	103	80	120			
Lab ID:	**SRM-87039**	5	Standard Reference Material				Run: SUB-B238430			02/18/15 01:47	
Arsenic			318	mg/kg	1.0	93	72	120			
Cadmium			137	mg/kg	1.0	100	73	120			
Copper			284	mg/kg	1.0	101	77	120			
Lead			198	mg/kg	1.0	106	75	120			
Zinc			217	mg/kg	11	102	74	120			
Lab ID:	**H15010409-069A**	5	Serial Dilution				Run: SUB-B238430			02/18/15 02:28	
Arsenic			5.23	mg/kg	2.0		0	0		10	N
Cadmium			ND	mg/kg	1.0		0	0		10	
Copper			29.9	mg/kg	3.4		0	0		10	N

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_87039	
Lab ID:	**H15010409-069A**	5	Serial Dilution				Run: SUB-B238430			02/18/15 02:28	
Lead			12.2	mg/kg	3.8		0	0		10	N
Zinc			56.0	mg/kg	53		0	0		10	N
Lab ID:	**H15010409-069A**	5	Post Digestion/Distillation Spike				Run: SUB-B238430			02/18/15 02:46	
Arsenic			52.6	mg/kg	1.0	95	75	125			
Cadmium			48.5	mg/kg	1.0	97	75	125			
Copper			73.0	mg/kg	1.0	89	75	125			
Lead			60.2	mg/kg	1.0	97	75	125			
Zinc			98.8	mg/kg	11	93	75	125			
Lab ID:	**H15010409-069A**	5	Sample Matrix Spike				Run: SUB-B238430			02/18/15 02:50	
Arsenic			54.8	mg/kg	1.0	99	75	125			
Cadmium			26.1	mg/kg	1.0	104	75	125			
Copper			76.3	mg/kg	1.0	95	75	125			
Lead			63.6	mg/kg	1.0	104	75	125			
Zinc			109	mg/kg	11	113	75	125			
Lab ID:	**H15010409-069A**	5	Sample Matrix Spike Duplicate				Run: SUB-B238430			02/18/15 02:55	
Arsenic			55.2	mg/kg	1.0	100	75	125	0.7	20	
Cadmium			26.1	mg/kg	1.0	105	75	125	0.2	20	
Copper			77.4	mg/kg	1.0	98	75	125	1.4	20	
Lead			62.3	mg/kg	1.0	101	75	125	2.0	20	
Zinc			107	mg/kg	11	110	75	125	1.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B238673	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/20/15 09:29	
Arsenic			0.0494	mg/L	0.0010	99	90	110			
Cadmium			0.0250	mg/L	0.0010	100	90	110			
Copper			0.0511	mg/L	0.0010	102	90	110			
Lead			0.0482	mg/L	0.0010	96	90	110			
Zinc			0.0520	mg/L	0.0010	104	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/20/15 09:57	
Arsenic			-0.000160	mg/L	0.0010						
Cadmium			0.000320	mg/L	0.0010						
Copper			0.000810	mg/L	0.0010						
Lead			0.000190	mg/L	0.0010						
Zinc			0.00119	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/20/15 10:06	
Arsenic			0.00849	mg/L	0.0010	85	70	130			
Cadmium			0.00993	mg/L	0.0010	99	70	130			
Copper			0.0179	mg/L	0.0010	89	70	130			
Lead			0.000190	mg/L	0.0010		0	0			
Zinc			0.00953	mg/L	0.0010	95	70	130			
Method:	**SW6020**									Batch: B_87203	
Lab ID:	**MB-87203**	5	Method Blank				Run: SUB-B238673			02/20/15 18:58	
Arsenic			ND	mg/kg	0.3						
Cadmium			0.1	mg/kg	0.04						
Copper			ND	mg/kg	0.1						
Lead			ND	mg/kg	0.08						
Zinc			1	mg/kg	0.6						
Lab ID:	**LFB-87203**	5	Laboratory Fortified Blank				Run: SUB-B238673			02/20/15 19:00	
Arsenic			54.2	mg/kg	1.0	108	80	120			
Cadmium			27.9	mg/kg	1.0	111	80	120			
Copper			54.9	mg/kg	1.0	110	80	120			
Lead			55.2	mg/kg	1.0	110	80	120			
Zinc			56.0	mg/kg	1.0	109	80	120			
Lab ID:	**SRM-87203**	5	Standard Reference Material				Run: SUB-B238673			02/20/15 19:03	
Arsenic			314	mg/kg	1.0	92	72	120			
Cadmium			164	mg/kg	1.0	120	73	120			
Copper			282	mg/kg	1.0	101	77	120			
Lead			224	mg/kg	1.0	120	75	120			
Zinc			217	mg/kg	1.2	102	74	120			
Lab ID:	**H15010409-017A**	5	Serial Dilution				Run: SUB-B238673			02/20/15 19:43	
Arsenic			13.4	mg/kg	1.8		0	0		10	N
Cadmium			1.12	mg/kg	1.0		0	0		10	N
Copper			52.4	mg/kg	1.0		0	0	22	10	R

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010409

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_87203	
Lab ID:	**H15010409-017A**	5	Serial Dilution				Run: SUB-B238673			02/20/15 19:43	
Lead			17.8	mg/kg	1.0		0	0	0.4	10	
Zinc			164	mg/kg	3.0		0	0	24	10	R
Lab ID:	**H15010409-017A**	5	Post Digestion/Distillation Spike				Run: SUB-B238673			02/20/15 19:46	
Arsenic			40.8	mg/kg	1.0	66	75	125			S
Cadmium			46.0	mg/kg	1.0	89	75	125			
Copper			73.6	mg/kg	1.0	62	75	125			S
Lead			63.7	mg/kg	1.0	90	75	125			
Zinc			152	mg/kg	1.0	44	75	125			S
Lab ID:	**H15010409-017A**	5	Sample Matrix Spike				Run: SUB-B238673			02/20/15 19:49	
Arsenic			47.6	mg/kg	1.0	78	75	125			
Cadmium			28.9	mg/kg	1.0	110	75	125			
Copper			86.1	mg/kg	1.0	85	75	125			
Lead			73.6	mg/kg	1.0	109	75	125			
Zinc			173	mg/kg	1.0	84	75	125			
Lab ID:	**H15010409-017A**	5	Sample Matrix Spike Duplicate				Run: SUB-B238673			02/20/15 19:51	
Arsenic			48.4	mg/kg	1.0	82	75	125	1.7	20	
Cadmium			30.3	mg/kg	1.0	119	75	125	4.7	20	
Copper			86.3	mg/kg	1.0	88	75	125	0.2	20	
Lead			77.6	mg/kg	1.0	120	75	125	5.3	20	
Zinc			178	mg/kg	1.0	98	75	125	3.2	20	

Qualifiers:

RL - Analyte reporting limit.

R - RPD exceeds advisory limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15010409

Login completed by: Tracy L. Lorash
Reviewed by: Wanda Johnson
Reviewed Date: 2/10/2015

Date Received: 1/30/2015
Received by: AHN
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample ID on COC is 4-271W-0006 -ID on bag is 4-271-0006. Logged in with ID from COC.
Cooler 1 was received at 8.7°C, Cooler 2 at 14.3°C, Cooler 3 at 9.0°C. Temperature was taken from a temperature blank for Coolers 1 & 3 and from a client sample for Cooler 2. Samples were not received on ice. TI 1/30/15

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010409

SAMPLE ID C3	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-231W2-0006	1233	1/19/15	Soil	A	B		1
4-231W2-0612	1232	1/19/15	Soil	A	B		1
4-231W2-1218	1231	1/19/15	Soil	A	B		1
4-232-0612	811	1/19/15	Soil	A	B		1
4-232-1218	810	1/19/15	Soil	A	B		1
4-232-1824	809	1/19/15	Soil	A	B		1
4-235-3036	827	1/19/15	Soil	A	B		1
4-235-3642	826	1/19/15	Soil	A	B		1
4-235-4248	825	1/19/15	Soil	A	B		1
4-240-2430	1053	1/19/15	Soil	A	B		1
4-240-3036	1052	1/19/15	Soil	A	B		1
4-240-3642	1051	1/19/15	Soil	A	B		1
4-242-1218	1116	1/19/15	Soil	A	B		1
4-242-1824	1114	1/19/15	Soil	A	B		1
4-242-1824D	1115	1/19/15	Soil	A	B		1
4-243-1824	1219	1/19/15	Soil	A	B		1
4-243-2430	1218	1/19/15	Soil	A	B		1
4-243-3036	1217	1/19/15	Soil	A	B		1
4-246-4854	902	1/19/15	Soil	A	B		1
4-246-5460	901	1/19/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature] Date/Time: 01/30/15 1400

Received By (sign): (1) Date/Time:

Relinquished By (sign): (2) Date/Time:

Received By (sign): (2) Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] C1 = 8.7 TB C2 = 14.3 - ØTB C3 = 9.0 TB } Ø ice

Date/Time: hand del 1/30/15 1400

COC Blank.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15010409

SAMPLE ID C3	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-251-1824	1014	1/19/15	Soil	A	B		1
4-251-2430	1013	1/19/15	Soil	A	B		1
4-251-3036	1012	1/19/15	Soil	A	B		1
4-252-1824	1034	1/19/15	Soil	A	B		1
4-252-2430	1033	1/19/15	Soil	A	B		1
4-252-3036	1032	1/19/15	Soil	A	B		1
4-253-0006	1147	1/19/15	Soil	A	B		1
4-253-0612	1146	1/19/15	Soil	A	B		1
4-253-1218	1145	1/19/15	Soil	A	B		1
4-261-0612	946	1/19/15	Soil	A	B		1
4-261-1218	945	1/19/15	Soil	A	B		1
4-261-1824	944	1/19/15	Soil	A	B		1
4-262-0612	957	1/19/15	Soil	A	B		1
4-262-1218	956	1/19/15	Soil	A	B		1
4-262-1824	954	1/19/15	Soil	A	B		1
4-263-1218	1300	1/19/15	Soil	A	B		1
4-263-1824	1259	1/19/15	Soil	A	B		1
4-263-2430	1258	1/19/15	Soil	A	B		1
4-263W-0612	1522	1/19/15	Soil	A	B		1
4-263W-1218	1521	1/19/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 01/30/15 1700

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 = 8.7 TB
C2 = 14.3 TB
C3 = 9.0 TB
Ice
Date/Time: hand del 1/30/15 14:00

COC Blank.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15010409

	SAMPLE ID		TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
C3	4-263W-1824	C3	1520	1/19/15	Soil	A	B		1
C3	4-271-0612		1402	1/19/15	Soil	A	B		1
C1	4-271-1218	C1	1400	1/19/15	Soil	A	B		1
C3	4-271-1218D	C3	1401	1/19/15	Soil	A	B		1
C1	4-271W-0006	C1	1548	1/19/15	Soil	A	B		1
	4-271W-0612		1547	1/19/15	Soil	A	B		1
	4-272-1824		1324	1/19/15	Soil	A	B		1
	4-272-2430		1323	1/19/15	Soil	A	B		1
	4-272-3036		1322	1/19/15	Soil	A	B		1
	4-280-0612		1426	1/19/15	Soil	A	B		1
	4-280-1218		1425	1/19/15	Soil	A	B		1
	4-280-1824		1424	1/19/15	Soil	A	B		1
	4-281-0612		1504	1/19/15	Soil	A	B		1
	4-281-1218		1503	1/19/15	Soil	A	B		1
	4-281-1824		1502	1/19/15	Soil	A	B		1
	4-289-0612		1446	1/19/15	Soil	A	B		1
	4-289-1218		1445	1/19/15	Soil	A	B		1
	4-289-1824		1444	1/19/15	Soil	A	B		1
	4-298-1824		1659	1/19/15	Soil	A	B		1
	4-298-2430		1658	1/19/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 01/30/15 1400	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1 = 8.7 C2 = 14.3 C3 = 9.0	hand del 1/30/15 14:00

COC Blank.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15010409

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
C1	C1						
4-298-3036	1657	1/19/15	Soil	A	B		1
4-299-0006	1612	1/19/15	Soil	A	B		1
4-299-0612	1611	1/19/15	Soil	A	B		1
4-309-3036	1632	1/19/15	Soil	A	B		1
4-309-3036D	1633	1/19/15	Soil	A	B		1
4-309-3642	1631	1/19/15	Soil	A	B		1
4-309-4248	1630	1/19/15	Soil	A	B		1
4-309-4854	1645	1/19/15	Soil	A	B		1
4-262-1824	0955	1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1
		1/19/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 01/30/15 1400

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 = 8.7 TB
C2 = 14.3 TB
C3 = 9.0 TB
> ice

Date/Time: hand del.
1/30/15 14:00

COC Blank.xls

ANALYTICAL SUMMARY REPORT

February 23, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010408

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 55 samples for MT DEQ-Federal Superfund on 1/30/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010408-001	4-268-1824	01/21/15 8:34	01/30/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010408-002	4-268-1824D	01/21/15 8:35	01/30/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010408-003	4-268-2430	01/21/15 8:33	01/30/15	Soil	Same As Above
H15010408-004	4-268-3036	01/21/15 8:32	01/30/15	Soil	Same As Above
H15010408-005	4-269-4248	01/21/15 9:00	01/30/15	Soil	Same As Above
H15010408-006	4-269-4854	01/21/15 9:18	01/30/15	Soil	Same As Above
H15010408-007	4-269-5460	01/21/15 9:17	01/30/15	Soil	Same As Above
H15010408-008	4-270-2430	01/21/15 9:53	01/30/15	Soil	Same As Above
H15010408-009	4-270-3036	01/21/15 9:52	01/30/15	Soil	Same As Above
H15010408-010	4-270-3642	01/21/15 9:51	01/30/15	Soil	Same As Above
H15010408-011	4-278-1218	01/21/15 11:05	01/30/15	Soil	Same As Above
H15010408-012	4-278-1824	01/21/15 11:04	01/30/15	Soil	Same As Above
H15010408-013	4-278-2430	01/21/15 11:03	01/30/15	Soil	Same As Above
H15010408-014	4-279-4854	01/21/15 10:31	01/30/15	Soil	Same As Above
H15010408-015	4-279-5460	01/21/15 10:30	01/30/15	Soil	Same As Above
H15010408-016	4-288-1824	01/21/15 10:44	01/30/15	Soil	Same As Above
H15010408-017	4-288-2430	01/21/15 10:43	01/30/15	Soil	Same As Above
H15010408-018	4-288-3036	01/21/15 10:42	01/30/15	Soil	Same As Above
H15010408-019	4-303-1218	01/21/15 16:25	01/30/15	Soil	Same As Above
H15010408-020	4-303-1218D	01/21/15 16:26	01/30/15	Soil	Same As Above
H15010408-021	4-303-1824	01/21/15 16:24	01/30/15	Soil	Same As Above
H15010408-022	4-303-2430	01/21/15 16:23	01/30/15	Soil	Same As Above
H15010408-023	4-304-4248	01/21/15 16:40	01/30/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010408-024	4-304-4854	01/21/15 16:51	01/30/15	Soil	Same As Above
H15010408-025	4-304-5460	01/21/15 16:50	01/30/15	Soil	Same As Above
H15010408-026	4-305-0612	01/21/15 17:06	01/30/15	Soil	Same As Above
H15010408-027	4-305-1218	01/21/15 17:05	01/30/15	Soil	Same As Above
H15010408-028	4-305-1824	01/21/15 17:04	01/30/15	Soil	Same As Above
H15010408-029	4-309W-0006	01/21/15 7:57	01/30/15	Soil	Same As Above
H15010408-030	4-309W-0612	01/21/15 7:56	01/30/15	Soil	Same As Above
H15010408-031	4-309W-1218	01/21/15 7:55	01/30/15	Soil	Same As Above
H15010408-032	4-313-0612	01/21/15 16:16	01/30/15	Soil	Same As Above
H15010408-033	4-313-1218	01/21/15 16:15	01/30/15	Soil	Same As Above
H15010408-034	4-313-1824	01/21/15 16:14	01/30/15	Soil	Same As Above
H15010408-035	4-314-1218	01/21/15 15:55	01/30/15	Soil	Same As Above
H15010408-036	4-314-1824	01/21/15 15:54	01/30/15	Soil	Same As Above
H15010408-037	4-314-2430	01/21/15 15:53	01/30/15	Soil	Same As Above
H15010408-038	4-322-1218	01/21/15 14:45	01/30/15	Soil	Same As Above
H15010408-039	4-322-1824	01/21/15 14:44	01/30/15	Soil	Same As Above
H15010408-040	4-322-2430	01/21/15 14:43	01/30/15	Soil	Same As Above
H15010408-041	4-323-1824	01/21/15 14:24	01/30/15	Soil	Same As Above
H15010408-042	4-323-2430	01/21/15 14:23	01/30/15	Soil	Same As Above
H15010408-043	4-323-3036	01/21/15 14:22	01/30/15	Soil	Same As Above
H15010408-044	4-332-1218	01/21/15 14:55	01/30/15	Soil	Same As Above
H15010408-045	4-332-1824	01/21/15 14:54	01/30/15	Soil	Same As Above
H15010408-046	4-332-2430	01/21/15 14:53	01/30/15	Soil	Same As Above
H15010408-047	4-333-0612	01/21/15 15:14	01/30/15	Soil	Same As Above
H15010408-048	4-333-1218	01/21/15 15:13	01/30/15	Soil	Same As Above
H15010408-049	4-333-1824	01/21/15 15:12	01/30/15	Soil	Same As Above
H15010408-050	4-334-0006	01/21/15 12:52	01/30/15	Soil	Same As Above
H15010408-051	4-334-0612	01/21/15 12:51	01/30/15	Soil	Same As Above
H15010408-052	4-334-1218	01/21/15 12:50	01/30/15	Soil	Same As Above
H15010408-053	4-338-1218	01/21/15 13:10	01/30/15	Soil	Same As Above
H15010408-054	4-338-1824	01/21/15 13:09	01/30/15	Soil	Same As Above
H15010408-055	4-338-2430	01/21/15 13:08	01/30/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

ANALYTICAL SUMMARY REPORT

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010408

Report Date: 02/23/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010408

Report Date: 02/23/15
Date Received: 01/30/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Client Sample ID		Results	Results	Results	Results	Results	Results
H15010408-001	4-268-1824		7.0	10	14	216	17	5820
H15010408-002	4-268-1824D		6.8	13	19	1460	17	7540
H15010408-003	4-268-2430		6.5	6	4	76	10	1140
H15010408-004	4-268-3036		7.0	10	3	1170	14	367
H15010408-005	4-269-4248		7.2	729	7	5940	922	2650
H15010408-006	4-269-4854		7.4	567	3	5480	1400	1370
H15010408-007	4-269-5460		7.5	179	2	2140	811	618
H15010408-008	4-270-2430		7.6	11	1	140	29	2770
H15010408-009	4-270-3036		6.3	8	< 1	40	17	249
H15010408-010	4-270-3642		7.2	4	< 1	25	12	52
H15010408-011	4-278-1218		6.8	21	9	718	38	2140
H15010408-012	4-278-1824		7.0	5	3	31	10	1290
H15010408-013	4-278-2430		7.1	6	4	34	9	1190
H15010408-014	4-279-4854		7.1	113	7	2350	147	1960
H15010408-015	4-279-5460		7.4	30	6	779	54	1030
H15010408-016	4-288-1824		7.2	127	11	4960	142	2640
H15010408-017	4-288-2430		7.9	6	< 1	89	11	103
H15010408-018	4-288-3036		7.5	5	< 1	46	11	67
H15010408-019	4-303-1218		7.6	930	9	6820	600	2900
H15010408-020	4-303-1218D		7.6	1010	10	7710	670	2820
H15010408-021	4-303-1824		8.0	76	2	645	72	397
H15010408-022	4-303-2430		7.7	11	< 1	72	22	94
H15010408-023	4-304-4248		8.0	8	< 1	46	21	3650
H15010408-024	4-304-4854		7.0	42	< 1	33	16	1330
H15010408-025	4-304-5460		7.4	40	< 1	70	17	1750
H15010408-026	4-305-0612		7.6	635	5	2200	491	1620
H15010408-027	4-305-1218		8.0	30	2	165	30	230
H15010408-028	4-305-1824		7.9	7	< 1	30	19	80
H15010408-029	4-309W-0006		7.5	17	< 1	126	35	124
H15010408-030	4-309W-0612		7.9	37	< 1	145	31	129
H15010408-031	4-309W-1218		7.9	109	2	523	99	441
H15010408-032	4-313-0612		8.0	425	7	3030	404	1770
H15010408-033	4-313-1218		8.0	33	< 1	220	38	178
H15010408-034	4-313-1824		7.7	7	< 1	40	17	70
H15010408-035	4-314-1218		7.4	1390	13	10300	805	3600
H15010408-036	4-314-1824		7.9	195	2	1200	133	753
H15010408-037	4-314-2430		7.7	17	< 1	116	23	134
H15010408-038	4-322-1218		7.5	989	13	8020	692	3800
H15010408-039	4-322-1824		7.5	394	3	2730	266	876
H15010408-040	4-322-2430		7.3	20	< 1	114	21	119

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010408

Report Date: 02/23/15
Date Received: 01/30/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010408-041	4-323-1824		7.5	1010	9	6620	504	2820
H15010408-042	4-323-2430		7.3	23	< 1	145	22	118
H15010408-043	4-323-3036		7.5	15	< 1	117	29	119
H15010408-044	4-332-1218		7.7	1230	10	10500	1150	2960
H15010408-045	4-332-1824		7.6	54	< 1	411	60	209
H15010408-046	4-332-2430		7.5	29	< 1	181	28	161
H15010408-047	4-333-0612		8.0	72	1	588	76	410
H15010408-048	4-333-1218		7.6	49	< 1	352	43	230
H15010408-049	4-333-1824		8.0	8	< 1	52	13	74
H15010408-050	4-334-0006		7.1	545	7	2580	451	1820
H15010408-051	4-334-0612		7.3	407	4	3680	781	1840
H15010408-052	4-334-1218		7.3	6	1	102	12	210
H15010408-053	4-338-1218		7.7	334	5	2930	353	1360
H15010408-054	4-338-1824		7.6	14	< 1	98	17	96
H15010408-055	4-338-2430		7.3	6	< 1	48	14	78

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150206A		
Lab ID: CCV_1_150205_1		Continuing Calibration Verification Standard							02/06/15 07:31	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150205_1		Continuing Calibration Verification Standard							02/06/15 07:31	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150205_1		Initial Calibration Verification Standard							02/06/15 07:32	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150205_1		Continuing Calibration Verification Standard							02/06/15 07:41	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150205_1		Continuing Calibration Verification Standard							02/06/15 07:55	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150205_1		Continuing Calibration Verification Standard							02/06/15 07:55	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150205_1		Initial Calibration Verification Standard							02/06/15 07:56	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150205_1		Continuing Calibration Verification Standard							02/06/15 08:06	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150205_1		Continuing Calibration Verification Standard							02/06/15 08:22	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150205_1		Continuing Calibration Verification Standard							02/06/15 08:23	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150205_1		Initial Calibration Verification Standard							02/06/15 08:23	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150205_1		Continuing Calibration Verification Standard							02/06/15 08:33	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150205_1		Initial Calibration Verification Standard							02/06/15 06:20	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 27940	
Lab ID: LCS-27940		Laboratory Control Sample				Run: SOIL PH METER_150206A			02/06/15 07:32	
pH, sat. paste		7.61	s.u.	0.10	102	95	105			
Lab ID: H15010408-010ADUP		Sample Duplicate				Run: SOIL PH METER_150206A			02/06/15 07:41	
pH, sat. paste		7.21	s.u.	0.10				0.1	30	
Lab ID: H15010408-020ADUP		Sample Duplicate				Run: SOIL PH METER_150206A			02/06/15 07:49	
pH, sat. paste		7.65	s.u.	0.10				0.3	30	
Method: ASAM10-3.2									Batch: 27941	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27941
Lab ID: LCS-27941		Laboratory Control Sample				Run: SOIL PH METER_150206A				02/06/15 07:57
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H15010408-030ADUP		Sample Duplicate				Run: SOIL PH METER_150206A				02/06/15 08:06
pH, sat. paste		7.87	s.u.	0.10				0.3	30	
Lab ID: H15010408-040ADUP		Sample Duplicate				Run: SOIL PH METER_150206A				02/06/15 08:14
pH, sat. paste		7.26	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27942
Lab ID: LCS-27942		Laboratory Control Sample				Run: SOIL PH METER_150206A				02/06/15 08:24
pH, sat. paste		7.60	s.u.	0.10	102	95	105			
Lab ID: H15010408-050ADUP		Sample Duplicate				Run: SOIL PH METER_150206A				02/06/15 08:32
pH, sat. paste		7.11	s.u.	0.10				0.3	30	
Lab ID: H15010408-055ADUP		Sample Duplicate				Run: SOIL PH METER_150206A				02/06/15 08:37
pH, sat. paste		7.31	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150206C	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/06/15 09:14
Arsenic			0.776	mg/L	0.0085	97	90	110			
Cadmium			0.389	mg/L	0.0010	97	90	110			
Copper			0.806	mg/L	0.010	101	90	110			
Lead			0.803	mg/L	0.010	100	90	110			
Zinc			0.792	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/06/15 09:29
Arsenic			-0.000870	mg/L	0.0085		0	0			
Cadmium			0.00352	mg/L	0.0010		0	0			
Copper			0.00169	mg/L	0.010		0	0			
Lead			0.00439	mg/L	0.010		0	0			
Zinc			0.00174	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/06/15 09:33
Arsenic			0.973	mg/L	0.0085	97	80	120			
Cadmium			0.895	mg/L	0.0010	90	80	120			
Copper			0.510	mg/L	0.010	102	80	120			
Lead			0.934	mg/L	0.010	93	80	120			
Zinc			0.976	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/06/15 17:47
Arsenic			2.42	mg/L	0.0085	97	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.45	mg/L	0.010	98	90	110			
Lead			2.41	mg/L	0.010	97	90	110			
Zinc			2.42	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/06/15 17:51
Arsenic			-0.0104	mg/L	0.0085						
Cadmium			0.000450	mg/L	0.0010						
Copper			-0.00122	mg/L	0.010						
Lead			0.00837	mg/L	0.010						
Zinc			0.000400	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/06/15 18:31
Arsenic			2.53	mg/L	0.0085	101	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/06/15 18:35
Arsenic			-0.00440	mg/L	0.0085						
Cadmium			0.000310	mg/L	0.0010						
Copper			0.000600	mg/L	0.010						
Lead			0.00764	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150206C	
Lab ID: CCB	5	Continuing Calibration Blank							02/06/15 18:35	
Zinc		-0.000830	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/06/15 19:15	
Arsenic		2.50	mg/L	0.0085	100	90	110			
Cadmium		2.44	mg/L	0.0010	98	90	110			
Copper		2.51	mg/L	0.010	100	90	110			
Lead		2.48	mg/L	0.010	99	90	110			
Zinc		2.46	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/06/15 19:19	
Arsenic		-0.00690	mg/L	0.0085						
Cadmium		0.000760	mg/L	0.0010						
Copper		-0.000190	mg/L	0.010						
Lead		0.00619	mg/L	0.010						
Zinc		-0.000760	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/06/15 20:00	
Arsenic		2.49	mg/L	0.0085	100	90	110			
Cadmium		2.44	mg/L	0.0010	97	90	110			
Copper		2.51	mg/L	0.010	100	90	110			
Lead		2.49	mg/L	0.010	100	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/06/15 20:03	
Arsenic		-0.00330	mg/L	0.0085						
Cadmium		0.00131	mg/L	0.0010						
Copper		-0.00177	mg/L	0.010						
Lead		-0.00153	mg/L	0.010						
Zinc		0.000590	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/06/15 20:44	
Arsenic		2.51	mg/L	0.0085	101	90	110			
Cadmium		2.45	mg/L	0.0010	98	90	110			
Copper		2.50	mg/L	0.010	100	90	110			
Lead		2.50	mg/L	0.010	100	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/06/15 20:48	
Arsenic		0.00309	mg/L	0.0085						
Cadmium		0.000680	mg/L	0.0010						
Copper		0.00211	mg/L	0.010						
Lead		0.00259	mg/L	0.010						
Zinc		-0.000560	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/06/15 21:28	
Arsenic		2.50	mg/L	0.0085	100	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150206C	
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/06/15 21:28	
Cadmium		2.41	mg/L	0.0010	97	90	110			
Copper		2.53	mg/L	0.010	101	90	110			
Lead		2.50	mg/L	0.010	100	90	110			
Zinc		2.44	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/06/15 21:32	
Arsenic		-0.0105	mg/L	0.0085						
Cadmium		0.000550	mg/L	0.0010						
Copper		-0.00155	mg/L	0.010						
Lead		-0.00161	mg/L	0.010						
Zinc		-0.000530	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/06/15 21:54	
Arsenic		2.44	mg/L	0.0085	98	90	110			
Cadmium		2.45	mg/L	0.0010	98	90	110			
Copper		2.49	mg/L	0.010	99	90	110			
Lead		2.48	mg/L	0.010	99	90	110			
Zinc		2.46	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/06/15 21:58	
Arsenic		-0.00276	mg/L	0.0085						
Cadmium		-1.00E-05	mg/L	0.0010						
Copper		0.00374	mg/L	0.010						
Lead		0.0107	mg/L	0.010						
Zinc		0.000740	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/06/15 22:39	
Arsenic		2.43	mg/L	0.0085	97	90	110			
Cadmium		2.41	mg/L	0.0010	96	90	110			
Copper		2.47	mg/L	0.010	99	90	110			
Lead		2.43	mg/L	0.010	97	90	110			
Zinc		2.42	mg/L	0.010	97	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/06/15 22:42	
Arsenic		0.00713	mg/L	0.0085						
Cadmium		-0.000140	mg/L	0.0010						
Copper		0.00244	mg/L	0.010						
Lead		-0.0165	mg/L	0.010						
Zinc		0.000870	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/06/15 23:23	
Arsenic		2.44	mg/L	0.0085	98	90	110			
Cadmium		2.43	mg/L	0.0010	97	90	110			
Copper		2.46	mg/L	0.010	99	90	110			
Lead		2.45	mg/L	0.010	98	90	110			
Zinc		2.44	mg/L	0.010	98	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150206C	
Lab ID: CCB	5	Continuing Calibration Blank							02/06/15 23:27	
Arsenic		0.00473	mg/L	0.0085						
Cadmium		0.000160	mg/L	0.0010						
Copper		-0.00139	mg/L	0.010						
Lead		0.0190	mg/L	0.010						
Zinc		0.000980	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/06/15 23:56	
Arsenic		2.44	mg/L	0.0085	98	90	110			
Cadmium		2.41	mg/L	0.0010	96	90	110			
Copper		2.48	mg/L	0.010	99	90	110			
Lead		2.43	mg/L	0.010	97	90	110			
Zinc		2.42	mg/L	0.010	97	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/07/15 00:00	
Arsenic		-0.00254	mg/L	0.0085						
Cadmium		5.00E-05	mg/L	0.0010						
Copper		0.000220	mg/L	0.010						
Lead		0.00928	mg/L	0.010						
Zinc		0.00118	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27944
Lab ID:	**MB-27944**	5	Method Blank				Run: ICP2-HE_150206C				02/06/15 17:58
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.1	mg/kg	0.09						
Lab ID:	**LFB-27944**	5	Laboratory Fortified Blank				Run: ICP2-HE_150206C				02/06/15 18:02
Arsenic			47.6	mg/kg	1.0	95	80	120			
Cadmium			23.5	mg/kg	1.0	94	80	120			
Copper			48.9	mg/kg	1.0	98	80	120			
Lead			49.0	mg/kg	1.0	98	80	120			
Zinc			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27944**	5	Laboratory Control Sample				Run: ICP2-HE_150206C				02/06/15 18:06
Arsenic			258	mg/kg	1.8	74	72.3	106.4			
Cadmium			108	mg/kg	1.0	77	73	105.1			
Copper			233	mg/kg	1.1	81	77.5	109.6			
Lead			159	mg/kg	3.2	83	75.9	108.6			
Zinc			173	mg/kg	1.0	79	74.2	109.9			
Lab ID:	**H15010408-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150206C				02/06/15 19:34
Arsenic			251	mg/kg	1.9	94	75	125			
Cadmium			118	mg/kg	1.0	90	75	125			
Copper			286	mg/kg	1.2	91	75	125			
Lead			254	mg/kg	3.3	92	75	125			
Zinc			310	mg/kg	1.0	92	75	125			
Lab ID:	**H15010408-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150206C				02/06/15 19:38
Arsenic			53.7	mg/kg	1.8	98	75	125			
Cadmium			23.6	mg/kg	1.0	93	75	125			
Copper			94.8	mg/kg	1.1	96	75	125			
Lead			62.5	mg/kg	3.2	100	75	125			
Zinc			119	mg/kg	1.0	103	75	125			
Lab ID:	**H15010408-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150206C				02/06/15 19:41
Arsenic			48.5	mg/kg	1.8	87	75	125	10	20	
Cadmium			23.1	mg/kg	1.0	91	75	125	2.2	20	
Copper			94.7	mg/kg	1.1	96	75	125	0.1	20	
Lead			64.7	mg/kg	3.2	105	75	125	3.5	20	
Zinc			116	mg/kg	1.0	98	75	125	2.2	20	
Method:	**SW6010B**										Batch: 27946
Lab ID:	**MB-27946**	5	Method Blank				Run: ICP2-HE_150206C				02/06/15 19:45
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27946
Lab ID:	**MB-27946**	5	Method Blank				Run: ICP2-HE_150206C			02/06/15 19:45	
Lead			0.8	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27946**	5	Laboratory Fortified Blank				Run: ICP2-HE_150206C			02/06/15 19:49	
Arsenic			48.2	mg/kg	1.0	96	80	120			
Cadmium			23.4	mg/kg	1.0	93	80	120			
Copper			49.0	mg/kg	1.0	98	80	120			
Lead			47.5	mg/kg	1.0	93	80	120			
Zinc			48.2	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27946**	5	Laboratory Control Sample				Run: ICP2-HE_150206C			02/06/15 19:53	
Arsenic			265	mg/kg	1.8	77	72.3	106.4			
Cadmium			111	mg/kg	1.0	81	73	105.1			
Copper			239	mg/kg	1.1	85	77.5	109.6			
Lead			174	mg/kg	3.2	93	75.9	108.6			
Zinc			178	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H15010408-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150206C			02/06/15 21:21	
Arsenic			413	mg/kg	1.8	87	75	125			
Cadmium			108	mg/kg	1.0	83	75	125			
Copper			1400	mg/kg	1.1		75	125			A
Lead			342	mg/kg	3.2	83	75	125			
Zinc			947	mg/kg	1.0	77	75	125			
Lab ID:	**H15010408-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150206C			02/06/15 21:25	
Arsenic			238	mg/kg	1.8	89	75	125			
Cadmium			23.2	mg/kg	1.0	85	75	125			
Copper			1240	mg/kg	1.1		75	125			A
Lead			175	mg/kg	3.1	86	75	125			
Zinc			793	mg/kg	1.0		75	125			A
Lab ID:	**H15010408-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150206C			02/06/15 22:02	
Arsenic			228	mg/kg	1.8	68	75	125	4.1	20	S
Cadmium			23.3	mg/kg	1.0	85	75	125	0.7	20	
Copper			1240	mg/kg	1.1		75	125	0.6	20	A
Lead			181	mg/kg	3.2	95	75	125	2.8	20	
Zinc			782	mg/kg	1.0		75	125	1.4	20	A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Method:	**SW6010B**										Batch: 27947
Lab ID:	**MB-27947**	5	Method Blank				Run: ICP2-HE_150206C			02/06/15 22:05	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.6	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27947
Lab ID:	**MB-27947**	5	Method Blank				Run: ICP2-HE_150206C				02/06/15 22:05
Lab ID:	**LFB-27947**	5	Laboratory Fortified Blank				Run: ICP2-HE_150206C				02/06/15 22:09
Arsenic			46.7	mg/kg	1.0	93	80	120			
Cadmium			22.9	mg/kg	1.0	92	80	120			
Copper			48.3	mg/kg	1.0	95	80	120			
Lead			47.4	mg/kg	1.0	95	80	120			
Zinc			47.1	mg/kg	1.0	93	80	120			
Lab ID:	**LCS-27947**	5	Laboratory Control Sample				Run: ICP2-HE_150206C				02/06/15 22:13
Arsenic			258	mg/kg	1.8	74	72.3	106.4			
Cadmium			109	mg/kg	1.0	78	73	105.1			
Copper			232	mg/kg	1.1	81	77.5	109.6			
Lead			161	mg/kg	3.2	84	75.9	108.6			
Zinc			175	mg/kg	1.0	80	74.2	109.9			
Lab ID:	**H15010408-055APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150206C				02/06/15 23:45
Arsenic			224	mg/kg	1.8	85	75	125			
Cadmium			105	mg/kg	1.0	82	75	125			
Copper			269	mg/kg	1.1	87	75	125			
Lead			230	mg/kg	3.2	81	75	125			
Zinc			296	mg/kg	1.0	85	75	125			
Lab ID:	**H15010408-055AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150206C				02/06/15 23:49
Arsenic			50.1	mg/kg	1.8	87	75	125			
Cadmium			21.3	mg/kg	1.0	85	75	125			
Copper			90.8	mg/kg	1.1	87	75	125			
Lead			66.5	mg/kg	3.2	86	75	125			
Zinc			122	mg/kg	1.0	89	75	125			
Lab ID:	**H15010408-055AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150206C				02/06/15 23:53
Arsenic			49.2	mg/kg	1.8	85	75	125	1.8	20	
Cadmium			20.9	mg/kg	1.0	84	75	125	1.5	20	
Copper			93.2	mg/kg	1.1	92	75	125	2.6	20	
Lead			65.9	mg/kg	3.2	85	75	125	1.0	20	
Zinc			123	mg/kg	1.0	90	75	125	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6010B**										Batch: 27944
Lab ID: **H15010408-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150210B				02/11/15 11:49
Arsenic		93.4	mg/kg	1.0	85	75	125			
Cadmium		42.6	mg/kg	1.0	81	75	125			
Copper		132	mg/kg	1.0	87	75	125			
Lead		96.4	mg/kg	1.3	84	75	125			
Zinc		152	mg/kg	1.0	86	75	125			
Lab ID: **H15010408-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150210B				02/11/15 11:53
Arsenic		46.8	mg/kg	1.0	85	75	125			
Cadmium		20.2	mg/kg	1.0	80	75	125			
Copper		85.0	mg/kg	1.0	88	75	125			
Lead		51.2	mg/kg	1.3	85	75	125			
Zinc		105	mg/kg	1.0	87	75	125			
Lab ID: **H15010408-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150210B				02/11/15 11:56
Arsenic		47.2	mg/kg	1.0	86	75	125	0.8	20	
Cadmium		20.4	mg/kg	1.0	81	75	125	1.3	20	
Copper		83.9	mg/kg	1.0	86	75	125	1.2	20	
Lead		49.7	mg/kg	1.3	82	75	125	3.1	20	
Zinc		105	mg/kg	1.0	85	75	125	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Analytical Run: SUB-B238450	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/17/15 12:37	
Arsenic			0.77	mg/L	0.10	96	90	110			
Cadmium			0.39	mg/L	0.010	97	90	110			
Copper			0.76	mg/L	0.010	95	90	110			
Lead			0.75	mg/L	0.050	94	90	110			
Zinc			0.77	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/17/15 12:40	
Arsenic			-0.0030	mg/L	0.10						
Cadmium			0.0090	mg/L	0.010						
Copper			-0.0024	mg/L	0.010						
Lead			0.011	mg/L	0.050						
Zinc			0.0029	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/17/15 12:44	
Arsenic			0.92	mg/L	0.10	92	80	120			
Cadmium			0.83	mg/L	0.010	83	80	120			
Copper			0.46	mg/L	0.010	93	80	120			
Lead			0.85	mg/L	0.050	85	80	120			
Zinc			0.91	mg/L	0.010	91	80	120			
Method:	**SW6010B**									Batch: B_87033	
Lab ID:	**MB-87033**	5	Method Blank				Run: SUB-B238450			02/17/15 17:55	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.05						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	0.5						
Lab ID:	**LCS-87033**	5	Standard Reference Material				Run: SUB-B238450			02/17/15 17:58	
Arsenic			260	mg/kg	5.0	74	72	120			
Cadmium			110	mg/kg	5.0	79	73	120			
Copper			220	mg/kg	5.0	78	77	120			
Lead			150	mg/kg	5.0	80	75	120			
Zinc			170	mg/kg	5.0	76	74	120			
Lab ID:	**LFB-87033**	5	Laboratory Fortified Blank				Run: SUB-B238450			02/17/15 18:02	
Arsenic			46	mg/kg	5.0	93	80	120			
Cadmium			23	mg/kg	5.0	92	80	120			
Copper			43	mg/kg	5.0	86	80	120			
Lead			46	mg/kg	5.0	91	80	120			
Zinc			45	mg/kg	5.0	89	80	120			
Lab ID:	**H15010408-018A**	5	Serial Dilution				Run: SUB-B238450			02/17/15 18:56	
Arsenic			5.94	mg/kg	1.9		0	0		10	N
Cadmium			0.418	mg/kg	1.0		0	0		10	N
Copper			46.4	mg/kg	1.4		0	0	6.1	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_87033	
Lab ID:	**H15010408-018A**	5	Serial Dilution				Run: SUB-B238450			02/17/15 18:56	
Lead			14.0	mg/kg	4.3		0	0		10	N
Zinc			69.4	mg/kg	2.5		0	0	7.7	10	
Lab ID:	**H15010408-018A**	5	Post Digestion/Distillation Spike				Run: SUB-B238450			02/17/15 18:59	
Arsenic			52.6	mg/kg	1.0	91	75	125			
Cadmium			23.9	mg/kg	1.0	90	75	125			
Copper			89.9	mg/kg	1.0	88	75	125			
Lead			55.9	mg/kg	1.0	85	75	125			
Zinc			110	mg/kg	1.0	87	75	125			
Lab ID:	**H15010408-018A**	5	Sample Matrix Spike				Run: SUB-B238450			02/17/15 19:03	
Arsenic			50.3	mg/kg	1.0	90	75	125			
Cadmium			22.5	mg/kg	1.0	88	75	125			
Copper			88.9	mg/kg	1.0	90	75	125			
Lead			53.1	mg/kg	1.0	83	75	125			
Zinc			109	mg/kg	1.0	89	75	125			
Lab ID:	**H15010408-018A**	5	Sample Matrix Spike Duplicate				Run: SUB-B238450			02/17/15 19:07	
Arsenic			50.0	mg/kg	1.0	89	75	125	0.5	20	
Cadmium			22.7	mg/kg	1.0	89	75	125	0.8	20	
Copper			90.4	mg/kg	1.0	93	75	125	1.6	20	
Lead			53.4	mg/kg	1.0	83	75	125	0.6	20	
Zinc			109	mg/kg	1.0	89	75	125	0.2	20	
Method:	**SW6010B**									Batch: B_87034	
Lab ID:	**MB-87034**	5	Method Blank				Run: SUB-B238450			02/17/15 19:11	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.05						
Copper			0.3	mg/kg	0.3						
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	0.5						
Lab ID:	**LCS-87034**	5	Standard Reference Material				Run: SUB-B238450			02/17/15 19:14	
Arsenic			270	mg/kg	5.0	79	72	120			
Cadmium			120	mg/kg	5.0	85	73	120			
Copper			230	mg/kg	5.0	82	77	120			
Lead			160	mg/kg	5.0	85	75	120			
Zinc			180	mg/kg	5.0	84	74	120			
Lab ID:	**LFB-87034**	5	Laboratory Fortified Blank				Run: SUB-B238450			02/17/15 19:25	
Arsenic			46	mg/kg	5.0	91	80	120			
Cadmium			23	mg/kg	5.0	90	80	120			
Copper			43	mg/kg	5.0	85	80	120			
Lead			45	mg/kg	5.0	90	80	120			
Zinc			45	mg/kg	5.0	89	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_87034	
Lab ID:	**B15021187-036ADIL**	5	Serial Dilution				Run: SUB-B238450			02/17/15 19:57	
Arsenic			215	mg/kg	1.8		0	0	12	10	R
Cadmium			6.06	mg/kg	1.0		0	0	12	10	R
Copper			1210	mg/kg	1.0		0	0	9.9	10	
Lead			151	mg/kg	4.2		0	0	21	10	R
Zinc			826	mg/kg	2.5		0	0	15	10	R
Lab ID:	**B15021187-036APDS**	5	Post Digestion/Distillation Spike				Run: SUB-B238450			02/17/15 20:00	
Arsenic			228	mg/kg	1.0	75	75	125			
Cadmium			27.0	mg/kg	1.0	84	75	125			
Copper			1140	mg/kg	1.0		75	125			A
Lead			160	mg/kg	1.0	74	75	125			S
Zinc			742	mg/kg	1.0		75	125			A
Lab ID:	**B15021187-036AMS3**	5	Sample Matrix Spike				Run: SUB-B238450			02/17/15 20:36	
Arsenic			228	mg/kg	1.0	77	75	125			
Cadmium			26.6	mg/kg	1.0	85	75	125			
Copper			1160	mg/kg	1.0		75	125			A
Lead			154	mg/kg	1.0	63	75	125			S
Zinc			733	mg/kg	1.0		75	125			A
Lab ID:	**B15021187-036AMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B238450			02/17/15 20:40	
Arsenic			227	mg/kg	1.0	73	75	125	0.7	20	S
Cadmium			26.6	mg/kg	1.0	85	75	125	0.2	20	
Copper			1130	mg/kg	1.0		75	125	2.7	20	A
Lead			153	mg/kg	1.0	61	75	125	0.6	20	S
Zinc			721	mg/kg	1.0		75	125	1.6	20	A
Method:	**SW6010B**									Batch: B_87037	
Lab ID:	**MB-87037**	5	Method Blank				Run: SUB-B238450			02/17/15 21:49	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.05	mg/kg	0.05						
Copper			0.4	mg/kg	0.2						
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	0.5						
Lab ID:	**SRM-87037**	5	Standard Reference Material				Run: SUB-B238450			02/17/15 21:53	
Arsenic			250	mg/kg	5.0	74	72	120			
Cadmium			110	mg/kg	5.0	80	73	120			
Copper			220	mg/kg	5.0	78	77	120			
Lead			150	mg/kg	5.0	79	75	120			
Zinc			170	mg/kg	5.0	78	74	120			
Lab ID:	**LFB-87037**	5	Laboratory Fortified Blank				Run: SUB-B238450			02/17/15 21:56	
Arsenic			44	mg/kg	5.0	88	80	120			
Cadmium			21	mg/kg	5.0	85	80	120			
Copper			42	mg/kg	5.0	82	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010408

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_87037	
Lab ID:	**LFB-87037**	5	Laboratory Fortified Blank				Run: SUB-B238450			02/17/15 21:56	
Lead			42	mg/kg	5.0	85	80	120			
Zinc			43	mg/kg	5.0	86	80	120			
Lab ID:	**H15010408-055A**	5	Serial Dilution				Run: SUB-B238450			02/17/15 22:43	
Arsenic			5.68	mg/kg	1.8		0	0		10	N
Cadmium			0.520	mg/kg	1.0		0	0		10	N
Copper			48.9	mg/kg	1.0		0	0	7.9	10	
Lead			20.4	mg/kg	4.2		0	0		10	N
Zinc			86.7	mg/kg	2.5		0	0	13	10	R
Lab ID:	**H15010408-055A**	5	Post Digestion/Distillation Spike				Run: SUB-B238450			02/17/15 22:54	
Arsenic			49.1	mg/kg	1.0	84	75	125			
Cadmium			21.9	mg/kg	1.0	84	75	125			
Copper			89.2	mg/kg	1.0	85	75	125			
Lead			54.5	mg/kg	1.0	78	75	125			
Zinc			118	mg/kg	1.0	82	75	125			
Lab ID:	**H15010408-055A**	5	Sample Matrix Spike				Run: SUB-B238450			02/17/15 22:58	
Arsenic			47.7	mg/kg	1.0	84	75	125			
Cadmium			21.6	mg/kg	1.0	85	75	125			
Copper			86.9	mg/kg	1.0	83	75	125			
Lead			52.9	mg/kg	1.0	78	75	125			
Zinc			118	mg/kg	1.0	84	75	125			
Lab ID:	**H15010408-055A**	5	Sample Matrix Spike Duplicate				Run: SUB-B238450			02/17/15 23:02	
Arsenic			49.3	mg/kg	1.0	87	75	125	3.3	20	
Cadmium			22.4	mg/kg	1.0	89	75	125	3.9	20	
Copper			88.3	mg/kg	1.0	86	75	125	1.5	20	
Lead			55.6	mg/kg	1.0	83	75	125	4.9	20	
Zinc			123	mg/kg	1.0	94	75	125	4.0	20	

Qualifiers:

RL - Analyte reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15010408

Login completed by: Austin H. Nearpass
Reviewed by: BL2000\rwilliams
Reviewed Date: 2/3/2015

Date Received: 1/30/2015
Received by: AHN
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See Comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 4.5°C, Cooler 2 at 8.7 °C, Cooler 3 at 5.0 °C, no ice present. An 1/30/15

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-268-1824	834	1/21/15	Soil	A	B		1
4-268-1824D	835	1/21/15	Soil	A	B		1
4-268-2430	833	1/21/15	Soil	A	B		1
4-268-3036	832	1/21/15	Soil	A	B		1
4-269-4248	900	1/21/15	Soil	A	B		1
4-269-4854	918	1/21/15	Soil	A	B		1
4-269-5460	917	1/21/15	Soil	A	B		1
4-270-2430	953	1/21/15	Soil	A	B		1
4-270-3036	952	1/21/15	Soil	A	B		1
4-270-3642	951	1/21/15	Soil	A	B		1
4-278-1218	1105	1/21/15	Soil	A	B		1
4-278-1824	1104	1/21/15	Soil	A	B		1
4-278-2430	1103	1/21/15	Soil	A	B		1
4-279-4854	1031	1/21/15	Soil	A	B		1
4-279-5460	1030	1/21/15	Soil	A	B		1
4-288-1824	1044	1/21/15	Soil	A	B		1
4-288-2430	1043	1/21/15	Soil	A	B		1
4-288-3036	1042	1/21/15	Soil	A	B		1
4-303-1218	1625	1/21/15	Soil	A	B		1
4-303-1218D	1626	1/21/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15010408

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1)	(1)	(2)	(2)
Date/Time: 01/30/15 1900	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	C1 = 4.5 C2 = 8.7 TB C3 = 5.0 ice	hand del 1/30/15 14:00

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-303-1824	1624	1/21/15	Soil	A	B		1
4-303-2430	1623	1/21/15	Soil	A	B		1
4-304-4248	1640	1/21/15	Soil	A	B		1
4-304-4854	1651	1/21/15	Soil	A	B		1
4-304-5460	1650	1/21/15	Soil	A	B		1
4-305-0612	1706	1/21/15	Soil	A	B		1
4-305-1218	1705	1/21/15	Soil	A	B		1
4-305-1824	1704	1/21/15	Soil	A	B		1
4-309W-0006	757	1/21/15	Soil	A	B		1
4-309W-0612	756	1/21/15	Soil	A	B		1
4-309W-1218	755	1/21/15	Soil	A	B		1
4-313-0612	1616	1/21/15	Soil	A	B		1
4-313-1218	1615	1/21/15	Soil	A	B		1
4-313-1824	1614	1/21/15	Soil	A	B		1
4-314-1218	1555	1/21/15	Soil	A	B		1
4-314-1824	1554	1/21/15	Soil	A	B		1
4-314-2430	1553	1/21/15	Soil	A	B		1
4-322-1218	1445	1/21/15	Soil	A	B		1
4-322-1824	1444	1/21/15	Soil	A	B		1
4-322-2430	1443	1/21/15	Soil	A	B		1

H15010408

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) _____ Date/Time: 01/30/15

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) _____ Date/Time:

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): _____

C1 = 4.5
C2 = 8.7
C3 = 5.0
TR prec

Date/Time: hand del 1/30/15 14:00

COC012115 EL.xls

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-323-1824	1424	1/21/15	Soil	A	B		1
4-323-2430	1423	1/21/15	Soil	A	B		1
4-323-3036	1422	1/21/15	Soil	A	B		1
4-332-1218	1455	1/21/15	Soil	A	B		1
4-332-1824	1454	1/21/15	Soil	A	B		1
4-332-2430	1453	1/21/15	Soil	A	B		1
4-333-0612	1514	1/21/15	Soil	A	B		1
4-333-1218	1513	1/21/15	Soil	A	B		1
4-333-1824	1512	1/21/15	Soil	A	B		1
4-334-0006	1252	1/21/15	Soil	A	B		1
4-334-0612	1251	1/21/15	Soil	A	B		1
4-334-1218	1250	1/21/15	Soil	A	B		1
4-338-1218	1310	1/21/15	Soil	A	B		1
4-338-1824	1309	1/21/15	Soil	A	B		1
4-338-2430	1308	1/21/15	Soil	A	B		1
		1/21/15	Soil	A	B		1
		1/21/15	Soil	A	B		1
		1/21/15	Soil	A	B		1
		1/21/15	Soil	A	B		1
		1/21/15	Soil	A	B		1
		1/21/15	Soil	A	B		1

H15010408

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 01/30/15 1400

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 4.5 TB
C2 = 8.7 ice
C3 = 5.0

Date/Time: hand del 1/30/15 1400

COC012115 EL.xls

ANALYTICAL SUMMARY REPORT

February 27, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010405

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 58 samples for MT DEQ-Federal Superfund on 1/30/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010405-001	4-286-1218	01/20/15 8:30	01/30/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010405-002	4-286-1218D	01/20/15 8:31	01/30/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010405-003	4-286-1824	01/20/15 8:29	01/30/15	Soil	Same As Above
H15010405-004	4-286-2430	01/20/15 8:28	01/30/15	Soil	Same As Above
H15010405-005	4-287-0006	01/20/15 8:07	01/30/15	Soil	Same As Above
H15010405-006	4-287-0612	01/20/15 8:06	01/30/15	Soil	Same As Above
H15010405-007	4-287-1218	01/20/15 8:05	01/30/15	Soil	Same As Above
H15010405-008	4-287-1824	01/20/15 8:04	01/30/15	Soil	Same As Above
H15010405-009	4-290-3642	01/20/15 8:51	01/30/15	Soil	Same As Above
H15010405-010	4-290-4248	01/20/15 8:50	01/30/15	Soil	Same As Above
H15010405-011	4-297-1824	01/20/15 9:14	01/30/15	Soil	Same As Above
H15010405-012	4-297-2430	01/20/15 9:13	01/30/15	Soil	Same As Above
H15010405-013	4-297-3036	01/20/15 9:12	01/30/15	Soil	Same As Above
H15010405-014	4-307-0006	01/20/15 10:02	01/30/15	Soil	Same As Above
H15010405-015	4-307-0612	01/20/15 10:01	01/30/15	Soil	Same As Above
H15010405-016	4-307-1218	01/20/15 10:00	01/30/15	Soil	Same As Above
H15010405-017	4-308-0006	01/20/15 10:18	01/30/15	Soil	Same As Above
H15010405-018	4-308-0612	01/20/15 10:17	01/30/15	Soil	Same As Above
H15010405-019	4-315-3642	01/20/15 11:41	01/30/15	Soil	Same As Above
H15010405-020	4-315-4248	01/20/15 11:40	01/30/15	Soil	Same As Above
H15010405-021	4-316-1218	01/20/15 11:25	01/30/15	Soil	Same As Above
H15010405-022	4-316-1218D	01/20/15 11:26	01/30/15	Soil	Same As Above
H15010405-023	4-316-1824	01/20/15 11:24	01/30/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010405-024	4-316-2430	01/20/15 11:23	01/30/15	Soil	Same As Above
H15010405-025	4-317-0612	01/20/15 10:46	01/30/15	Soil	Same As Above
H15010405-026	4-317-1218	01/20/15 10:45	01/30/15	Soil	Same As Above
H15010405-027	4-317-1824	01/20/15 10:44	01/30/15	Soil	Same As Above
H15010405-028	4-318-0006	01/20/15 10:37	01/30/15	Soil	Same As Above
H15010405-029	4-318-0612	01/20/15 10:36	01/30/15	Soil	Same As Above
H15010405-030	4-319-0006	01/20/15 14:58	01/30/15	Soil	Same As Above
H15010405-031	4-319-0612	01/20/15 14:57	01/30/15	Soil	Same As Above
H15010405-032	4-319-1218	01/20/15 14:56	01/30/15	Soil	Same As Above
H15010405-033	4-324-3642	01/20/15 13:31	01/30/15	Soil	Same As Above
H15010405-034	4-324-4248	01/20/15 13:30	01/30/15	Soil	Same As Above
H15010405-035	4-325-0612	01/20/15 13:16	01/30/15	Soil	Same As Above
H15010405-036	4-325-1218	01/20/15 13:15	01/30/15	Soil	Same As Above
H15010405-037	4-325-1824	01/20/15 13:14	01/30/15	Soil	Same As Above
H15010405-038	4-326-0006	01/20/15 11:07	01/30/15	Soil	Same As Above
H15010405-039	4-326-0612	01/20/15 11:06	01/30/15	Soil	Same As Above
H15010405-040	4-326-1218	01/20/15 11:05	01/30/15	Soil	Same As Above
H15010405-041	4-328-2430	01/20/15 14:43	01/30/15	Soil	Same As Above
H15010405-042	4-328-3036	01/20/15 14:42	01/30/15	Soil	Same As Above
H15010405-043	4-328-3642	01/20/15 14:41	01/30/15	Soil	Same As Above
H15010405-044	4-328W-0006	01/20/15 16:37	01/30/15	Soil	Same As Above
H15010405-045	4-328W-0612	01/20/15 16:36	01/30/15	Soil	Same As Above
H15010405-046	4-329-1218	01/20/15 12:55	01/30/15	Soil	Same As Above
H15010405-047	4-329-1824	01/20/15 12:54	01/30/15	Soil	Same As Above
H15010405-048	4-329-2430	01/20/15 12:53	01/30/15	Soil	Same As Above
H15010405-049	4-335-1218	01/20/15 15:30	01/30/15	Soil	Same As Above
H15010405-050	4-335-1824	01/20/15 15:29	01/30/15	Soil	Same As Above
H15010405-051	4-335-2430	01/20/15 15:28	01/30/15	Soil	Same As Above
H15010405-052	4-336-0006	01/20/15 15:52	01/30/15	Soil	Same As Above
H15010405-053	4-336-0612	01/20/15 15:51	01/30/15	Soil	Same As Above
H15010405-054	4-337-0006	01/20/15 16:12	01/30/15	Soil	Same As Above
H15010405-055	4-337-0612	01/20/15 16:11	01/30/15	Soil	Same As Above
H15010405-056	4-327-0612	01/20/15 14:26	01/30/15	Soil	Same As Above
H15010405-057	4-327-1218	01/20/15 14:25	01/30/15	Soil	Same As Above
H15010405-058	4-327-1824	01/20/15 14:24	01/30/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010405

Report Date: 02/27/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010405

Report Date: 02/27/15
Date Received: 01/30/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010405-001	4-286-1218	0	0	7.6	34	< 1	63	24	115
H15010405-002	4-286-1218D	0	0	7.6	25	< 1	29	9	42
H15010405-003	4-286-1824	0	0	7.5	31	< 1	21	8	48
H15010405-004	4-286-2430	0	0	7.2	16	< 1	23	11	47
H15010405-005	4-287-0006	0	0	7.2	703	3	4030	764	1090
H15010405-006	4-287-0612	0	0	7.5	30	7	1380	16	1450
H15010405-007	4-287-1218	0	0	7.6	23	2	312	20	352
H15010405-008	4-287-1824	0	0	7.6	29	3	1150	45	637
H15010405-009	4-290-3642	0	0	7.3	116	3	666	96	1120
H15010405-010	4-290-4248	0	0	7.3	352	15	2390	205	2630
H15010405-011	4-297-1824	0	0	7.4	9	4	1720	14	484
H15010405-012	4-297-2430	0	0	7.2	7	5	1370	10	926
H15010405-013	4-297-3036	0	0	7.1	5	< 1	24	7	283
H15010405-014	4-307-0006	0	0	7.1	318	9	3180	331	2110
H15010405-015	4-307-0612	0	0	7.5	32	< 1	77	21	112
H15010405-016	4-307-1218	0	0	7.9	38	< 1	16	8	33
H15010405-017	4-308-0006	0	0	7.3	37	< 1	193	35	121
H15010405-018	4-308-0612	0	0	7.8	69	< 1	53	12	64
H15010405-019	4-315-3642	0	0	7.2	358	5	1800	271	1210
H15010405-020	4-315-4248	0	0	7.3	372	9	2860	310	1800
H15010405-021	4-316-1218	0	0	7.3	117	14	4340	298	3020
H15010405-022	4-316-1218D	0	0	7.3	137	17	2220	204	3170
H15010405-023	4-316-1824	0	0	7.6	18	< 1	43	14	129
H15010405-024	4-316-2430	0	0	7.3	16	< 1	71	19	70
H15010405-025	4-317-0612	0	0	7.6	161	3	1070	185	490
H15010405-026	4-317-1218	0	0	7.6	29	< 1	23	13	59
H15010405-027	4-317-1824	0	0	7.5	18	< 1	23	12	51
H15010405-028	4-318-0006	0	0	7.4	57	2	391	66	205
H15010405-029	4-318-0612	0	0	7.5	56	< 1	70	17	75
H15010405-030	4-319-0006	0	0	7.0	1290	4	2320	831	1630
H15010405-031	4-319-0612	0	0	7.7	94	6	1480	88	1690
H15010405-032	4-319-1218	0	0	7.7	23	1	171	27	720
H15010405-033	4-324-3642	0	0	7.6	488	14	6950	1050	3460
H15010405-034	4-324-4248	0	0	7.5	473	13	6980	968	3050
H15010405-035	4-325-0612	0	0	7.4	53	< 1	242	41	241
H15010405-036	4-325-1218	0	0	7.0	9	< 1	40	18	72
H15010405-037	4-325-1824	0	0	6.7	4	< 1	23	13	68
H15010405-038	4-326-0006	0	0	7.7	71	2	676	101	437
H15010405-039	4-326-0612	0	0	7.7	22	< 1	217	27	124
H15010405-040	4-326-1218	0	0	7.7	12	< 1	29	17	85

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010405

Report Date: 02/27/15
Date Received: 01/30/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010405-041	4-328-2430	0	0	7.5	154	7	1350	2280	3090
H15010405-042	4-328-3036	0	0	7.9	17	< 1	38	158	60
H15010405-043	4-328-3642	0	0	8.1	11	< 1	23	101	35
H15010405-044	4-328W-0006	0	0	7.8	174	6	1170	219	880
H15010405-045	4-328W-0612	0	0	7.9	55	< 1	122	19	114
H15010405-046	4-329-1218	0	0	7.5	100	3	604	97	760
H15010405-047	4-329-1824	0	0	7.5	98	3	627	91	812
H15010405-048	4-329-2430	0	0	7.8	109	5	635	98	965
H15010405-049	4-335-1218	0	0	7.0	80	12	432	66	3470
H15010405-050	4-335-1824	0	0	7.8	13	< 1	56	15	303
H15010405-051	4-335-2430	0	0	7.5	20	< 1	62	17	154
H15010405-052	4-336-0006	0	0	7.8	66	< 1	147	33	127
H15010405-053	4-336-0612	0	0	7.6	23	< 1	86	20	91
H15010405-054	4-337-0006	0	0	7.8	331	5	1990	286	1330
H15010405-055	4-337-0612	0	0	7.9	24	< 1	43	13	67
H15010405-056	4-327-0612	0	0	7.6	1070	11	11500	1080	3040
H15010405-057	4-327-1218	0	0	8.0	50	< 1	333	34	213
H15010405-058	4-327-1824	0	0	7.9	13	< 1	27	9	90

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150204A	
Lab ID: ICV_1_150202_1		Initial Calibration Verification Standard								02/03/15 07:12
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150203_1		Initial Calibration Verification Standard								02/04/15 07:37
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150202_1		Initial Calibration Verification Standard								02/03/15 07:37
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150202_1		Initial Calibration Verification Standard								02/03/15 08:05
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150202_1		Initial Calibration Verification Standard								02/03/15 06:24
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150203_1		Continuing Calibration Verification Standard								02/04/15 06:40
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150203_1		Continuing Calibration Verification Standard								02/04/15 06:41
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150203_1		Initial Calibration Verification Standard								02/04/15 06:42
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150203_1		Continuing Calibration Verification Standard								02/04/15 06:52
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150203_1		Continuing Calibration Verification Standard								02/04/15 07:08
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150203_1		Continuing Calibration Verification Standard								02/04/15 07:09
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150203_1		Initial Calibration Verification Standard								02/04/15 07:09
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150203_1		Continuing Calibration Verification Standard								02/04/15 07:19
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150203_1		Continuing Calibration Verification Standard								02/04/15 07:36
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150203_1		Continuing Calibration Verification Standard								02/04/15 07:36
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150203_1		Initial Calibration Verification Standard								02/04/15 07:37
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150203_1		Continuing Calibration Verification Standard								02/04/15 07:50
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27912
Lab ID: LCS-27912		Laboratory Control Sample				Run: SOIL PH METER_150204A				02/04/15 06:42
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15010405-010ADUP		Sample Duplicate				Run: SOIL PH METER_150204A				02/04/15 06:51
pH, sat. paste		7.33	s.u.	0.10				0.0	30	
Lab ID: H15010405-020ADUP		Sample Duplicate				Run: SOIL PH METER_150204A				02/04/15 07:01
pH, sat. paste		7.26	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 27913
Lab ID: LCS-27913		Laboratory Control Sample				Run: SOIL PH METER_150204A				02/04/15 07:10
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H15010405-030ADUP		Sample Duplicate				Run: SOIL PH METER_150204A				02/04/15 07:18
pH, sat. paste		7.02	s.u.	0.10				0.1	30	
Lab ID: H15010405-040ADUP		Sample Duplicate				Run: SOIL PH METER_150204A				02/04/15 07:28
pH, sat. paste		7.74	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27914
Lab ID: LCS-27914		Laboratory Control Sample				Run: SOIL PH METER_150204A				02/03/15 07:12
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15010405-050ADUP		Sample Duplicate				Run: SOIL PH METER_150204A				02/04/15 07:49
pH, sat. paste		7.81	s.u.	0.10				0.1	30	
Lab ID: H15010405-058ADUP		Sample Duplicate				Run: SOIL PH METER_150204A				02/04/15 07:57
pH, sat. paste		7.93	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150205B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/05/15 10:19
Arsenic			0.769	mg/L	0.0085	96	90	110			
Cadmium			0.389	mg/L	0.0010	97	90	110			
Copper			0.795	mg/L	0.010	99	90	110			
Lead			0.757	mg/L	0.010	95	90	110			
Zinc			0.795	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/05/15 10:34
Arsenic			-0.00710	mg/L	0.0085		0	0			
Cadmium			0.00531	mg/L	0.0010		0	0			
Copper			-0.00297	mg/L	0.010		0	0			
Lead			-0.00241	mg/L	0.010		0	0			
Zinc			0.00258	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/05/15 10:38
Arsenic			0.970	mg/L	0.0085	97	80	120			
Cadmium			0.910	mg/L	0.0010	91	80	120			
Copper			0.507	mg/L	0.010	101	80	120			
Lead			0.879	mg/L	0.010	88	80	120			
Zinc			0.990	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/05/15 15:21
Arsenic			2.43	mg/L	0.0085	97	90	110			
Cadmium			2.46	mg/L	0.0010	99	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.44	mg/L	0.010	98	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/05/15 15:25
Arsenic			0.000910	mg/L	0.0085						
Cadmium			0.00107	mg/L	0.0010						
Copper			2.00E-05	mg/L	0.010						
Lead			-0.0134	mg/L	0.010						
Zinc			0.00114	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/05/15 22:14
Arsenic			2.42	mg/L	0.0085	97	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.39	mg/L	0.010	96	90	110			
Lead			2.41	mg/L	0.010	96	90	110			
Zinc			2.44	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/05/15 22:18
Arsenic			0.00502	mg/L	0.0085						
Cadmium			0.000210	mg/L	0.0010						
Copper			0.00172	mg/L	0.010						
Lead			-0.00935	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150205B	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/05/15 22:18	
Zinc			5.00E-05	mg/L	0.010						
Method:	**E200.7**									Analytical Run: ICP2-HE_150210B	
Lab ID:	**ICV**		Initial Calibration Verification Standard							02/10/15 10:17	
Lead			0.783	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							02/10/15 10:32	
Lead			-0.00108	mg/L	0.010		0	0			
Lab ID:	**ICSAB**		Interference Check Sample AB							02/10/15 10:36	
Lead			0.919	mg/L	0.010	92	80	120			
Lab ID:	**CCV**		Continuing Calibration Verification Standard							02/11/15 05:22	
Lead			2.53	mg/L	0.010	101	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							02/11/15 05:25	
Lead			0.0143	mg/L	0.010						
Lab ID:	**CCV**		Continuing Calibration Verification Standard							02/11/15 06:51	
Lead			2.55	mg/L	0.010	102	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							02/11/15 06:54	
Lead			0.0123	mg/L	0.010						
Method:	**E200.7**									Analytical Run: SUB-B238337	
Lab ID:	**ICV**	3	Continuing Calibration Verification Standard							02/13/15 10:09	
Arsenic			2.47	mg/L	0.10	99	95	105			
Cadmium			2.43	mg/L	0.010	97	95	105			
Lead			2.42	mg/L	0.050	97	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: SUB-B238308	
Lab ID: QCS	3	Initial Calibration Verification Standard							02/12/15 12:05	
Arsenic		0.0491	mg/L	0.0050	98	90	110			
Cadmium		0.0258	mg/L	0.0010	103	90	110			
Lead		0.0508	mg/L	0.010	102	90	110			
Lab ID: QCS	3	Initial Calibration Verification Standard							02/12/15 17:01	
Arsenic		0.0491	mg/L	0.0050	98	90	110			
Cadmium		0.0262	mg/L	0.0010	105	90	110			
Lead		0.0497	mg/L	0.010	99	90	110			
Lab ID: QCS	3	Initial Calibration Verification Standard							02/14/15 03:47	
Arsenic		0.0488	mg/L	0.0050	98	90	110			
Cadmium		0.0252	mg/L	0.0010	101	90	110			
Lead		0.0496	mg/L	0.010	99	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27922
Lab ID:	**MB-27922**	5	Method Blank				Run: ICP2-HE_150205B				02/05/15 15:32
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27922**	5	Laboratory Fortified Blank				Run: ICP2-HE_150205B				02/05/15 15:36
Arsenic			45.9	mg/kg	1.0	92	80	120			
Cadmium			23.1	mg/kg	1.0	92	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			46.1	mg/kg	1.0	92	80	120			
Zinc			47.5	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27922**	5	Laboratory Control Sample				Run: ICP2-HE_150205B				02/05/15 15:40
Arsenic			259	mg/kg	1.8	74	72.3	106.4			
Cadmium			112	mg/kg	1.0	80	73	105.1			
Copper			245	mg/kg	1.1	86	77.5	109.6			
Lead			166	mg/kg	3.2	87	75.9	108.6			
Zinc			180	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H15010405-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150205B				02/05/15 17:08
Arsenic			301	mg/kg	1.9	87	75	125			
Cadmium			111	mg/kg	1.0	84	75	125			
Copper			296	mg/kg	1.2	92	75	125			
Lead			239	mg/kg	3.4	85	75	125			
Zinc			301	mg/kg	1.0	89	75	125			
Lab ID:	**H15010405-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150205B				02/05/15 17:12
Arsenic			118	mg/kg	1.9	94	75	125			
Cadmium			22.3	mg/kg	1.0	85	75	125			
Copper			99.4	mg/kg	1.1	91	75	125			
Lead			53.1	mg/kg	3.3	79	75	125			
Zinc			112	mg/kg	1.0	92	75	125			
Lab ID:	**H15010405-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150205B				02/05/15 17:15
Arsenic			119	mg/kg	1.8	97	75	125	0.8	20	
Cadmium			22.1	mg/kg	1.0	85	75	125	1.0	20	
Copper			98.4	mg/kg	1.1	90	75	125	1.1	20	
Lead			57.3	mg/kg	3.2	88	75	125	7.6	20	
Zinc			114	mg/kg	1.0	97	75	125	1.8	20	
Method:	**SW6010B**										Batch: 27923
Lab ID:	**MB-27923**	5	Method Blank				Run: ICP2-HE_150205B				02/05/15 17:19
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27923
Lab ID:	**MB-27923**	5	Method Blank				Run: ICP2-HE_150205B				02/05/15 17:19
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27923**	5	Laboratory Fortified Blank				Run: ICP2-HE_150205B				02/05/15 17:23
Arsenic			46.8	mg/kg	1.0	94	80	120			
Cadmium			22.8	mg/kg	1.0	91	80	120			
Copper			48.2	mg/kg	1.0	96	80	120			
Lead			45.3	mg/kg	1.0	91	80	120			
Zinc			47.0	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27923**	5	Laboratory Control Sample				Run: ICP2-HE_150205B				02/05/15 17:26
Arsenic			270	mg/kg	1.8	78	72.3	106.4			
Cadmium			113	mg/kg	1.0	82	73	105.1			
Copper			247	mg/kg	1.1	87	77.5	109.6			
Lead			164	mg/kg	3.2	87	75.9	108.6			
Zinc			181	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H15010405-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150205B				02/05/15 19:21
Arsenic			244	mg/kg	1.9	88	75	125			
Cadmium			113	mg/kg	1.0	85	75	125			
Copper			271	mg/kg	1.2	87	75	125			
Lead			248	mg/kg	3.4	85	75	125			
Zinc			306	mg/kg	1.0	88	75	125			
Lab ID:	**H15010405-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150205B				02/05/15 19:24
Arsenic			57.8	mg/kg	1.9	90	75	125			
Cadmium			22.5	mg/kg	1.0	86	75	125			
Copper			89.5	mg/kg	1.1	96	75	125			
Lead			67.9	mg/kg	3.3	90	75	125			
Zinc			118	mg/kg	1.0	88	75	125			
Lab ID:	**H15010405-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150205B				02/05/15 19:36
Arsenic			56.3	mg/kg	1.8	88	75	125	2.6	20	
Cadmium			22.4	mg/kg	1.0	87	75	125	0.4	20	
Copper			88.5	mg/kg	1.1	95	75	125	1.2	20	
Lead			64.3	mg/kg	3.2	84	75	125	5.4	20	
Zinc			119	mg/kg	1.0	91	75	125	0.8	20	
Method:	**SW6010B**										Batch: 27924
Lab ID:	**MB-27924**	5	Method Blank				Run: ICP2-HE_150205B				02/05/15 19:39
Arsenic			0.6	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27924
Lab ID:	**LFB-27924**	5	Laboratory Fortified Blank				Run: ICP2-HE_150205B				02/05/15 19:43
Arsenic			48.8	mg/kg	1.0	96	80	120			
Cadmium			23.3	mg/kg	1.0	93	80	120			
Copper			46.8	mg/kg	1.0	94	80	120			
Lead			48.0	mg/kg	1.0	96	80	120			
Zinc			47.7	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27924**	5	Laboratory Control Sample				Run: ICP2-HE_150205B				02/05/15 19:47
Arsenic			264	mg/kg	1.8	77	72.3	106.4			
Cadmium			108	mg/kg	1.0	79	73	105.1			
Copper			228	mg/kg	1.1	81	77.5	109.6			
Lead			157	mg/kg	3.2	84	75.9	108.6			
Zinc			177	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H15010405-054APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150205B				02/05/15 21:15
Arsenic			564	mg/kg	1.9	89	75	125			
Cadmium			120	mg/kg	1.0	88	75	125			
Copper			2190	mg/kg	1.2		75	125			A
Lead			518	mg/kg	3.3	89	75	125			
Zinc			1550	mg/kg	1.0		75	125			A
Lab ID:	**H15010405-054AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150205B				02/05/15 21:19
Arsenic			365	mg/kg	1.9		75	125			A
Cadmium			27.6	mg/kg	1.0	88	75	125			
Copper			2010	mg/kg	1.1		75	125			A
Lead			334	mg/kg	3.3		75	125			A
Zinc			1320	mg/kg	1.0		75	125			A
Lab ID:	**H15010405-054AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150205B				02/05/15 21:23
Arsenic			366	mg/kg	1.8		75	125	0.2	20	A
Cadmium			27.7	mg/kg	1.0	89	75	125	0.3	20	
Copper			1980	mg/kg	1.1		75	125	1.2	20	A
Lead			321	mg/kg	3.2		75	125	3.9	20	A
Zinc			1350	mg/kg	1.0		75	125	2.2	20	A
Method:	**SW6010B**										Batch: 27925
Lab ID:	**MB-27925**	5	Method Blank				Run: ICP2-HE_150205B				02/05/15 21:26
Arsenic			0.7	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27925**	5	Laboratory Fortified Blank				Run: ICP2-HE_150205B				02/05/15 21:30
Arsenic			46.6	mg/kg	1.0	92	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			46.2	mg/kg	1.0	92	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27925
Lab ID:	**LFB-27925**	5	Laboratory Fortified Blank				Run: ICP2-HE_150205B				02/05/15 21:30
Lead			48.2	mg/kg	1.0	96	80	120			
Zinc			47.1	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27925**	5	Laboratory Control Sample				Run: ICP2-HE_150205B				02/05/15 21:34
Arsenic			256	mg/kg	1.7	77	72.3	106.4			
Cadmium			109	mg/kg	1.0	82	73	105.1			
Copper			224	mg/kg	1.1	82	77.5	109.6			
Lead			154	mg/kg	3.1	85	75.9	108.6			
Zinc			173	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H15010405-058APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150205B				02/05/15 22:03
Arsenic			249	mg/kg	1.8	94	75	125			
Cadmium			117	mg/kg	1.0	92	75	125			
Copper			253	mg/kg	1.1	88	75	125			
Lead			250	mg/kg	3.2	94	75	125			
Zinc			333	mg/kg	1.0	95	75	125			
Lab ID:	**H15010405-058AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150205B				02/05/15 22:07
Arsenic			57.2	mg/kg	1.8	94	75	125			
Cadmium			22.1	mg/kg	1.0	89	75	125			
Copper			75.9	mg/kg	1.1	98	75	125			
Lead			56.2	mg/kg	3.2	91	75	125			
Zinc			135	mg/kg	1.0	90	75	125			
Lab ID:	**H15010405-058AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150205B				02/05/15 22:11
Arsenic			57.2	mg/kg	1.8	94	75	125	0.0	20	
Cadmium			22.5	mg/kg	1.0	90	75	125	1.4	20	
Copper			73.9	mg/kg	1.1	94	75	125	2.7	20	
Lead			53.4	mg/kg	3.2	85	75	125	5.0	20	
Zinc			134	mg/kg	1.0	88	75	125	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Analytical Run: SUB-B238337	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/13/15 10:20	
Arsenic			0.75	mg/L	0.10	94	90	110			
Cadmium			0.40	mg/L	0.010	100	90	110			
Copper			0.77	mg/L	0.010	96	90	110			
Lead			0.76	mg/L	0.050	95	90	110			
Zinc			0.76	mg/L	0.010	95	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/13/15 10:23	
Arsenic			0.0079	mg/L	0.10						
Cadmium			0.0081	mg/L	0.010						
Copper			-0.0013	mg/L	0.010						
Lead			0.0091	mg/L	0.050						
Zinc			0.0025	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/13/15 10:27	
Arsenic			0.91	mg/L	0.10	91	80	120			
Cadmium			0.84	mg/L	0.010	84	80	120			
Copper			0.45	mg/L	0.010	90	80	120			
Lead			0.86	mg/L	0.050	86	80	120			
Zinc			0.90	mg/L	0.010	90	80	120			
Method:	**SW6010B**									Batch: B_86937	
Lab ID:	**MB-86937**	2	Method Blank				Run: SUB-B238337			02/14/15 01:40	
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	0.5						
Lab ID:	**LFB-86937**	2	Laboratory Fortified Blank				Run: SUB-B238337			02/14/15 01:44	
Lead			42	mg/kg	5.0	85	80	120			
Zinc			44	mg/kg	5.0	87	80	120			
Lab ID:	**SRM-86937**	2	Standard Reference Material				Run: SUB-B238337			02/14/15 01:47	
Lead			160	mg/kg	5.0	83	75	120			
Zinc			170	mg/kg	5.0	82	74	120			
Lab ID:	**H15010405-018A**	2	Post Digestion/Distillation Spike				Run: SUB-B238337			02/14/15 03:25	
Lead			52.3	mg/kg	1.0	78	75	125			
Zinc			105	mg/kg	1.0	83	75	125			
Lab ID:	**H15010405-018A**	2	Sample Matrix Spike				Run: SUB-B238337			02/14/15 03:29	
Lead			49.5	mg/kg	1.0	75	75	125			
Zinc			101	mg/kg	1.0	77	75	125			
Lab ID:	**H15010405-018A**	2	Sample Matrix Spike Duplicate				Run: SUB-B238337			02/14/15 03:33	
Lead			48.8	mg/kg	1.0	74	75	125	1.5	20	S
Zinc			102	mg/kg	1.0	81	75	125	1.4	20	
Method:	**SW6010B**									Batch: B_86939	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: B_86939
Lab ID:	**MB-86939**	5	Method Blank				Run: SUB-B238337				02/14/15 03:36
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.03						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	0.5						
Lab ID:	**LFB-86939**	5	Laboratory Fortified Blank				Run: SUB-B238337				02/14/15 03:40
Arsenic			46	mg/kg	5.0	90	80	120			
Cadmium			22	mg/kg	5.0	89	80	120			
Copper			45	mg/kg	5.0	89	80	120			
Lead			45	mg/kg	5.0	91	80	120			
Zinc			45	mg/kg	5.0	90	80	120			
Lab ID:	**SRM-86939**	5	Standard Reference Material				Run: SUB-B238337				02/14/15 03:43
Arsenic			270	mg/kg	5.0	80	72	120			
Cadmium			110	mg/kg	5.0	79	73	120			
Copper			240	mg/kg	5.0	84	77	120			
Lead			160	mg/kg	5.0	87	75	120			
Zinc			180	mg/kg	5.0	84	74	120			
Lab ID:	**H15010405-036A**	5	Post Digestion/Distillation Spike				Run: SUB-B238337				02/14/15 04:30
Arsenic			105	mg/kg	1.0	97	75	125			
Cadmium			46.6	mg/kg	1.0	87	75	125			
Copper			136	mg/kg	1.0	90	75	125			
Lead			112	mg/kg	1.8	86	75	125			
Zinc			169	mg/kg	1.0	90	75	125			
Lab ID:	**H15010405-036A**	5	Sample Matrix Spike				Run: SUB-B238337				02/14/15 04:34
Arsenic			57.2	mg/kg	1.0	106	75	125			
Cadmium			23.8	mg/kg	1.0	91	75	125			
Copper			90.4	mg/kg	1.0	96	75	125			
Lead			67.9	mg/kg	1.7	91	75	125			
Zinc			122	mg/kg	1.0	95	75	125			
Lab ID:	**H15010405-036A**	5	Sample Matrix Spike Duplicate				Run: SUB-B238337				02/14/15 04:38
Arsenic			56.2	mg/kg	1.0	105	75	125	1.8	20	
Cadmium			23.3	mg/kg	1.0	90	75	125	2.1	20	
Copper			91.4	mg/kg	1.0	99	75	125	1.1	20	
Lead			65.8	mg/kg	1.7	88	75	125	3.1	20	
Zinc			123	mg/kg	1.0	97	75	125	0.3	20	
Method:	**SW6010B**										Batch: B_86949
Lab ID:	**MB-86949**	5	Method Blank				Run: SUB-B238337				02/14/15 13:25
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.03						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_86949	
Lab ID:	**MB-86949**	5	Method Blank				Run: SUB-B238337			02/14/15 13:25	
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	0.5						
Lab ID:	**LFB-86949**	5	Laboratory Fortified Blank				Run: SUB-B238337			02/14/15 13:28	
Arsenic			44	mg/kg	5.0	88	80	120			
Cadmium			22	mg/kg	5.0	88	80	120			
Copper			45	mg/kg	5.0	90	80	120			
Lead			43	mg/kg	5.0	87	80	120			
Zinc			44	mg/kg	5.0	87	80	120			
Lab ID:	**SRM-86949**	5	Standard Reference Material				Run: SUB-B238337			02/14/15 13:31	
Arsenic			260	mg/kg	5.0	76	72	120			
Cadmium			110	mg/kg	5.0	80	73	120			
Copper			230	mg/kg	5.0	82	77	120			
Lead			150	mg/kg	5.0	81	75	120			
Zinc			170	mg/kg	5.0	80	74	120			
Lab ID:	**B15020890-054APDS**	5	Post Digestion/Distillation Spike				Run: SUB-B238337			02/14/15 14:32	
Arsenic			574	mg/kg	1.9	95	75	125			
Cadmium			117	mg/kg	1.0	84	75	125			
Copper			2250	mg/kg	1.0		75	125			A
Lead			512	mg/kg	4.3	89	75	125			
Zinc			1550	mg/kg	2.5		75	125			A
Lab ID:	**B15020890-054AMS3**	5	Sample Matrix Spike				Run: SUB-B238337			02/14/15 14:35	
Arsenic			370	mg/kg	1.8		75	125			A
Cadmium			27.6	mg/kg	1.0	74	75	125			S
Copper			1970	mg/kg	1.0		75	125			A
Lead			330	mg/kg	4.2		75	125			A
Zinc			1310	mg/kg	2.5		75	125			A
Lab ID:	**B15020890-054AMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B238337			02/14/15 14:38	
Arsenic			377	mg/kg	1.8		75	125	1.7	20	A
Cadmium			27.6	mg/kg	1.0	73	75	125	0.1	20	S
Copper			2040	mg/kg	1.0		75	125	3.8	20	A
Lead			324	mg/kg	4.2		75	125	1.9	20	A
Zinc			1350	mg/kg	2.5		75	125	3.2	20	A
Method:	**SW6010B**									Batch: B_86950	
Lab ID:	**MB-86950**	2	Method Blank				Run: SUB-B238337			02/14/15 14:42	
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	0.5						
Lab ID:	**LFB-86950**	2	Laboratory Fortified Blank				Run: SUB-B238337			02/14/15 14:45	
Lead			44	mg/kg	5.0	88	80	120			
Zinc			44	mg/kg	5.0	89	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_86950	
Lab ID:	**SRM-86950**	2	Standard Reference Material				Run: SUB-B238337			02/14/15 14:49	
Lead			150	mg/kg	5.0	82	75	120			
Zinc			170	mg/kg	5.0	80	74	120			
Lab ID:	**H15010405-058A**	2	Post Digestion/Distillation Spike				Run: SUB-B238337			02/14/15 15:15	
Lead			52.4	mg/kg	1.0	84	75	125			
Zinc			131	mg/kg	1.0	85	75	125			
Lab ID:	**H15010405-058A**	2	Sample Matrix Spike				Run: SUB-B238337			02/14/15 15:19	
Lead			50.4	mg/kg	1.0	83	75	125			
Zinc			129	mg/kg	1.0	84	75	125			
Lab ID:	**H15010405-058A**	2	Sample Matrix Spike Duplicate				Run: SUB-B238337			02/14/15 15:23	
Lead			52.6	mg/kg	1.0	87	75	125	4.2	20	
Zinc			129	mg/kg	1.0	84	75	125	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B238308	
Lab ID:	**QCS**	4	Initial Calibration Verification Standard							02/12/15 10:38	
Arsenic			0.0491	mg/L	0.0010	98	90	110			
Cadmium			0.0254	mg/L	0.0010	102	90	110			
Copper			0.0491	mg/L	0.0010	98	90	110			
Lead			0.0504	mg/L	0.0010	101	90	110			
Lab ID:	**ICSA**	4	Interference Check Sample A							02/12/15 10:47	
Arsenic			-6.58E-05	mg/L	0.0010						
Cadmium			0.000520	mg/L	0.0010						
Copper			0.000329	mg/L	0.0010						
Lead			0.000183	mg/L	0.0010						
Lab ID:	**ICSAB**	4	Interference Check Sample AB							02/12/15 10:59	
Arsenic			0.00909	mg/L	0.0010	91	70	130			
Cadmium			0.00990	mg/L	0.0010	99	70	130			
Copper			0.0184	mg/L	0.0010	92	70	130			
Lead			8.80E-05	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: B_86937	
Lab ID:	**MB-86937**	4	Method Blank				Run: SUB-B238308			02/12/15 19:42	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.8						
Lab ID:	**LFB-86937**	4	Laboratory Fortified Blank				Run: SUB-B238308			02/12/15 19:46	
Arsenic			51.1	mg/kg	1.0	102	80	120			
Cadmium			27.0	mg/kg	1.0	108	80	120			
Copper			59.4	mg/kg	1.0	119	80	120			
Lead			51.4	mg/kg	1.0	103	80	120			
Lab ID:	**SRM-86937**	4	Standard Reference Material				Run: SUB-B238308			02/12/15 19:51	
Arsenic			294	mg/kg	1.0	86	72	120			
Cadmium			134	mg/kg	1.0	98	73	120			
Copper			264	mg/kg	1.0	94	77	120			
Lead			188	mg/kg	1.0	101	75	120			
Lab ID:	**H15010405-018A**	4	Post Digestion/Distillation Spike				Run: SUB-B238308			02/12/15 21:29	
Arsenic			124	mg/kg	1.0	88	75	125			
Cadmium			50.5	mg/kg	1.0	97	75	125			
Copper			96.4	mg/kg	1.0	81	75	125			
Lead			60.5	mg/kg	1.0	94	75	125			
Lab ID:	**H15010405-018A**	4	Sample Matrix Spike				Run: SUB-B238308			02/12/15 21:34	
Arsenic			132	mg/kg	1.0	105	75	125			
Cadmium			28.3	mg/kg	1.0	108	75	125			
Copper			105	mg/kg	1.0	98	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: B_86937
Lab ID:	**H15010405-018A**	4	Sample Matrix Spike				Run: SUB-B238308			02/12/15 21:34	
Lead			65.4	mg/kg	1.0	103	75	125			
Lab ID:	**H15010405-018A**	4	Sample Matrix Spike Duplicate				Run: SUB-B238308			02/12/15 21:38	
Arsenic			133	mg/kg	1.0	107	75	125	0.5	20	
Cadmium			27.9	mg/kg	1.0	107	75	125	1.5	20	
Copper			105	mg/kg	1.0	99	75	125	0.0	20	
Lead			64.7	mg/kg	1.0	103	75	125	1.2	20	
Lab ID:	**MB-86937**	4	Method Blank				Run: SUB-B238308			02/14/15 05:17	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.8						
Lab ID:	**LFB-86937**	4	Laboratory Fortified Blank				Run: SUB-B238308			02/14/15 05:21	
Arsenic			47.7	mg/kg	1.0	95	80	120			
Cadmium			25.0	mg/kg	1.0	100	80	120			
Copper			50.9	mg/kg	1.0	102	80	120			
Lead			49.1	mg/kg	1.0	98	80	120			
Lab ID:	**SRM-86937**	4	Standard Reference Material				Run: SUB-B238308			02/14/15 05:26	
Arsenic			285	mg/kg	1.0	83	72	120			
Cadmium			126	mg/kg	1.0	92	73	120			
Copper			260	mg/kg	1.0	93	77	120			
Lead			177	mg/kg	1.0	94	75	120			
Lab ID:	**H15010405-018A**	4	Post Digestion/Distillation Spike				Run: SUB-B238308			02/14/15 07:04	
Arsenic			122	mg/kg	1.0	91	75	125			
Cadmium			50.3	mg/kg	1.0	97	75	125			
Copper			102	mg/kg	1.0	95	75	125			
Lead			60.8	mg/kg	1.0	95	75	125			
Lab ID:	**H15010405-018A**	4	Sample Matrix Spike				Run: SUB-B238308			02/14/15 07:09	
Arsenic			124	mg/kg	1.0	89	75	125			
Cadmium			26.6	mg/kg	1.0	101	75	125			
Copper			104	mg/kg	1.0	95	75	125			
Lead			61.7	mg/kg	1.0	96	75	125			
Lab ID:	**H15010405-018A**	4	Sample Matrix Spike Duplicate				Run: SUB-B238308			02/14/15 07:13	
Arsenic			125	mg/kg	1.0	99	75	125	5.6	20	
Cadmium			25.5	mg/kg	1.0	98	75	125	10	20	
Copper			101	mg/kg	1.0	95	75	125	3.5	20	
Lead			60.1	mg/kg	1.0	95	75	125	8.5	20	
Method:	**SW6020**										Batch: B_86939

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: B_86939
Lab ID:	**MB-86939**	2	Method Blank				Run: SUB-B238308				02/14/15 07:22
Arsenic			ND	mg/kg	0.4						
Lead			ND	mg/kg	0.8						
Lab ID:	**LFB-86939**	2	Laboratory Fortified Blank				Run: SUB-B238308				02/14/15 07:27
Arsenic			48.4	mg/kg	1.0	97	80	120			
Lead			47.5	mg/kg	1.0	95	80	120			
Lab ID:	**SRM-86939**	2	Standard Reference Material				Run: SUB-B238308				02/14/15 07:31
Arsenic			289	mg/kg	1.0	84	72	120			
Lead			175	mg/kg	1.0	94	75	120			
Lab ID:	**H15010405-036A**	2	Post Digestion/Distillation Spike				Run: SUB-B238308				02/14/15 08:34
Arsenic			54.9	mg/kg	1.0	90	75	125			
Lead			64.9	mg/kg	1.0	92	75	125			
Lab ID:	**H15010405-036A**	2	Sample Matrix Spike				Run: SUB-B238308				02/14/15 08:39
Arsenic			57.9	mg/kg	1.0	96	75	125			
Lead			67.6	mg/kg	1.0	97	75	125			
Lab ID:	**H15010405-036A**	2	Sample Matrix Spike Duplicate				Run: SUB-B238308				02/14/15 08:56
Arsenic			57.1	mg/kg	1.0	95	75	125	1.3	20	
Lead			66.8	mg/kg	1.0	96	75	125	1.3	20	
Method:	**SW6020**										Batch: B_86950
Lab ID:	**MB-86950**	3	Method Blank				Run: SUB-B238308				02/13/15 17:40
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lab ID:	**LFB-86950**	3	Laboratory Fortified Blank				Run: SUB-B238308				02/13/15 17:44
Arsenic			47.0	mg/kg	1.0	94	80	120			
Cadmium			25.3	mg/kg	1.0	101	80	120			
Copper			50.1	mg/kg	1.0	100	80	120			
Lab ID:	**SRM-86950**	3	Standard Reference Material				Run: SUB-B238308				02/13/15 17:49
Arsenic			302	mg/kg	1.0	88	72	120			
Cadmium			136	mg/kg	1.0	100	73	120			
Copper			279	mg/kg	1.0	100	77	120			
Lab ID:	**H15010405-058A**	3	Post Digestion/Distillation Spike				Run: SUB-B238308				02/13/15 18:29
Arsenic			57.0	mg/kg	1.0	88	75	125			
Cadmium			47.1	mg/kg	1.0	94	75	125			
Copper			78.4	mg/kg	1.0	64	75	125			S
Lab ID:	**H15010405-058A**	3	Sample Matrix Spike				Run: SUB-B238308				02/13/15 18:33
Arsenic			71.3	mg/kg	1.0	117	75	125			
Cadmium			33.1	mg/kg	1.0	131	75	125			S

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/27/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010405

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86950	
Lab ID:	**H15010405-058A**	3	Sample Matrix Spike				Run: SUB-B238308			02/13/15 18:33	
Copper			106	mg/kg	1.0	118	75	125			
Lab ID:	**H15010405-058A**	3	Sample Matrix Spike Duplicate				Run: SUB-B238308			02/13/15 18:38	
Arsenic			69.4	mg/kg	1.0	113	75	125	2.6	20	
Cadmium			32.8	mg/kg	1.0	130	75	125	1.0	20	S
Copper			103	mg/kg	1.0	114	75	125	2.0	20	
Method:	**SW6020**									Batch: B_86950	
Lab ID:	**MB-86950**	4	Method Blank				Run: SUB-B238527			02/19/15 18:06	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.07						
Copper			ND	mg/kg	0.3						
Zinc			2	mg/kg	0.9						
Lab ID:	**LFB-86950**	4	Laboratory Fortified Blank				Run: SUB-B238527			02/19/15 18:13	
Arsenic			49.2	mg/kg	1.0	98	80	120			
Cadmium			25.7	mg/kg	1.0	103	80	120			
Copper			54.1	mg/kg	1.0	108	80	120			
Zinc			53.1	mg/kg	1.0	101	80	120			
Lab ID:	**SRM-86950**	4	Standard Reference Material				Run: SUB-B238527			02/19/15 18:19	
Arsenic			317	mg/kg	1.0	92	72	120			
Cadmium			135	mg/kg	1.0	98	73	120			
Copper			294	mg/kg	1.0	105	77	120			
Zinc			226	mg/kg	1.0	106	74	120			
Lab ID:	**H15010405-058A**	4	Post Digestion/Distillation Spike				Run: SUB-B238527			02/19/15 19:12	
Arsenic			57.9	mg/kg	1.0	97	75	125			
Cadmium			49.2	mg/kg	1.0	98	75	125			
Copper			81.4	mg/kg	1.0	97	75	125			
Zinc			145	mg/kg	1.0	74	75	125			S
Lab ID:	**H15010405-058A**	4	Sample Matrix Spike				Run: SUB-B238527			02/19/15 19:18	
Arsenic			57.8	mg/kg	1.0	97	75	125			
Cadmium			26.5	mg/kg	1.0	105	75	125			
Copper			86.5	mg/kg	1.0	107	75	125			
Zinc			158	mg/kg	1.0	100	75	125			
Lab ID:	**H15010405-058A**	4	Sample Matrix Spike Duplicate				Run: SUB-B238527			02/19/15 19:24	
Arsenic			59.3	mg/kg	1.0	100	75	125	2.5	20	
Cadmium			26.2	mg/kg	1.0	104	75	125	1.2	20	
Copper			85.2	mg/kg	1.0	105	75	125	1.6	20	
Zinc			152	mg/kg	1.0	88	75	125	4.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15010405

Login completed by: Austin H. Nearpass
Reviewed by: BL2000\rwilliams
Reviewed Date: 2/2/2015

Date Received: 1/30/2015
Received by: AHN
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	comments °C No Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

C1=8.7 TB. C2=14.3 no Temp blank. C3=9.0 TB. An 1/30/15

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-286-1218	830	1/20/15	Soil	A	B		1
4-286-1218D	831	1/20/15	Soil	A	B		1
4-286-1824	829	1/20/15	Soil	A	B		1
4-286-2430	828	1/20/15	Soil	A	B		1
4-287-0006	807	1/20/15	Soil	A	B		1
4-287-0612	806	1/20/15	Soil	A	B		1
4-287-1218	805	1/20/15	Soil	A	B		1
4-287-1824	804	1/20/15	Soil	A	B		1
4-290-3642	851	1/20/15	Soil	A	B		1
4-290-4248	850	1/20/15	Soil	A	B		1
4-297-1824	914	1/20/15	Soil	A	B		1
4-297-2430	913	1/20/15	Soil	A	B		1
4-297-3036	912	1/20/15	Soil	A	B		1
4-307-0006	1002	1/20/15	Soil	A	B		1
4-307-0612	1001	1/20/15	Soil	A	B		1
4-307-1218	1000	1/20/15	Soil	A	B		1
4-308-0006	1018	1/20/15	Soil	A	B		1
4-308-0612	1017	1/20/15	Soil	A	B		1
4-315-3642	1141	1/20/15	Soil	A	B		1
4-315-4248	1140	1/20/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15010405

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 01/30/15 1400	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1 = 8.7 TB C2 = 14.3 ~~0TB~~ } ice C3 = 9.0 TB	hand del 1/30/15 1400

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
C2							
4-316-1218	1125	1/20/15	Soil	A	B		1
4-316-1218D	1126	1/20/15	Soil	A	B		1
4-316-1824	1124	1/20/15	Soil	A	B		1
4-316-2430	1123	1/20/15	Soil	A	B		1
4-317-0612	1046	1/20/15	Soil	A	B		1
4-317-1218	1045	1/20/15	Soil	A	B		1
4-317-1824	1044	1/20/15	Soil	A	B		1
4-318-0006	1037	1/20/15	Soil	A	B		1
4-318-0612	1036	1/20/15	Soil	A	B		1
4-319-0006	1458	1/20/15	Soil	A	B		1
4-319-0612	1457	1/20/15	Soil	A	B		1
4-319-1218	1456	1/20/15	Soil	A	B		1
4-324-3642	1331	1/20/15	Soil	A	B		1
4-324-4248	1330	1/20/15	Soil	A	B		1
4-325-0612	1316	1/20/15	Soil	A	B		1
4-325-1218	1315	1/20/15	Soil	A	B		1
4-325-1824	1314	1/20/15	Soil	A	B		1
4-326-0006	1107	1/20/15	Soil	A	B		1
4-326-0612	1106	1/20/15	Soil	A	B		1
4-326-1218	1105	1/20/15	Soil	A	B		1
C1							

H15010405

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 01/30/15 1400

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 = 8.7 TD
C2 = 14.3 TD
C3 = 9.0 TD
Date/Time: hand del / ice 1/30/15 14:00

COC012015 EL.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-328-2430 C2	1443	1/20/15	Soil	A	B		1
4-328-3036	1442	1/20/15	Soil	A	B		1
4-328-3642 C1	1441	1/20/15	Soil	A	B		1
4-328W-0006 C2	1637	1/20/15	Soil	A	B		1
4-328W-0612	1636	1/20/15	Soil	A	B		1
4-329-1218 C1	1255	1/20/15	Soil	A	B		1
4-329-1824	1254	1/20/15	Soil	A	B		1
4-329-2430	1253	1/20/15	Soil	A	B		1
4-335-1218	1530	1/20/15	Soil	A	B		1
4-335-1824	1529	1/20/15	Soil	A	B		1
4-335-2430	1528	1/20/15	Soil	A	B		1
4-336-0006	1552	1/20/15	Soil	A	B		1
4-336-0612	1551	1/20/15	Soil	A	B		1
4-337-0006	1612	1/20/15	Soil	A	B		1
4-337-0612	1611	1/20/15	Soil	A	B		1
4-327-0612	1426	1/20/15	Soil	A	B		1
4-327-1218	1425	1/20/15	Soil	A	B		1
4-327-1824	1424	1/20/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15010405

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 01/30/15 1400

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 8.7 TB
C2 = 14.3 TB
C3 = 9.0 TB

Date/Time: hand del. ~~0~~ ice
1/30/15 1400

ANALYTICAL SUMMARY REPORT

February 20, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010302

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 55 samples for MT DEQ-Federal Superfund on 1/22/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010302-001	4-169W-0006	01/15/15 8:13	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010302-002	4-169W-0612	01/15/15 8:12	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010302-003	4-180W-0006	01/15/15 8:33	01/22/15	Soil	Same As Above
H15010302-004	4-180W-0612	01/15/15 8:32	01/22/15	Soil	Same As Above
H15010302-005	4-200-3036	01/15/15 14:22	01/22/15	Soil	Same As Above
H15010302-006	4-200-3642	01/15/15 14:21	01/22/15	Soil	Same As Above
H15010302-007	4-200-4248	01/15/15 14:20	01/22/15	Soil	Same As Above
H15010302-008	4-203-2430	01/15/15 14:03	01/22/15	Soil	Same As Above
H15010302-009	4-203-3036	01/15/15 14:02	01/22/15	Soil	Same As Above
H15010302-010	4-203-3642	01/15/15 14:01	01/22/15	Soil	Same As Above
H15010302-011	4-207-1824	01/15/15 14:44	01/22/15	Soil	Same As Above
H15010302-012	4-207-2430	01/15/15 14:43	01/22/15	Soil	Same As Above
H15010302-013	4-207-3036	01/15/15 14:42	01/22/15	Soil	Same As Above
H15010302-014	4-209-1218	01/15/15 16:15	01/22/15	Soil	Same As Above
H15010302-015	4-209-1824	01/15/15 16:14	01/22/15	Soil	Same As Above
H15010302-016	4-209-2430	01/15/15 16:13	01/22/15	Soil	Same As Above
H15010302-017	4-210-3036	01/15/15 13:52	01/22/15	Soil	Same As Above
H15010302-018	4-210-3642	01/15/15 13:51	01/22/15	Soil	Same As Above
H15010302-019	4-210-4248	01/15/15 13:50	01/22/15	Soil	Same As Above
H15010302-020	4-215-1218	01/15/15 15:25	01/22/15	Soil	Same As Above
H15010302-021	4-215-1218D	01/15/15 15:26	01/22/15	Soil	Same As Above
H15010302-022	4-215-1824	01/15/15 15:24	01/22/15	Soil	Same As Above
H15010302-023	4-215-2430	01/15/15 15:23	01/22/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010302-024	4-215-3036	01/15/15 15:22	01/22/15	Soil	Same As Above
H15010302-025	4-217-3642	01/15/15 15:51	01/22/15	Soil	Same As Above
H15010302-026	4-217-4248	01/15/15 15:50	01/22/15	Soil	Same As Above
H15010302-027	4-220-1218	01/15/15 16:25	01/22/15	Soil	Same As Above
H15010302-028	4-220-1824	01/15/15 16:24	01/22/15	Soil	Same As Above
H15010302-029	4-220-2430	01/15/15 16:23	01/22/15	Soil	Same As Above
H15010302-030	4-221-1824	01/15/15 12:59	01/22/15	Soil	Same As Above
H15010302-031	4-221-2430	01/15/15 12:58	01/22/15	Soil	Same As Above
H15010302-032	4-221-3036	01/15/15 12:57	01/22/15	Soil	Same As Above
H15010302-033	4-222-1824	01/15/15 10:14	01/22/15	Soil	Same As Above
H15010302-034	4-222-2430	01/15/15 10:13	01/22/15	Soil	Same As Above
H15010302-035	4-222-3036	01/15/15 10:12	01/22/15	Soil	Same As Above
H15010302-036	4-223-2430	01/15/15 9:13	01/22/15	Soil	Same As Above
H15010302-037	4-223-3036	01/15/15 9:12	01/22/15	Soil	Same As Above
H15010302-038	4-223-3642	01/15/15 9:11	01/22/15	Soil	Same As Above
H15010302-039	4-228-0006	01/15/15 17:02	01/22/15	Soil	Same As Above
H15010302-040	4-228-0612	01/15/15 17:01	01/22/15	Soil	Same As Above
H15010302-041	4-228-1218	01/15/15 17:00	01/22/15	Soil	Same As Above
H15010302-042	4-229-1218	01/15/15 11:25	01/22/15	Soil	Same As Above
H15010302-043	4-229-1218D	01/15/15 11:26	01/22/15	Soil	Same As Above
H15010302-044	4-229-1824	01/15/15 11:24	01/22/15	Soil	Same As Above
H15010302-045	4-229-2430	01/15/15 11:23	01/22/15	Soil	Same As Above
H15010302-046	4-230-3036	01/15/15 10:57	01/22/15	Soil	Same As Above
H15010302-047	4-230-3642	01/15/15 10:56	01/22/15	Soil	Same As Above
H15010302-048	4-230-4248	01/15/15 10:55	01/22/15	Soil	Same As Above
H15010302-049	4-231-2430	01/15/15 9:33	01/22/15	Soil	Same As Above
H15010302-050	4-231-3036	01/15/15 9:32	01/22/15	Soil	Same As Above
H15010302-051	4-231-4248	01/15/15 9:30	01/22/15	Soil	Same As Above
H15010302-052	4-231W-1218	01/15/15 11:58	01/22/15	Soil	Same As Above
H15010302-053	4-231W-1824	01/15/15 11:57	01/22/15	Soil	Same As Above
H15010302-054	4-231W-2430	01/15/15 11:56	01/22/15	Soil	Same As Above
H15010302-055	4-231-3642	01/15/15 9:31	01/22/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

ANALYTICAL SUMMARY REPORT

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010302

Report Date: 02/20/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010302

Report Date: 02/20/15
Date Received: 01/22/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010302-001	4-169W-0006		7.7	204	5	1650	313	1090
H15010302-002	4-169W-0612		7.5	168	3	947	154	698
H15010302-003	4-180W-0006		7.6	179	4	930	197	866
H15010302-004	4-180W-0612		7.8	20	< 1	41	9	64
H15010302-005	4-200-3036		6.2	29	6	6080	28	1270
H15010302-006	4-200-3642		6.3	2	1	31	9	1250
H15010302-007	4-200-4248		5.5	5	< 1	24	12	55
H15010302-008	4-203-2430		7.4	9	5	4130	17	1270
H15010302-009	4-203-3036		7.3	4	< 1	26	9	59
H15010302-010	4-203-3642		7.5	44	1	286	28	203
H15010302-011	4-207-1824		7.6	2120	25	18300	1380	4380
H15010302-012	4-207-2430		6.9	44	1	149	27	1940
H15010302-013	4-207-3036		6.2	7	< 1	32	11	96
H15010302-014	4-209-1218		7.3	1290	9	8280	1030	2660
H15010302-015	4-209-1824		7.1	37	6	823	41	1290
H15010302-016	4-209-2430		7.1	4	< 1	17	8	59
H15010302-017	4-210-3036		7.3	8	4	74	10	1520
H15010302-018	4-210-3642		7.0	5	< 1	17	9	58
H15010302-019	4-210-4248		6.7	3	< 1	16	9	35
H15010302-020	4-215-1218		6.8	69	10	12800	155	1670
H15010302-021	4-215-1218D		6.9	28	7	4280	31	1180
H15010302-022	4-215-1824		7.0	17	7	3200	18	1180
H15010302-023	4-215-2430		7.1	70	4	3380	59	867
H15010302-024	4-215-3036		7.4	17	4	3570	13	736
H15010302-025	4-217-3642		7.2	435	6	2630	281	1540
H15010302-026	4-217-4248		7.2	1390	17	9630	646	2570
H15010302-027	4-220-1218		7.7	116	2	677	91	482
H15010302-028	4-220-1824		7.8	6	< 1	29	13	55
H15010302-029	4-220-2430		7.8	7	< 1	31	15	61
H15010302-030	4-221-1824		6.6	10	9	726	16	2070
H15010302-031	4-221-2430		6.5	8	< 1	38	13	173
H15010302-032	4-221-3036		6.4	5	< 1	27	11	152
H15010302-033	4-222-1824		6.4	12	10	1910	22	2020
H15010302-034	4-222-2430		7.0	27	9	767	38	1470
H15010302-035	4-222-3036		7.3	9	5	150	18	785
H15010302-036	4-223-2430		7.4	7	15	864	16	2520
H15010302-037	4-223-3036		7.3	7	5	48	13	1660
H15010302-038	4-223-3642		7.3	7	2	71	13	760
H15010302-039	4-228-0006		7.5	387	7	1710	325	1590
H15010302-040	4-228-0612		7.7	405	7	1890	346	1650

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010302

Report Date: 02/20/15
Date Received: 01/22/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010302-041	4-228-1218		8.1	54	< 1	145	29	145
H15010302-042	4-229-1218		7.1	184	8	5120	310	1280
H15010302-043	4-229-1218D		6.9	739	4	910	527	1180
H15010302-044	4-229-1824		7.0	37	3	505	36	603
H15010302-045	4-229-2430		6.8	12	< 1	119	24	334
H15010302-046	4-230-3036		5.7	1440	4	6380	1600	2180
H15010302-047	4-230-3642		6.5	8	5	828	14	1130
H15010302-048	4-230-4248		6.2	10	< 1	51	13	71
H15010302-049	4-231-2430		7.5	1870	16	13900	903	3750
H15010302-050	4-231-3036		7.5	59	2	333	33	645
H15010302-051	4-231-4248		7.7	29	< 1	152	35	112
H15010302-052	4-231W-1218		7.7	691	23	8790	910	5220
H15010302-053	4-231W-1824		7.7	23	< 1	58	23	399
H15010302-054	4-231W-2430		7.2	7	< 1	21	12	63
H15010302-055	4-231-3642		7.4	8	< 1	39	14	61

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150204A	
Lab ID: CCV_1_150202_1		Continuing Calibration Verification Standard								02/03/15 07:10
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150202_1		Continuing Calibration Verification Standard								02/03/15 07:11
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150202_1		Initial Calibration Verification Standard								02/03/15 07:12
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150202_1		Continuing Calibration Verification Standard								02/03/15 07:22
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150203_1		Continuing Calibration Verification Standard								02/04/15 07:36
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150203_1		Continuing Calibration Verification Standard								02/04/15 07:36
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150203_1		Initial Calibration Verification Standard								02/04/15 07:37
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150202_1		Continuing Calibration Verification Standard								02/03/15 07:35
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150202_1		Continuing Calibration Verification Standard								02/03/15 07:36
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150202_1		Initial Calibration Verification Standard								02/03/15 07:37
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150202_1		Continuing Calibration Verification Standard								02/03/15 07:47
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150202_1		Continuing Calibration Verification Standard								02/03/15 08:03
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150202_1		Continuing Calibration Verification Standard								02/03/15 08:04
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150202_1		Initial Calibration Verification Standard								02/03/15 08:05
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150202_1		Continuing Calibration Verification Standard								02/03/15 08:14
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150202_1		Initial Calibration Verification Standard								02/03/15 06:24
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150203_1		Initial Calibration Verification Standard								02/04/15 06:42
pH, sat. paste		9.99	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150204A		
Lab ID: ICV_1_150203_1		Initial Calibration Verification Standard							02/04/15 07:09	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150203_1		Initial Calibration Verification Standard							02/04/15 07:37	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 27896	
Lab ID: LCS-27896		Laboratory Control Sample				Run: SOIL PH METER_150204A			02/03/15 07:12	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15010302-010ADUP		Sample Duplicate				Run: SOIL PH METER_150204A			02/03/15 07:21	
pH, sat. paste		7.62	s.u.	0.10				1.5	30	
Lab ID: H15010302-020ADUP		Sample Duplicate				Run: SOIL PH METER_150204A			02/03/15 07:30	
pH, sat. paste		6.82	s.u.	0.10				0.3	30	
Method: ASAM10-3.2									Batch: 27897	
Lab ID: LCS-27897		Laboratory Control Sample				Run: SOIL PH METER_150204A			02/03/15 07:38	
pH, sat. paste		7.67	s.u.	0.10	103	95	105			
Lab ID: H15010302-030ADUP		Sample Duplicate				Run: SOIL PH METER_150204A			02/03/15 07:47	
pH, sat. paste		6.61	s.u.	0.10				0.2	30	
Lab ID: H15010302-040ADUP		Sample Duplicate				Run: SOIL PH METER_150204A			02/03/15 07:56	
pH, sat. paste		7.72	s.u.	0.10				0.3	30	
Method: ASAM10-3.2									Batch: 27898	
Lab ID: LCS-27898		Laboratory Control Sample				Run: SOIL PH METER_150204A			02/03/15 08:06	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H15010302-050ADUP		Sample Duplicate				Run: SOIL PH METER_150204A			02/03/15 08:13	
pH, sat. paste		7.51	s.u.	0.10				0.3	30	
Lab ID: H15010302-055ADUP		Sample Duplicate				Run: SOIL PH METER_150204A			02/03/15 08:19	
pH, sat. paste		7.36	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150203B	
Lab ID: ICV	5	Initial Calibration Verification Standard							02/03/15 12:17	
Arsenic		0.782	mg/L	0.0085	98	90	110			
Cadmium		0.383	mg/L	0.0010	96	90	110			
Copper		0.795	mg/L	0.010	99	90	110			
Lead		0.804	mg/L	0.010	101	90	110			
Zinc		0.785	mg/L	0.010	98	90	110			
Lab ID: ICSA	5	Interference Check Sample A							02/03/15 12:32	
Arsenic		0.0105	mg/L	0.0085		0	0			
Cadmium		0.00566	mg/L	0.0010		0	0			
Copper		-0.00322	mg/L	0.010		0	0			
Lead		0.0232	mg/L	0.010		0	0			
Zinc		0.00424	mg/L	0.010		0	0			
Lab ID: ICSAB	5	Interference Check Sample AB							02/03/15 12:36	
Arsenic		0.966	mg/L	0.0085	97	80	120			
Cadmium		0.891	mg/L	0.0010	89	80	120			
Copper		0.504	mg/L	0.010	101	80	120			
Lead		0.914	mg/L	0.010	91	80	120			
Zinc		0.973	mg/L	0.010	97	80	120			
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/03/15 23:40	
Arsenic		2.48	mg/L	0.0085	99	90	110			
Cadmium		2.45	mg/L	0.0010	98	90	110			
Copper		2.49	mg/L	0.010	100	90	110			
Lead		2.51	mg/L	0.010	100	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/03/15 23:44	
Arsenic		0.00536	mg/L	0.0085						
Cadmium		0.000650	mg/L	0.0010						
Copper		0.00535	mg/L	0.010						
Lead		0.00668	mg/L	0.010						
Zinc		-1.00E-05	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/04/15 00:25	
Arsenic		2.47	mg/L	0.0085	99	90	110			
Cadmium		2.44	mg/L	0.0010	98	90	110			
Copper		2.48	mg/L	0.010	99	90	110			
Lead		2.46	mg/L	0.010	98	90	110			
Zinc		2.44	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/04/15 00:28	
Arsenic		-0.000250	mg/L	0.0085						
Cadmium		0.000720	mg/L	0.0010						
Copper		0.000250	mg/L	0.010						
Lead		-0.00183	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150203B	
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/04/15 00:28
Zinc			-0.000580	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/04/15 00:51
Arsenic			2.46	mg/L	0.0085	99	90	110			
Cadmium			2.44	mg/L	0.0010	98	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.43	mg/L	0.010	97	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/04/15 00:55
Arsenic			-0.00284	mg/L	0.0085						
Cadmium			0.000630	mg/L	0.0010						
Copper			0.00150	mg/L	0.010						
Lead			-0.0269	mg/L	0.010						
Zinc			-0.00115	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/04/15 01:35
Arsenic			2.45	mg/L	0.0085	98	90	110			
Cadmium			2.44	mg/L	0.0010	98	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.42	mg/L	0.010	97	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/04/15 01:39
Arsenic			-0.00314	mg/L	0.0085						
Cadmium			7.00E-05	mg/L	0.0010						
Copper			-0.00230	mg/L	0.010						
Lead			-0.00679	mg/L	0.010						
Zinc			-0.000290	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/04/15 02:19
Arsenic			2.46	mg/L	0.0085	98	90	110			
Cadmium			2.46	mg/L	0.0010	99	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.42	mg/L	0.010	97	90	110			
Zinc			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/04/15 02:23
Arsenic			0.00251	mg/L	0.0085						
Cadmium			0.000260	mg/L	0.0010						
Copper			-0.000230	mg/L	0.010						
Lead			-0.00678	mg/L	0.010						
Zinc			-4.00E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/04/15 03:04
Arsenic			2.53	mg/L	0.0085	101	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150203B	
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/04/15 03:04	
Cadmium		2.51	mg/L	0.0010	100	90	110			
Copper		2.60	mg/L	0.010	104	90	110			
Lead		2.49	mg/L	0.010	100	90	110			
Zinc		2.54	mg/L	0.010	102	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/04/15 03:07	
Arsenic		-0.000910	mg/L	0.0085						
Cadmium		0.000500	mg/L	0.0010						
Copper		0.00459	mg/L	0.010						
Lead		-0.0324	mg/L	0.010						
Zinc		0.000220	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/04/15 03:48	
Arsenic		2.43	mg/L	0.0085	97	90	110			
Cadmium		2.43	mg/L	0.0010	97	90	110			
Copper		2.50	mg/L	0.010	100	90	110			
Lead		2.41	mg/L	0.010	96	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/04/15 03:52	
Arsenic		-0.0102	mg/L	0.0085						
Cadmium		0.000170	mg/L	0.0010						
Copper		-0.00187	mg/L	0.010						
Lead		-0.0138	mg/L	0.010						
Zinc		0.000750	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/04/15 04:17	
Arsenic		2.47	mg/L	0.0085	99	90	110			
Cadmium		2.43	mg/L	0.0010	97	90	110			
Copper		2.50	mg/L	0.010	100	90	110			
Lead		2.40	mg/L	0.010	96	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/04/15 04:21	
Arsenic		0.000490	mg/L	0.0085						
Cadmium		0.000500	mg/L	0.0010						
Copper		0.000370	mg/L	0.010						
Lead		-0.0110	mg/L	0.010						
Zinc		0.000280	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150204C	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								02/04/15 15:28
Arsenic			0.797	mg/L	0.0085	100	90	110			
Cadmium			0.382	mg/L	0.0010	96	90	110			
Copper			0.798	mg/L	0.010	100	90	110			
Lead			0.779	mg/L	0.010	97	90	110			
Zinc			0.782	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								02/04/15 15:43
Arsenic			0.0137	mg/L	0.0085		0	0			
Cadmium			0.00532	mg/L	0.0010		0	0			
Copper			-0.000190	mg/L	0.010		0	0			
Lead			0.00350	mg/L	0.010		0	0			
Zinc			0.00337	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								02/04/15 15:47
Arsenic			0.987	mg/L	0.0085	99	80	120			
Cadmium			0.907	mg/L	0.0010	91	80	120			
Copper			0.505	mg/L	0.010	101	80	120			
Lead			0.913	mg/L	0.010	91	80	120			
Zinc			0.982	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/04/15 23:52
Arsenic			2.46	mg/L	0.0085	98	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/04/15 23:55
Arsenic			0.00472	mg/L	0.0085						
Cadmium			-0.000200	mg/L	0.0010						
Copper			-0.000180	mg/L	0.010						
Lead			-0.00183	mg/L	0.010						
Zinc			0.000490	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								02/05/15 00:36
Arsenic			2.44	mg/L	0.0085	97	90	110			
Cadmium			2.44	mg/L	0.0010	97	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.42	mg/L	0.010	97	90	110			
Zinc			2.44	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								02/05/15 00:39
Arsenic			-0.0164	mg/L	0.0085						
Cadmium			-0.000450	mg/L	0.0010						
Copper			0.00273	mg/L	0.010						
Lead			0.00707	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150204C	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/05/15 00:39	
Zinc			0.000470	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/05/15 01:17	
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.44	mg/L	0.0010	98	90	110			
Copper			2.46	mg/L	0.010	98	90	110			
Lead			2.42	mg/L	0.010	97	90	110			
Zinc			2.44	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/05/15 01:20	
Arsenic			0.00463	mg/L	0.0085						
Cadmium			-0.000770	mg/L	0.0010						
Copper			8.00E-05	mg/L	0.010						
Lead			0.00696	mg/L	0.010						
Zinc			0.000420	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150211B	
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							02/11/15 16:33	
Arsenic			0.767	mg/L	0.0085	96	90	110			
Zinc			0.784	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							02/11/15 16:48	
Arsenic			-0.000270	mg/L	0.0085		0	0			
Zinc			-0.000320	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	2	Interference Check Sample AB							02/11/15 16:52	
Arsenic			0.957	mg/L	0.0085	96	80	120			
Zinc			0.979	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/12/15 03:19	
Arsenic			2.52	mg/L	0.0085	101	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/12/15 03:23	
Arsenic			-0.00100	mg/L	0.0085						
Zinc			0.000910	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/12/15 04:04	
Arsenic			2.54	mg/L	0.0085	102	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/12/15 04:07	
Arsenic			-0.00204	mg/L	0.0085						
Zinc			0.00147	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/12/15 04:48	
Arsenic			2.54	mg/L	0.0085	102	90	110			
Zinc			2.53	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/12/15 04:52	
Arsenic			0.00292	mg/L	0.0085						
Zinc			0.00124	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/12/15 05:15	
Arsenic			2.50	mg/L	0.0085	100	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/12/15 05:18	
Arsenic			-0.0126	mg/L	0.0085						
Zinc			0.000310	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/12/15 05:59	
Arsenic			2.51	mg/L	0.0085	100	90	110			
Zinc			2.51	mg/L	0.010	101	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.7**									Analytical Run: ICP2-HE_150211B	
Lab ID: **CCB**	2	Continuing Calibration Blank							02/12/15 06:02	
Arsenic		0.00121	mg/L	0.0085						
Zinc		0.000540	mg/L	0.010						
Lab ID: **CCV**	2	Continuing Calibration Verification Standard							02/12/15 06:43	
Arsenic		2.45	mg/L	0.0085	98	90	110			
Zinc		2.46	mg/L	0.010	98	90	110			
Lab ID: **CCB**	2	Continuing Calibration Blank							02/12/15 06:47	
Arsenic		-0.00362	mg/L	0.0085						
Zinc		0.000270	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: SUB-B238308	
Lab ID: QCS	3	Initial Calibration Verification Standard							02/12/15 12:05	
Arsenic		0.0491	mg/L	0.0050	98	90	110			
Cadmium		0.0258	mg/L	0.0010	103	90	110			
Lead		0.0508	mg/L	0.010	102	90	110			
Lab ID: QCS	3	Initial Calibration Verification Standard							02/12/15 17:01	
Arsenic		0.0491	mg/L	0.0050	98	90	110			
Cadmium		0.0262	mg/L	0.0010	105	90	110			
Lead		0.0497	mg/L	0.010	99	90	110			
Lab ID: QCS	3	Initial Calibration Verification Standard							02/14/15 03:47	
Arsenic		0.0488	mg/L	0.0050	98	90	110			
Cadmium		0.0252	mg/L	0.0010	101	90	110			
Lead		0.0496	mg/L	0.010	99	90	110			
Method: E200.8									Analytical Run: SUB-B238527	
Lab ID: QCS	2	Initial Calibration Verification Standard							02/18/15 16:11	
Arsenic		0.0513	mg/L	0.0050	103	90	110			
Lead		0.0489	mg/L	0.010	98	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27821
Lab ID:	**MB-27821**	4	Method Blank				Run: ICP2-HE_150203B				02/04/15 00:10
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27821**	4	Laboratory Fortified Blank				Run: ICP2-HE_150203B				02/04/15 00:14
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			48.2	mg/kg	1.0	96	80	120			
Lead			47.2	mg/kg	1.0	94	80	120			
Zinc			47.6	mg/kg	1.0	90	80	120			
Lab ID:	**LCS-27821**	4	Laboratory Control Sample				Run: ICP2-HE_150203B				02/04/15 00:17
Cadmium			104	mg/kg	1.0	76	73	105.1			
Copper			226	mg/kg	1.2	81	77.5	109.6			
Lead			155	mg/kg	3.4	83	75.9	108.6			
Zinc			165	mg/kg	1.0	76	74.2	109.9			
Lab ID:	**H15010302-018APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150203B				02/04/15 02:12
Cadmium			119	mg/kg	1.0	89	75	125			
Copper			260	mg/kg	1.2	91	75	125			
Lead			241	mg/kg	3.4	87	75	125			
Zinc			300	mg/kg	1.0	91	75	125			
Lab ID:	**H15010302-018AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150203B				02/04/15 02:16
Cadmium			24.4	mg/kg	1.0	91	75	125			
Copper			65.2	mg/kg	1.2	92	75	125			
Lead			60.0	mg/kg	3.4	98	75	125			
Zinc			110	mg/kg	1.0	99	75	125			
Lab ID:	**H15010302-018AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150203B				02/04/15 02:27
Cadmium			24.4	mg/kg	1.0	91	75	125	0.1	20	
Copper			66.8	mg/kg	1.2	95	75	125	2.4	20	
Lead			55.1	mg/kg	3.4	89	75	125	8.6	20	
Zinc			110	mg/kg	1.0	99	75	125	0.1	20	
Method:	**SW6010B**										Batch: 27822
Lab ID:	**MB-27822**	5	Method Blank				Run: ICP2-HE_150203B				02/04/15 02:31
Arsenic			ND	mg/kg	0.4						
Cadmium			0.01	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			8	mg/kg	0.09						
Lab ID:	**LFB-27822**	5	Laboratory Fortified Blank				Run: ICP2-HE_150203B				02/04/15 02:35
Arsenic			46.0	mg/kg	1.0	92	80	120			
Cadmium			23.1	mg/kg	1.0	92	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27822
Lab ID:	**LFB-27822**	5	Laboratory Fortified Blank				Run: ICP2-HE_150203B			02/04/15 02:35	
Copper			48.5	mg/kg	1.0	97	80	120			
Lead			45.3	mg/kg	1.0	91	80	120			
Zinc			48.6	mg/kg	1.0	82	80	120			
Lab ID:	**LCS-27822**	5	Laboratory Control Sample				Run: ICP2-HE_150203B			02/04/15 02:38	
Arsenic			251	mg/kg	1.8	73	72.3	106.4			
Cadmium			108	mg/kg	1.0	79	73	105.1			
Copper			228	mg/kg	1.1	81	77.5	109.6			
Lead			151	mg/kg	3.2	81	75.9	108.6			
Zinc			174	mg/kg	1.0	78	74.2	109.9			
Lab ID:	**H15010302-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150203B			02/04/15 04:07	
Arsenic			239	mg/kg	1.9	88	75	125			
Cadmium			129	mg/kg	1.0	84	75	125			
Copper			1090	mg/kg	1.2	86	75	125			
Lead			236	mg/kg	3.4	83	75	125			
Zinc			2690	mg/kg	1.0		75	125			A
Lab ID:	**H15010302-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150203B			02/04/15 04:10	
Arsenic			52.4	mg/kg	1.9	91	75	125			
Cadmium			37.7	mg/kg	1.0	85	75	125			
Copper			907	mg/kg	1.2		75	125			A
Lead			57.4	mg/kg	3.4	85	75	125			
Zinc			2520	mg/kg	1.0		75	125			A
Lab ID:	**H15010302-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150203B			02/04/15 04:14	
Arsenic			52.3	mg/kg	1.9	91	75	125	0.3	20	
Cadmium			38.1	mg/kg	1.0	86	75	125	0.9	20	
Copper			916	mg/kg	1.2		75	125	1.0	20	A
Lead			57.1	mg/kg	3.4	84	75	125	0.5	20	
Zinc			2570	mg/kg	1.0		75	125	2.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27821
Lab ID:	**MB-27821**	4	Method Blank				Run: ICP2-HE_150204C				02/04/15 18:01
Cadmium			0.03	mg/kg	0.01						
Copper			1	mg/kg	0.2						
Lead			0.7	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27821**	4	Laboratory Fortified Blank				Run: ICP2-HE_150204C				02/04/15 18:05
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			49.2	mg/kg	1.0	96	80	120			
Lead			47.3	mg/kg	1.0	93	80	120			
Zinc			47.8	mg/kg	1.0	91	80	120			
Lab ID:	**LCS-27821**	4	Laboratory Control Sample				Run: ICP2-HE_150204C				02/04/15 18:08
Cadmium			104	mg/kg	1.0	76	73	105.1			
Copper			229	mg/kg	1.2	81	77.5	109.6			
Lead			150	mg/kg	3.4	80	75.9	108.6			
Zinc			166	mg/kg	1.0	77	74.2	109.9			
Lab ID:	**H15010302-018APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150204C				02/04/15 20:03
Cadmium			119	mg/kg	1.0	89	75	125			
Copper			266	mg/kg	1.2	93	75	125			
Lead			248	mg/kg	3.4	88	75	125			
Zinc			303	mg/kg	1.0	91	75	125			
Lab ID:	**H15010302-018AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150204C				02/04/15 20:06
Cadmium			24.6	mg/kg	1.0	93	75	125			
Copper			67.5	mg/kg	1.2	96	75	125			
Lead			66.1	mg/kg	3.4	105	75	125			
Zinc			112	mg/kg	1.0	103	75	125			
Lab ID:	**H15010302-018AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150204C				02/04/15 20:10
Cadmium			24.6	mg/kg	1.0	93	75	125	0.2	20	
Copper			68.3	mg/kg	1.2	97	75	125	1.2	20	
Lead			54.1	mg/kg	3.4	82	75	125	20	20	R
Zinc			112	mg/kg	1.0	102	75	125	0.4	20	

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.

Method:	**SW6010B**										Batch: 27822
Lab ID:	**MB-27822**	5	Method Blank				Run: ICP2-HE_150204C				02/04/15 21:53
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			7	mg/kg	0.09						
Method:	**SW6010B**										Batch: 27823

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27823
Lab ID:	**MB-27823**	5	Method Blank				Run: ICP2-HE_150204C				02/04/15 22:53
Arsenic			0.6	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27823**	5	Laboratory Fortified Blank				Run: ICP2-HE_150204C				02/04/15 22:56
Arsenic			51.7	mg/kg	1.0	102	80	120			
Cadmium			26.1	mg/kg	1.0	104	80	120			
Copper			55.7	mg/kg	1.0	111	80	120			
Lead			50.9	mg/kg	1.0	102	80	120			
Zinc			54.0	mg/kg	1.0	107	80	120			
Lab ID:	**LCS-27823**	5	Laboratory Control Sample				Run: ICP2-HE_150204C				02/04/15 23:00
Arsenic			270	mg/kg	1.7	79	72.3	106.4			
Cadmium			116	mg/kg	1.0	84	73	105.1			
Copper			245	mg/kg	1.0	88	77.5	109.6			
Lead			165	mg/kg	2.9	88	75.9	108.6			
Zinc			184	mg/kg	1.0	86	74.2	109.9			
Lab ID:	**H15010302-055APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150204C				02/05/15 00:58
Arsenic			244	mg/kg	1.9	88	75	125			
Cadmium			117	mg/kg	1.0	87	75	125			
Copper			277	mg/kg	1.2	89	75	125			
Lead			251	mg/kg	3.4	87	75	125			
Zinc			301	mg/kg	1.0	89	75	125			
Lab ID:	**H15010302-055AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150204C				02/05/15 01:02
Arsenic			50.9	mg/kg	1.9	84	75	125			
Cadmium			23.5	mg/kg	1.0	91	75	125			
Copper			85.5	mg/kg	1.1	91	75	125			
Lead			64.1	mg/kg	3.3	90	75	125			
Zinc			111	mg/kg	1.0	97	75	125			
Lab ID:	**H15010302-055AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150204C				02/05/15 01:05
Arsenic			50.9	mg/kg	1.9	84	75	125	0.0	20	
Cadmium			23.5	mg/kg	1.0	91	75	125	0.1	20	
Copper			86.6	mg/kg	1.1	93	75	125	1.3	20	
Lead			67.6	mg/kg	3.3	97	75	125	5.3	20	
Zinc			111	mg/kg	1.0	95	75	125	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B										Batch: 27823
Lab ID: H15010302-055APDS	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150210B			02/11/15 08:38	
Arsenic		91.4	mg/kg	1.0	79	75	125			
Cadmium		40.8	mg/kg	1.0	76	75	125			
Copper		128	mg/kg	1.0	86	75	125			
Lead		95.6	mg/kg	1.4	78	75	125			
Zinc		141	mg/kg	1.0	81	75	125			
Lab ID: H15010302-055AMS	5	Sample Matrix Spike				Run: ICP2-HE_150210B			02/11/15 08:42	
Arsenic		48.0	mg/kg	1.0	80	75	125			
Cadmium		19.8	mg/kg	1.0	77	75	125			
Copper		81.6	mg/kg	1.0	88	75	125			
Lead		51.3	mg/kg	1.3	76	75	125			
Zinc		97.5	mg/kg	1.0	84	75	125			
Lab ID: H15010302-055AMSD	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150210B			02/11/15 08:53	
Arsenic		46.2	mg/kg	1.0	76	75	125	3.8	20	
Cadmium		19.1	mg/kg	1.0	74	75	125	3.4	20	S
Copper		78.0	mg/kg	1.0	81	75	125	4.5	20	
Lead		50.9	mg/kg	1.3	75	75	125	0.7	20	
Zinc		96.3	mg/kg	1.0	82	75	125	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B										Batch: 27999
Lab ID: MB-27999		Method Blank				Run: ICP2-HE_150211B				02/12/15 03:45
Arsenic		ND	mg/kg	0.4						
Lab ID: LFB-27999		Laboratory Fortified Blank				Run: ICP2-HE_150211B				02/12/15 03:49
Arsenic		47.4	mg/kg	1.0	95	80	120			
Lab ID: LCS-27999		Laboratory Control Sample				Run: ICP2-HE_150211B				02/12/15 03:53
Arsenic		276	mg/kg	3.5	81	72.3	106.4			
Lab ID: H15010302-018APDS		Post Digestion/Distillation Spike				Run: ICP2-HE_150211B				02/12/15 05:48
Arsenic		227	mg/kg	1.8	90	75	125			
Lab ID: H15010302-018AMS		Sample Matrix Spike				Run: ICP2-HE_150211B				02/12/15 05:51
Arsenic		48.8	mg/kg	1.8	99	75	125			
Lab ID: H15010302-018AMSD		Sample Matrix Spike Duplicate				Run: ICP2-HE_150211B				02/12/15 05:55
Arsenic		49.0	mg/kg	1.9	93	75	125	0.4	20	
Method: SW6010B										Batch: 28000
Lab ID: MB-28000		Method Blank				Run: ICP2-HE_150211B				02/12/15 06:06
Zinc		0.3	mg/kg	0.09						
Lab ID: LFB-28000		Laboratory Fortified Blank				Run: ICP2-HE_150211B				02/12/15 06:10
Zinc		47.9	mg/kg	1.0	95	80	120			
Lab ID: LCS-28000		Laboratory Control Sample				Run: ICP2-HE_150211B				02/12/15 06:14
Zinc		192	mg/kg	1.0	90	74.2	109.9			
Lab ID: H15010302-029APDS		Post Digestion/Distillation Spike				Run: ICP2-HE_150211B				02/12/15 06:32
Zinc		293	mg/kg	1.0	88	75	125			
Lab ID: H15010302-029AMS		Sample Matrix Spike				Run: ICP2-HE_150211B				02/12/15 06:36
Zinc		108	mg/kg	1.0	93	75	125			
Lab ID: H15010302-029AMSD		Sample Matrix Spike Duplicate				Run: ICP2-HE_150211B				02/12/15 06:40
Zinc		109	mg/kg	1.0	94	75	125	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Analytical Run: SUB-B238337	
Lab ID:	**QCS**	2	Initial Calibration Verification Standard							02/13/15 09:09	
Arsenic			0.73	mg/L	0.10	91	90	110			
Lead			0.73	mg/L	0.050	91	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							02/13/15 09:13	
Arsenic			0.0011	mg/L	0.10						
Lead			-0.0093	mg/L	0.050						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							02/13/15 09:17	
Arsenic			0.84	mg/L	0.10	84	80	120			
Lead			0.78	mg/L	0.050	78	80	120			S
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/13/15 10:20	
Arsenic			0.75	mg/L	0.10	94	90	110			
Cadmium			0.40	mg/L	0.010	100	90	110			
Copper			0.77	mg/L	0.010	96	90	110			
Lead			0.76	mg/L	0.050	95	90	110			
Zinc			0.76	mg/L	0.010	95	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/13/15 10:23	
Arsenic			0.0079	mg/L	0.10						
Cadmium			0.0081	mg/L	0.010						
Copper			-0.0013	mg/L	0.010						
Lead			0.0091	mg/L	0.050						
Zinc			0.0025	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/13/15 10:27	
Arsenic			0.91	mg/L	0.10	91	80	120			
Cadmium			0.84	mg/L	0.010	84	80	120			
Copper			0.45	mg/L	0.010	90	80	120			
Lead			0.86	mg/L	0.050	86	80	120			
Zinc			0.90	mg/L	0.010	90	80	120			
Method:	**SW6010B**									Batch: B_86940	
Lab ID:	**MB-86940**	2	Method Blank				Run: SUB-B238337			02/13/15 09:27	
Copper			0.2	mg/kg	0.2						
Zinc			6	mg/kg	0.5						
Lab ID:	**LFB-86940**	2	Laboratory Fortified Blank				Run: SUB-B238337			02/13/15 09:31	
Copper			45	mg/kg	5.0	90	80	120			
Zinc			45	mg/kg	5.0	90	80	120			
Lab ID:	**SRM-86940**	2	Standard Reference Material				Run: SUB-B238337			02/13/15 09:41	
Copper			220	mg/kg	5.0	79	77	120			
Zinc			170	mg/kg	5.0	78	74	120			
Lab ID:	**H15010302-036A**	2	Serial Dilution				Run: SUB-B238337			02/13/15 11:49	
Copper			877	mg/kg	1.0		0	0	4.0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_86940	
Lab ID:	**H15010302-036A**	2	Serial Dilution				Run: SUB-B238337			02/13/15 11:49	
Zinc			2680	mg/kg	2.6		0	0	10	10	
Lab ID:	**H15010302-036A**	2	Post Digestion/Distillation Spike				Run: SUB-B238337			02/13/15 11:53	
Copper			881	mg/kg	1.0		75	125			A
Zinc			2440	mg/kg	1.0		75	125			A
Lab ID:	**H15010302-036A**	2	Sample Matrix Spike				Run: SUB-B238337			02/13/15 11:57	
Copper			876	mg/kg	1.0		75	125			A
Zinc			2380	mg/kg	1.0		75	125			A
Lab ID:	**H15010302-036A**	2	Sample Matrix Spike Duplicate				Run: SUB-B238337			02/13/15 12:01	
Copper			898	mg/kg	1.0		75	125	2.5	20	A
Zinc			2470	mg/kg	1.0		75	125	3.6	20	A
Lab ID:	**MB-86940**	2	Method Blank				Run: SUB-B238337			02/14/15 04:42	
Copper			0.3	mg/kg	0.2						
Zinc			7	mg/kg	0.5						
Lab ID:	**LFB-86940**	2	Laboratory Fortified Blank				Run: SUB-B238337			02/14/15 04:52	
Copper			44	mg/kg	5.0	88	80	120			
Zinc			46	mg/kg	5.0	91	80	120			
Lab ID:	**SRM-86940**	2	Standard Reference Material				Run: SUB-B238337			02/14/15 04:56	
Copper			220	mg/kg	5.0	78	77	120			
Zinc			170	mg/kg	5.0	79	74	120			
Lab ID:	**H15010302-036A**	2	Serial Dilution				Run: SUB-B238337			02/14/15 05:15	
Copper			900	mg/kg	4.0		0	0	6.7	10	
Zinc			2820	mg/kg	13		0	0	15	10	R
Lab ID:	**H15010302-036A**	2	Post Digestion/Distillation Spike				Run: SUB-B238337			02/14/15 05:18	
Copper			1100	mg/kg	1.0	97	75	125			
Zinc			2870	mg/kg	2.6		75	125			A
Lab ID:	**H15010302-036A**	2	Sample Matrix Spike				Run: SUB-B238337			02/14/15 05:22	
Copper			954	mg/kg	1.0		75	125			A
Zinc			2750	mg/kg	2.6		75	125			A
Lab ID:	**H15010302-036A**	2	Sample Matrix Spike Duplicate				Run: SUB-B238337			02/14/15 05:25	
Copper			968	mg/kg	1.0		75	125	10	20	A
Zinc			2800	mg/kg	2.6		75	125	16	20	A
Method:	**SW6010B**									Batch: B_86946	
Lab ID:	**MB-86946**	5	Method Blank				Run: SUB-B238337			02/14/15 09:02	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.03						
Copper			0.9	mg/kg	0.2						
Lead			ND	mg/kg	0.8						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: B_86946
Lab ID:	**MB-86946**	5	Method Blank				Run: SUB-B238337				02/14/15 09:02
Zinc			2	mg/kg	0.5						
Lab ID:	**LFB-86946**	5	Laboratory Fortified Blank				Run: SUB-B238337				02/14/15 09:06
Arsenic			44	mg/kg	5.0	87	80	120			
Cadmium			21	mg/kg	5.0	85	80	120			
Copper			44	mg/kg	5.0	86	80	120			
Lead			43	mg/kg	5.0	86	80	120			
Zinc			44	mg/kg	5.0	82	80	120			
Lab ID:	**SRM-86946**	5	Standard Reference Material				Run: SUB-B238337				02/14/15 09:09
Arsenic			250	mg/kg	5.0	73	72	120			
Cadmium			110	mg/kg	5.0	77	73	120			
Copper			220	mg/kg	5.0	79	77	120			
Lead			140	mg/kg	5.0	77	75	120			
Zinc			160	mg/kg	5.0	77	74	120			
Lab ID:	**H15010302-018A**	5	Post Digestion/Distillation Spike				Run: SUB-B238337				02/14/15 10:42
Arsenic			55.0	mg/kg	1.0	93	75	125			
Cadmium			23.0	mg/kg	1.0	85	75	125			
Copper			64.4	mg/kg	1.0	91	75	125			
Lead			54.0	mg/kg	1.0	85	75	125			
Zinc			103	mg/kg	1.0	90	75	125			
Lab ID:	**H15010302-018A**	5	Sample Matrix Spike				Run: SUB-B238337				02/14/15 10:46
Arsenic			52.2	mg/kg	1.0	89	75	125			
Cadmium			22.5	mg/kg	1.0	85	75	125			
Copper			63.7	mg/kg	1.0	92	75	125			
Lead			53.1	mg/kg	1.0	84	75	125			
Zinc			104	mg/kg	1.0	93	75	125			
Lab ID:	**H15010302-018A**	5	Sample Matrix Spike Duplicate				Run: SUB-B238337				02/14/15 10:50
Arsenic			54.1	mg/kg	1.0	93	75	125	3.6	20	
Cadmium			23.0	mg/kg	1.0	86	75	125	1.9	20	
Copper			65.3	mg/kg	1.0	95	75	125	2.5	20	
Lead			54.1	mg/kg	1.0	86	75	125	1.9	20	
Zinc			107	mg/kg	1.0	98	75	125	2.6	20	
Method:	**SW6010B**										Batch: B_86947
Lab ID:	**MB-86947**		Method Blank				Run: SUB-B238337				02/14/15 10:54
Lead			ND	mg/kg	0.8						
Lab ID:	**LFB-86947**		Laboratory Fortified Blank				Run: SUB-B238337				02/14/15 10:57
Lead			52	mg/kg	5.0	104	80	120			
Lab ID:	**SRM-86947**		Standard Reference Material				Run: SUB-B238337				02/14/15 11:08
Lead			180	mg/kg	5.0	94	75	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: B_86947
Lab ID:	**H15010302-055A**		Serial Dilution				Run: SUB-B238337			02/14/15 12:02	
Lead			18.2	mg/kg	4.2		0	0		10	N
Lab ID:	**H15010302-055A**		Post Digestion/Distillation Spike				Run: SUB-B238337			02/14/15 12:05	
Lead			58.3	mg/kg	1.0	86	75	125			
Lab ID:	**H15010302-055A**		Sample Matrix Spike				Run: SUB-B238337			02/14/15 12:09	
Lead			54.9	mg/kg	1.0	82	75	125			
Lab ID:	**H15010302-055A**		Sample Matrix Spike Duplicate				Run: SUB-B238337			02/14/15 12:13	
Lead			55.7	mg/kg	1.0	83	75	125	1.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Analytical Run: SUB-B238450	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/17/15 12:37	
Arsenic			0.77	mg/L	0.10	96	90	110			
Cadmium			0.39	mg/L	0.010	97	90	110			
Copper			0.76	mg/L	0.010	95	90	110			
Lead			0.75	mg/L	0.050	94	90	110			
Zinc			0.77	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/17/15 12:40	
Arsenic			-0.0030	mg/L	0.10						
Cadmium			0.0090	mg/L	0.010						
Copper			-0.0024	mg/L	0.010						
Lead			0.011	mg/L	0.050						
Zinc			0.0029	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/17/15 12:44	
Arsenic			0.92	mg/L	0.10	92	80	120			
Cadmium			0.83	mg/L	0.010	83	80	120			
Copper			0.46	mg/L	0.010	93	80	120			
Lead			0.85	mg/L	0.050	85	80	120			
Zinc			0.91	mg/L	0.010	91	80	120			
Method:	**SW6010B**									Batch: B_86946	
Lab ID:	**MB-86946**	5	Method Blank				Run: SUB-B238450			02/17/15 17:32	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.03						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.8						
Zinc			2	mg/kg	0.5						
Lab ID:	**H15010302-004A**	5	Serial Dilution				Run: SUB-B238450			02/17/15 17:40	
Arsenic			22.8	mg/kg	1.9		0	0	19	10	R
Cadmium			0.379	mg/kg	1.0		0	0		10	N
Copper			39.1	mg/kg	1.0		0	0	4.3	10	
Lead			14.5	mg/kg	4.3		0	0		10	N
Zinc			64.4	mg/kg	2.5		0	0	15	10	R
Method:	**SW6010B**									Batch: B_86940	
Lab ID:	**MB-86940**	2	Method Blank				Run: SUB-B238610			02/19/15 11:25	
Copper			0.2	mg/kg	0.2						
Zinc			6	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B238308	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/12/15 10:38	
Arsenic			0.0491	mg/L	0.0010	98	90	110			
Cadmium			0.0254	mg/L	0.0010	102	90	110			
Copper			0.0491	mg/L	0.0010	98	90	110			
Lead			0.0504	mg/L	0.0010	101	90	110			
Zinc			0.0503	mg/L	0.0010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/12/15 10:47	
Arsenic			-6.58E-05	mg/L	0.0010						
Cadmium			0.000520	mg/L	0.0010						
Copper			0.000329	mg/L	0.0010						
Lead			0.000183	mg/L	0.0010						
Zinc			0.00151	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/12/15 10:59	
Arsenic			0.00909	mg/L	0.0010	91	70	130			
Cadmium			0.00990	mg/L	0.0010	99	70	130			
Copper			0.0184	mg/L	0.0010	92	70	130			
Lead			8.80E-05	mg/L	0.0010		0	0			
Zinc			0.0102	mg/L	0.0010	102	70	130			
Method:	**SW6020**									Batch: B_86940	
Lab ID:	**MB-86940**	5	Method Blank				Run: SUB-B238308			02/13/15 00:46	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.8						
Zinc			10	mg/kg	10						
Lab ID:	**LFB-86940**	5	Laboratory Fortified Blank				Run: SUB-B238308			02/13/15 00:51	
Arsenic			50.1	mg/kg	1.0	100	80	120			
Cadmium			25.4	mg/kg	1.0	102	80	120			
Copper			52.6	mg/kg	1.0	105	80	120			
Lead			50.4	mg/kg	1.0	101	80	120			
Zinc			52.8	mg/kg	11	81	80	120			
Lab ID:	**SRM-86940**	5	Standard Reference Material				Run: SUB-B238308			02/13/15 00:55	
Arsenic			302	mg/kg	1.0	88	72	120			
Cadmium			134	mg/kg	1.0	98	73	120			
Copper			283	mg/kg	1.0	101	77	120			
Lead			190	mg/kg	1.0	102	75	120			
Zinc			215	mg/kg	11	101	74	120			
Lab ID:	**H15010302-036A**	5	Serial Dilution				Run: SUB-B238308			02/13/15 02:21	
Arsenic			7.41	mg/kg	2.1		0	0		10	N
Cadmium			17.0	mg/kg	1.0		0	0	15	10	R
Copper			980	mg/kg	3.6		0	0	8.1	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86940	
Lab ID:	**H15010302-036A**	5	Serial Dilution				Run: SUB-B238308			02/13/15 02:21	
Lead			13.9	mg/kg	4.0		0	0		10	N
Zinc			2880	mg/kg	55		0	0	7.9	10	
Lab ID:	**H15010302-036A**	5	Post Digestion/Distillation Spike				Run: SUB-B238308			02/13/15 02:25	
Arsenic			57.2	mg/kg	1.0	96	75	125			
Cadmium			68.0	mg/kg	1.0	92	75	125			
Copper			970	mg/kg	1.0		75	125			A
Lead			65.5	mg/kg	1.0	96	75	125			
Zinc			2760	mg/kg	11		75	125			A
Lab ID:	**H15010302-036A**	5	Sample Matrix Spike				Run: SUB-B238308			02/13/15 02:43	
Arsenic			63.2	mg/kg	1.0	106	75	125			
Cadmium			49.3	mg/kg	1.0	112	75	125			
Copper			1080	mg/kg	1.0		75	125			A
Lead			72.7	mg/kg	1.0	109	75	125			
Zinc			3100	mg/kg	11		75	125			A
Lab ID:	**H15010302-036A**	5	Sample Matrix Spike Duplicate				Run: SUB-B238308			02/13/15 02:48	
Arsenic			57.9	mg/kg	1.0	96	75	125	8.7	20	
Cadmium			44.7	mg/kg	1.0	94	75	125	9.8	20	
Copper			1010	mg/kg	1.0		75	125	7.4	20	A
Lead			66.5	mg/kg	1.0	97	75	125	8.8	20	
Zinc			2850	mg/kg	11		75	125	8.3	20	A
Method:	**SW6020**									Batch: B_86947	
Lab ID:	**MB-86947**	4	Method Blank				Run: SUB-B238308			02/13/15 12:51	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Zinc			ND	mg/kg	10						
Lab ID:	**LFB-86947**	4	Laboratory Fortified Blank				Run: SUB-B238308			02/13/15 12:56	
Arsenic			58.9	mg/kg	1.0	118	80	120			
Cadmium			29.2	mg/kg	1.0	117	80	120			
Copper			59.6	mg/kg	1.0	119	80	120			
Zinc			59.7	mg/kg	11	119	80	120			
Lab ID:	**SRM-86947**	4	Standard Reference Material				Run: SUB-B238308			02/13/15 13:00	
Arsenic			348	mg/kg	1.0	101	72	120			
Cadmium			157	mg/kg	1.0	115	73	120			
Copper			323	mg/kg	1.0	115	77	120			
Zinc			239	mg/kg	11	112	74	120			
Lab ID:	**H15010302-055A**	4	Serial Dilution				Run: SUB-B238308			02/13/15 14:26	
Arsenic			7.97	mg/kg	2.0		0	0		10	N
Cadmium			ND	mg/kg	1.0		0	0		10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86947	
Lab ID:	**H15010302-055A**	4	Serial Dilution				Run: SUB-B238308			02/13/15 14:26	
Copper			40.1	mg/kg	3.9		0	0	5.7	10	
Zinc			62.1	mg/kg	53		0	0		10	N
Lab ID:	**H15010302-055A**	4	Post Digestion/Distillation Spike				Run: SUB-B238308			02/13/15 14:30	
Arsenic			54.9	mg/kg	1.0	93	75	125			
Cadmium			49.1	mg/kg	1.0	98	75	125			
Copper			87.3	mg/kg	1.0	90	75	125			
Zinc			109	mg/kg	11	84	75	125			
Lab ID:	**H15010302-055A**	4	Sample Matrix Spike				Run: SUB-B238308			02/13/15 14:35	
Arsenic			61.2	mg/kg	1.0	106	75	125			
Cadmium			28.8	mg/kg	1.0	115	75	125			
Copper			98.6	mg/kg	1.0	112	75	125			
Zinc			128	mg/kg	11	122	75	125			
Lab ID:	**H15010302-055A**	4	Sample Matrix Spike Duplicate				Run: SUB-B238308			02/13/15 14:39	
Arsenic			55.4	mg/kg	1.0	94	75	125	10.0	20	
Cadmium			26.5	mg/kg	1.0	106	75	125	8.5	20	
Copper			87.8	mg/kg	1.0	91	75	125	12	20	
Zinc			116	mg/kg	11	97	75	125	10	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B238527	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/18/15 11:51	
Arsenic			0.0507	mg/L	0.0010	101	90	110			
Cadmium			0.0257	mg/L	0.0010	103	90	110			
Copper			0.0512	mg/L	0.0010	102	90	110			
Lead			0.0496	mg/L	0.0010	99	90	110			
Zinc			0.0530	mg/L	0.0010	106	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/18/15 12:22	
Arsenic			0.000116	mg/L	0.0010						
Cadmium			0.000316	mg/L	0.0010						
Copper			0.000318	mg/L	0.0010						
Lead			0.000227	mg/L	0.0010						
Zinc			0.000809	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/18/15 12:28	
Arsenic			0.0103	mg/L	0.0010	103	70	130			
Cadmium			0.00979	mg/L	0.0010	98	70	130			
Copper			0.0207	mg/L	0.0010	103	70	130			
Lead			0.000219	mg/L	0.0010		0	0			
Zinc			0.0112	mg/L	0.0010	112	70	130			
Method:	**SW6020**									Batch: B_86940	
Lab ID:	**MB-86940**	5	Method Blank				Run: SUB-B238527			02/19/15 09:43	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.07						
Copper			0.4	mg/kg	0.3						
Lead			ND	mg/kg	0.04						
Zinc			10	mg/kg	0.9						
Lab ID:	**LFB-86940**	5	Laboratory Fortified Blank				Run: SUB-B238527			02/19/15 09:49	
Arsenic			52.1	mg/kg	1.0	104	80	120			
Cadmium			25.5	mg/kg	1.0	102	80	120			
Copper			58.1	mg/kg	1.0	115	80	120			
Lead			51.3	mg/kg	1.0	103	80	120			
Zinc			58.6	mg/kg	1.0	96	80	120			
Lab ID:	**SRM-86940**	5	Standard Reference Material				Run: SUB-B238527			02/19/15 09:55	
Arsenic			288	mg/kg	1.0	84	72	120			
Cadmium			127	mg/kg	1.0	93	73	120			
Copper			276	mg/kg	1.0	98	77	120			
Lead			180	mg/kg	1.0	96	75	120			
Zinc			209	mg/kg	1.0	98	74	120			
Lab ID:	**H15010302-036A**	5	Serial Dilution				Run: SUB-B238527			02/19/15 10:55	
Arsenic			4.86	mg/kg	1.4		0	0		10	N
Cadmium			18.1	mg/kg	1.0		0	0	1.6	10	
Copper			1010	mg/kg	1.6		0	0	0.6	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86940	
Lab ID:	**H15010302-036A**	5	Serial Dilution				Run: SUB-B238527			02/19/15 10:55	
Lead			14.0	mg/kg	1.0		0	0	4.4	10	
Zinc			2960	mg/kg	4.7		0	0	0.9	10	
Lab ID:	**H15010302-036A**	5	Post Digestion/Distillation Spike				Run: SUB-B238527			02/19/15 11:01	
Arsenic			59.0	mg/kg	1.0	100	75	125			
Cadmium			67.5	mg/kg	1.0	95	75	125			
Copper			997	mg/kg	1.0		75	125			A
Lead			64.4	mg/kg	1.0	98	75	125			
Zinc			2750	mg/kg	1.0		75	125			A
Lab ID:	**H15010302-036A**	5	Sample Matrix Spike				Run: SUB-B238527			02/19/15 11:07	
Arsenic			58.8	mg/kg	1.0	98	75	125			
Cadmium			45.3	mg/kg	1.0	105	75	125			
Copper			1080	mg/kg	1.0		75	125			A
Lead			67.5	mg/kg	1.0	103	75	125			
Zinc			2970	mg/kg	1.0		75	125			A
Lab ID:	**H15010302-036A**	5	Sample Matrix Spike Duplicate				Run: SUB-B238527			02/19/15 11:13	
Arsenic			58.0	mg/kg	1.0	97	75	125	1.4	20	
Cadmium			44.9	mg/kg	1.0	103	75	125	1.0	20	
Copper			1080	mg/kg	1.0		75	125	0.2	20	A
Lead			66.8	mg/kg	1.0	102	75	125	0.9	20	
Zinc			2980	mg/kg	1.0		75	125	0.1	20	A
Method:	**SW6020**									Batch: B_86947	
Lab ID:	**MB-86947**	4	Method Blank				Run: SUB-B238527			02/19/15 11:31	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.07						
Copper			0.5	mg/kg	0.3						
Zinc			2	mg/kg	0.9						
Lab ID:	**LFB-86947**	4	Laboratory Fortified Blank				Run: SUB-B238527			02/19/15 11:55	
Arsenic			55.5	mg/kg	1.0	111	80	120			
Cadmium			28.7	mg/kg	1.0	115	80	120			
Copper			57.6	mg/kg	1.0	114	80	120			
Zinc			61.4	mg/kg	1.0	118	80	120			
Lab ID:	**SRM-86947**	4	Standard Reference Material				Run: SUB-B238527			02/19/15 12:01	
Arsenic			334	mg/kg	1.0	97	72	120			
Cadmium			145	mg/kg	1.0	106	73	120			
Copper			297	mg/kg	1.0	106	77	120			
Zinc			236	mg/kg	1.0	111	74	120			
Lab ID:	**H15010302-055A**	4	Serial Dilution				Run: SUB-B238527			02/19/15 12:31	
Arsenic			7.74	mg/kg	1.4		0	0		10	N
Cadmium			ND	mg/kg	1.0		0	0		10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010302

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86947	
Lab ID:	**H15010302-055A**	4	Serial Dilution				Run: SUB-B238527			02/19/15 12:31	
Copper			41.0	mg/kg	2.3		0	0	6.0	10	
Zinc			74.6	mg/kg	4.5		0	0	14	10	R
Lab ID:	**H15010302-055A**	4	Post Digestion/Distillation Spike				Run: SUB-B238527			02/19/15 12:37	
Arsenic			54.9	mg/kg	1.0	96	75	125			
Cadmium			47.7	mg/kg	1.0	95	75	125			
Copper			81.5	mg/kg	1.0	86	75	125			
Zinc			108	mg/kg	1.0	85	75	125			
Lab ID:	**H15010302-055A**	4	Sample Matrix Spike				Run: SUB-B238527			02/19/15 12:47	
Arsenic			55.0	mg/kg	1.0	96	75	125			
Cadmium			26.7	mg/kg	1.0	106	75	125			
Copper			92.5	mg/kg	1.0	108	75	125			
Zinc			117	mg/kg	1.0	104	75	125			
Lab ID:	**H15010302-055A**	4	Sample Matrix Spike Duplicate				Run: SUB-B238527			02/19/15 12:53	
Arsenic			56.6	mg/kg	1.0	99	75	125	2.9	20	
Cadmium			25.8	mg/kg	1.0	102	75	125	3.4	20	
Copper			86.7	mg/kg	1.0	96	75	125	6.4	20	
Zinc			122	mg/kg	1.0	115	75	125	4.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15010302

Login completed by: Austin H. Nearpass
Reviewed by: BL2000\rwilliams
Reviewed Date: 1/27/2015

Date Received: 1/22/2015
Received by: AHN
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.1°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Received samples 4-200-4854 collected on 1/15/15 @ 1505 and 4-200-5460 collected on 1/15/15 @ 1504 that are not on the COC. Per Erin, we are not to analyze. TI 1/23/15

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-169W-0006	813	1/15/15	Soil	A	B		1
4-169W-0612	812	1/15/15	Soil	A	B		1
4-180W-0006	833	1/15/15	Soil	A	B		1
4-180W-0612	832	1/15/15	Soil	A	B		1
4-200-3036	1422	1/15/15	Soil	A	B		1
4-200-3642	1421	1/15/15	Soil	A	B		1
4-200-4248	1420	1/15/15	Soil	A	B		1
4-203-2430	1403	1/15/15	Soil	A	B		1
4-203-3036	1402	1/15/15	Soil	A	B		1
4-203-3642	1401	1/15/15	Soil	A	B		1
4-207-1824	1444	1/15/15	Soil	A	B		1
4-207-2430	1443	1/15/15	Soil	A	B		1
4-207-3036	1442	1/15/15	Soil	A	B		1
4-209-1218	1615	1/15/15	Soil	A	B		1
4-209-1824	1614	1/15/15	Soil	A	B		1
4-209-2430	1613	1/15/15	Soil	A	B		1
4-210-3036	1352	1/15/15	Soil	A	B		1
4-210-3642	1351	1/15/15	Soil	A	B		1
4-210-4248	1350	1/15/15	Soil	A	B		1
4-215-1218	1525	1/15/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15010302

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1/22/15 1225

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 2.1 TB on ice hand del
Date/Time: 1/22/15 13:25

COC011515 EL.xls

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-215-1218D	1526	1/15/15	Soil	A	B		1
4-215-1824	1524	1/15/15	Soil	A	B		1
4-215-2430	1523	1/15/15	Soil	A	B		1
4-215-3036	1522	1/15/15	Soil	A	B		1
4-217-3642	1551	1/15/15	Soil	A	B		1
4-217-4248	1550	1/15/15	Soil	A	B		1
4-220-1218	1625	1/15/15	Soil	A	B		1
4-220-1824	1624	1/15/15	Soil	A	B		1
4-220-2430	1623	1/15/15	Soil	A	B		1
4-221-1824	1259	1/15/15	Soil	A	B		1
4-221-2430	1258	1/15/15	Soil	A	B		1
4-221-3036	1257	1/15/15	Soil	A	B		1
4-222-1824	1014	1/15/15	Soil	A	B		1
4-222-2430	1013	1/15/15	Soil	A	B		1
4-222-3036	1012	1/15/15	Soil	A	B		1
4-223-2430	913	1/15/15	Soil	A	B		1
4-223-3036	912	1/15/15	Soil	A	B		1
4-223-3642	911	1/15/15	Soil	A	B		1
4-228-0006	1702	1/15/15	Soil	A	B		1
4-228-0612	1701	1/15/15	Soil	A	B		1

H1501030 2

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 1/22/15 1325

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
2.1 TB
On ice
hand del

Date/Time: 1/22/15 13:25

COC011515 EL.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-228-1218	1700	1/15/15	Soil	A	B		1
4-229-1218	1125	1/15/15	Soil	A	B		1
4-229-1218D	1126	1/15/15	Soil	A	B		1
4-229-1824	1124	1/15/15	Soil	A	B		1
4-229-2430	1123	1/15/15	Soil	A	B		1
4-230-3036	1057	1/15/15	Soil	A	B		1
4-230-3642	1056	1/15/15	Soil	A	B		1
4-230-4248	1055	1/15/15	Soil	A	B		1
4-231-2430	933	1/15/15	Soil	A	B		1
4-231-3036	932	1/15/15	Soil	A	B		1
4-231-4248	930	1/15/15	Soil	A	B		1
4-231W-1218	1158	1/15/15	Soil	A	B		1
4-231W-1824	1157	1/15/15	Soil	A	B		1
4-231W-2430	1156	1/15/15	Soil	A	B		1
4-231-3042	931	1/15/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15010302

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1/22/15 1325	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 2.1 TB on ice handdel	1/22/15 13:25

COC011515 EL.xls

ANALYTICAL SUMMARY REPORT

February 20, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010298

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 53 samples for MT DEQ-Federal Superfund on 1/22/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010298-001	4-181-3036	01/14/15 8:37	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010298-002	4-181-3642	01/14/15 8:36	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010298-003	4-181-4248	01/14/15 8:35	01/22/15	Soil	Same As Above
H15010298-004	4-182-1824	01/14/15 8:14	01/22/15	Soil	Same As Above
H15010298-005	4-182-2430	01/14/15 8:13	01/22/15	Soil	Same As Above
H15010298-006	4-182-3036	01/14/15 8:12	01/22/15	Soil	Same As Above
H15010298-007	4-187-3036	01/14/15 10:07	01/22/15	Soil	Same As Above
H15010298-008	4-187-3642	01/14/15 10:06	01/22/15	Soil	Same As Above
H15010298-009	4-187-4248	01/14/15 10:05	01/22/15	Soil	Same As Above
H15010298-010	4-188-3036	01/14/15 10:27	01/22/15	Soil	Same As Above
H15010298-011	4-188-3642	01/14/15 10:26	01/22/15	Soil	Same As Above
H15010298-012	4-188-4248	01/14/15 10:25	01/22/15	Soil	Same As Above
H15010298-013	4-189-1218	01/14/15 9:35	01/22/15	Soil	Same As Above
H15010298-014	4-189-1824	01/14/15 9:34	01/22/15	Soil	Same As Above
H15010298-015	4-189-2430	01/14/15 9:33	01/22/15	Soil	Same As Above
H15010298-016	4-196-3036	01/14/15 11:52	01/22/15	Soil	Same As Above
H15010298-017	4-196-3642	01/14/15 11:51	01/22/15	Soil	Same As Above
H15010298-018	4-196-4248	01/14/15 11:50	01/22/15	Soil	Same As Above
H15010298-019	4-197-1218	01/14/15 11:00	01/22/15	Soil	Same As Above
H15010298-020	4-197-1824	01/14/15 10:59	01/22/15	Soil	Same As Above
H15010298-021	4-197-2430	01/14/15 10:58	01/22/15	Soil	Same As Above
H15010298-022	4-198-1218	01/14/15 14:05	01/22/15	Soil	Same As Above
H15010298-023	4-198-1824	01/14/15 14:04	01/22/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010298-024	4-198-2430	01/14/15 14:03	01/22/15	Soil	Same As Above
H15010298-025	4-205-1218	01/14/15 12:40	01/22/15	Soil	Same As Above
H15010298-026	4-205-1218D	01/14/15 12:41	01/22/15	Soil	Same As Above
H15010298-027	4-205-1824	01/14/15 12:39	01/22/15	Soil	Same As Above
H15010298-028	4-205-2430	01/14/15 12:38	01/22/15	Soil	Same As Above
H15010298-029	4-205-3036	01/14/15 12:37	01/22/15	Soil	Same As Above
H15010298-030	4-206-1824	01/14/15 14:24	01/22/15	Soil	Same As Above
H15010298-031	4-206-2430	01/14/15 14:23	01/22/15	Soil	Same As Above
H15010298-032	4-206-3036	01/14/15 14:22	01/22/15	Soil	Same As Above
H15010298-033	4-206W-1218	01/14/15 15:46	01/22/15	Soil	Same As Above
H15010298-034	4-206W-1824	01/14/15 15:45	01/22/15	Soil	Same As Above
H15010298-035	4-206W2-0006	01/14/15 16:33	01/22/15	Soil	Same As Above
H15010298-036	4-206W2-0612	01/14/15 16:32	01/22/15	Soil	Same As Above
H15010298-037	4-213-1218	01/14/15 13:05	01/22/15	Soil	
H15010298-038	4-213-1824	01/14/15 13:04	01/22/15	Soil	
H15010298-039	4-213-2430	01/14/15 13:03	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010298-040	4-214-3036	01/14/15 13:31	01/22/15	Soil	Same As Above
H15010298-041	4-214-3642	01/14/15 13:31	01/22/15	Soil	Same As Above
H15010298-042	4-214-4248	01/14/15 13:30	01/22/15	Soil	Same As Above
H15010298-043	4-214W-0612	01/14/15 16:17	01/22/15	Soil	Same As Above
H15010298-044	4-214W-1218	01/14/15 16:16	01/22/15	Soil	Same As Above
H15010298-045	4-214W-1824	01/14/15 16:15	01/22/15	Soil	Same As Above
H15010298-046	4-224-2430	01/14/15 15:03	01/22/15	Soil	Same As Above
H15010298-047	4-224-3036	01/14/15 15:02	01/22/15	Soil	Same As Above
H15010298-048	4-224-3642	01/14/15 15:01	01/22/15	Soil	Same As Above
H15010298-049	4-224W-1218	01/14/15 16:46	01/22/15	Soil	Same As Above
H15010298-050	4-224W-1824	01/14/15 16:45	01/22/15	Soil	Same As Above
H15010298-051	4-224W2-0612	01/14/15 17:07	01/22/15	Soil	Same As Above
H15010298-052	4-224W2-1218	01/14/15 17:06	01/22/15	Soil	Same As Above
H15010298-053	4-224W2-1824	01/14/15 17:05	01/22/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

ANALYTICAL SUMMARY REPORT

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010298

Report Date: 02/20/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010298

Report Date: 02/20/15
Date Received: 01/22/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Client Sample ID		Results	Results	Results	Results	Results	Results
H15010298-001	4-181-3036		6.9	1020	11	14200	1380	3610
H15010298-002	4-181-3642		6.3	107	< 1	165	23	317
H15010298-003	4-181-4248		7.0	7	< 1	32	14	78
H15010298-004	4-182-1824		7.2	54	18	3020	66	3760
H15010298-005	4-182-2430		6.7	5	< 1	47	11	817
H15010298-006	4-182-3036		6.9	5	< 1	24	10	116
H15010298-007	4-187-3036		7.2	33	5	13500	54	1940
H15010298-008	4-187-3642		6.7	9	1	165	15	352
H15010298-009	4-187-4248		6.9	3	< 1	23	8	849
H15010298-010	4-188-3036		7.2	10	27	701	17	6470
H15010298-011	4-188-3642		7.1	7	2	1650	11	812
H15010298-012	4-188-4248		7.7	31	25	605	13	694
H15010298-013	4-189-1218		7.6	28	10	2610	23	1830
H15010298-014	4-189-1824		7.7	7	< 1	62	19	153
H15010298-015	4-189-2430		7.7	5	< 1	27	23	62
H15010298-016	4-196-3036		7.2	97	13	468	68	3560
H15010298-017	4-196-3642		6.8	8	< 1	25	20	314
H15010298-018	4-196-4248		7.1	7	< 1	25	14	89
H15010298-019	4-197-1218		7.7	17	48	14500	17	8980
H15010298-020	4-197-1824		7.6	8	1	217	19	956
H15010298-021	4-197-2430		7.8	10	< 1	54	11	456
H15010298-022	4-198-1218		7.8	1060	10	6400	847	2930
H15010298-023	4-198-1824		7.8	1020	16	9660	1030	3680
H15010298-024	4-198-2430		7.8	18	< 1	71	29	73
H15010298-025	4-205-1218		7.2	1870	4	6360	1630	1580
H15010298-026	4-205-1218D		7.2	1410	4	4130	1260	1670
H15010298-027	4-205-1824		7.4	142	11	6100	111	1990
H15010298-028	4-205-2430		7.2	37	6	208	12	1400
H15010298-029	4-205-3036		7.6	20	1	647	8	294
H15010298-030	4-206-1824		7.5	66	18	2600	37	3230
H15010298-031	4-206-2430		7.6	42	3	678	33	791
H15010298-032	4-206-3036		7.4	14	2	65	12	475
H15010298-033	4-206W-1218		7.8	701	15	7330	617	3010
H15010298-034	4-206W-1824		7.8	5	< 1	57	12	84
H15010298-035	4-206W2-0006		7.7	198	10	1300	285	1430
H15010298-036	4-206W2-0612		7.7	30	< 1	188	37	144
H15010298-039	4-213-2430		7.8	8	< 1	22	8	51
H15010298-040	4-214-3036		7.6	170	7	1980	380	1210
H15010298-041	4-214-3642		7.0	6	< 1	34	22	64
H15010298-042	4-214-4248		7.0	10	< 1	47	24	80

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010298

Report Date: 02/20/15
Date Received: 01/22/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010298-043	4-214W-0612		7.7	24	2	353	68	440
H15010298-044	4-214W-1218		7.3	7	< 1	46	24	81
H15010298-045	4-214W-1824		7.0	3	< 1	49	27	110
H15010298-046	4-224-2430		7.6	1420	12	9160	688	3010
H15010298-047	4-224-3036		7.7	216	5	2420	694	1420
H15010298-048	4-224-3642		7.4	10	< 1	47	19	84
H15010298-049	4-224W-1218		7.1	785	7	11700	1930	2730
H15010298-050	4-224W-1824		7.1	25	< 1	216	51	518
H15010298-051	4-224W2-0612		7.9	375	6	3100	487	1730
H15010298-052	4-224W2-1218		7.5	14	< 1	80	17	123
H15010298-053	4-224W2-1824		7.5	9	< 1	29	13	56

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150130A		
Lab ID: CCV_1_150129_1		Continuing Calibration Verification Standard							01/30/15 06:30	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150129_1		Continuing Calibration Verification Standard							01/30/15 06:31	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150129_1		Initial Calibration Verification Standard							01/30/15 06:31	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150129_1		Continuing Calibration Verification Standard							01/30/15 06:40	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150129_1		Continuing Calibration Verification Standard							01/30/15 06:56	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150129_1		Continuing Calibration Verification Standard							01/30/15 06:57	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150129_1		Initial Calibration Verification Standard							01/30/15 06:57	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150129_1		Continuing Calibration Verification Standard							01/30/15 07:10	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150129_1		Continuing Calibration Verification Standard							01/30/15 07:23	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150129_1		Continuing Calibration Verification Standard							01/30/15 07:24	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150129_1		Initial Calibration Verification Standard							01/30/15 07:25	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150129_1		Continuing Calibration Verification Standard							01/30/15 07:34	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2									Batch: 27869	
Lab ID: LCS-27869		Laboratory Control Sample				Run: SOIL PH METER_150130A			01/30/15 06:32	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H15010298-010ADUP		Sample Duplicate				Run: SOIL PH METER_150130A			01/30/15 06:40	
pH, sat. paste		7.24	s.u.	0.10				0.3	30	
Lab ID: H15010298-020ADUP		Sample Duplicate				Run: SOIL PH METER_150130A			01/30/15 06:49	
pH, sat. paste		7.58	s.u.	0.10				0.0	30	
Method: ASAM10-3.2									Batch: 27870	
Lab ID: LCS-27870		Laboratory Control Sample				Run: SOIL PH METER_150130A			01/30/15 06:59	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27870
Lab ID: H15010298-030ADUP	Sample Duplicate					Run: SOIL PH METER_150130A			01/30/15 07:09	
pH, sat. paste		7.53	s.u.	0.10				0.0	30	
Lab ID: H15010298-040ADUP	Sample Duplicate					Run: SOIL PH METER_150130A			01/30/15 07:16	
pH, sat. paste		7.57	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27871
Lab ID: LCS-27871	Laboratory Control Sample					Run: SOIL PH METER_150130A			01/30/15 07:25	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15010298-050ADUP	Sample Duplicate					Run: SOIL PH METER_150130A			01/30/15 07:33	
pH, sat. paste		7.10	s.u.	0.10				0.0	30	
Lab ID: H15010298-053ADUP	Sample Duplicate					Run: SOIL PH METER_150130A			01/30/15 07:37	
pH, sat. paste		7.50	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150203B	
Lab ID: ICV	5	Initial Calibration Verification Standard							02/03/15 12:17	
Arsenic		0.782	mg/L	0.0085	98	90	110			
Cadmium		0.383	mg/L	0.0010	96	90	110			
Copper		0.795	mg/L	0.010	99	90	110			
Lead		0.804	mg/L	0.010	101	90	110			
Zinc		0.785	mg/L	0.010	98	90	110			
Lab ID: ICSA	5	Interference Check Sample A							02/03/15 12:32	
Arsenic		0.0105	mg/L	0.0085		0	0			
Cadmium		0.00566	mg/L	0.0010		0	0			
Copper		-0.00322	mg/L	0.010		0	0			
Lead		0.0232	mg/L	0.010		0	0			
Zinc		0.00424	mg/L	0.010		0	0			
Lab ID: ICSAB	5	Interference Check Sample AB							02/03/15 12:36	
Arsenic		0.966	mg/L	0.0085	97	80	120			
Cadmium		0.891	mg/L	0.0010	89	80	120			
Copper		0.504	mg/L	0.010	101	80	120			
Lead		0.914	mg/L	0.010	91	80	120			
Zinc		0.973	mg/L	0.010	97	80	120			
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/03/15 18:04	
Arsenic		2.60	mg/L	0.0085	104	90	110			
Cadmium		2.46	mg/L	0.0010	98	90	110			
Copper		2.55	mg/L	0.010	102	90	110			
Lead		2.56	mg/L	0.010	103	90	110			
Zinc		2.48	mg/L	0.010	99	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/03/15 18:08	
Arsenic		-0.00988	mg/L	0.0085						
Cadmium		0.000610	mg/L	0.0010						
Copper		0.00363	mg/L	0.010						
Lead		0.0189	mg/L	0.010						
Zinc		0.00166	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/03/15 18:48	
Arsenic		2.59	mg/L	0.0085	103	90	110			
Cadmium		2.46	mg/L	0.0010	99	90	110			
Copper		2.53	mg/L	0.010	101	90	110			
Lead		2.56	mg/L	0.010	102	90	110			
Zinc		2.49	mg/L	0.010	99	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/03/15 18:52	
Arsenic		-0.00668	mg/L	0.0085						
Cadmium		0.000410	mg/L	0.0010						
Copper		0.00219	mg/L	0.010						
Lead		0.0130	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150203B	
Lab ID: CCB	5	Continuing Calibration Blank								02/03/15 18:52
Zinc		-1.00E-05	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard								02/03/15 19:32
Arsenic		2.58	mg/L	0.0085	103	90	110			
Cadmium		2.49	mg/L	0.0010	99	90	110			
Copper		2.53	mg/L	0.010	101	90	110			
Lead		2.56	mg/L	0.010	103	90	110			
Zinc		2.49	mg/L	0.010	100	90	110			
Lab ID: CCB	5	Continuing Calibration Blank								02/03/15 19:36
Arsenic		0.000620	mg/L	0.0085						
Cadmium		0.000310	mg/L	0.0010						
Copper		0.00628	mg/L	0.010						
Lead		0.000720	mg/L	0.010						
Zinc		0.00153	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard								02/03/15 20:16
Arsenic		2.65	mg/L	0.0085	106	90	110			
Cadmium		2.51	mg/L	0.0010	101	90	110			
Copper		2.51	mg/L	0.010	100	90	110			
Lead		2.64	mg/L	0.010	105	90	110			
Zinc		2.52	mg/L	0.010	101	90	110			
Lab ID: CCB	5	Continuing Calibration Blank								02/03/15 20:20
Arsenic		-0.00376	mg/L	0.0085						
Cadmium		0.000680	mg/L	0.0010						
Copper		0.00265	mg/L	0.010						
Lead		0.00611	mg/L	0.010						
Zinc		0.00126	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard								02/03/15 20:43
Arsenic		2.48	mg/L	0.0085	99	90	110			
Cadmium		2.46	mg/L	0.0010	99	90	110			
Copper		2.50	mg/L	0.010	100	90	110			
Lead		2.47	mg/L	0.010	99	90	110			
Zinc		2.48	mg/L	0.010	99	90	110			
Lab ID: CCB	5	Continuing Calibration Blank								02/03/15 20:46
Arsenic		-0.00235	mg/L	0.0085						
Cadmium		0.000260	mg/L	0.0010						
Copper		-0.00109	mg/L	0.010						
Lead		0.00231	mg/L	0.010						
Zinc		-0.000640	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard								02/03/15 21:27
Arsenic		2.43	mg/L	0.0085	97	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150203B	
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/03/15 21:27	
Cadmium		2.43	mg/L	0.0010	97	90	110			
Copper		2.48	mg/L	0.010	99	90	110			
Lead		2.45	mg/L	0.010	98	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/03/15 21:30	
Arsenic		-0.00290	mg/L	0.0085						
Cadmium		0.000450	mg/L	0.0010						
Copper		0.00474	mg/L	0.010						
Lead		-0.00505	mg/L	0.010						
Zinc		0.000460	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/03/15 22:11	
Arsenic		2.45	mg/L	0.0085	98	90	110			
Cadmium		2.46	mg/L	0.0010	98	90	110			
Copper		2.49	mg/L	0.010	99	90	110			
Lead		2.48	mg/L	0.010	99	90	110			
Zinc		2.46	mg/L	0.010	99	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/03/15 22:15	
Arsenic		-0.00893	mg/L	0.0085						
Cadmium		0.000480	mg/L	0.0010						
Copper		-0.000280	mg/L	0.010						
Lead		-0.00492	mg/L	0.010						
Zinc		-0.000100	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/03/15 22:56	
Arsenic		2.45	mg/L	0.0085	98	90	110			
Cadmium		2.44	mg/L	0.0010	98	90	110			
Copper		2.49	mg/L	0.010	100	90	110			
Lead		2.45	mg/L	0.010	98	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/03/15 23:00	
Arsenic		-0.00260	mg/L	0.0085						
Cadmium		9.00E-05	mg/L	0.0010						
Copper		0.00110	mg/L	0.010						
Lead		0.00359	mg/L	0.010						
Zinc		-0.000830	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/03/15 23:40	
Arsenic		2.48	mg/L	0.0085	99	90	110			
Cadmium		2.45	mg/L	0.0010	98	90	110			
Copper		2.49	mg/L	0.010	100	90	110			
Lead		2.51	mg/L	0.010	100	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150203B	
Lab ID: CCB	5	Continuing Calibration Blank							02/03/15 23:44	
Arsenic		0.00536	mg/L	0.0085						
Cadmium		0.000650	mg/L	0.0010						
Copper		0.00535	mg/L	0.010						
Lead		0.00668	mg/L	0.010						
Zinc		-1.00E-05	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							02/04/15 00:25	
Arsenic		2.47	mg/L	0.0085	99	90	110			
Cadmium		2.44	mg/L	0.0010	98	90	110			
Copper		2.48	mg/L	0.010	99	90	110			
Lead		2.46	mg/L	0.010	98	90	110			
Zinc		2.44	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							02/04/15 00:28	
Arsenic		-0.000250	mg/L	0.0085						
Cadmium		0.000720	mg/L	0.0010						
Copper		0.000250	mg/L	0.010						
Lead		-0.00183	mg/L	0.010						
Zinc		-0.000580	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150204C	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							02/04/15 15:28	
Arsenic			0.797	mg/L	0.0085	100	90	110			
Cadmium			0.382	mg/L	0.0010	96	90	110			
Copper			0.798	mg/L	0.010	100	90	110			
Lead			0.779	mg/L	0.010	97	90	110			
Zinc			0.782	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/04/15 15:43	
Arsenic			0.0137	mg/L	0.0085		0	0			
Cadmium			0.00532	mg/L	0.0010		0	0			
Copper			-0.000190	mg/L	0.010		0	0			
Lead			0.00350	mg/L	0.010		0	0			
Zinc			0.00337	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/04/15 15:47	
Arsenic			0.987	mg/L	0.0085	99	80	120			
Cadmium			0.907	mg/L	0.0010	91	80	120			
Copper			0.505	mg/L	0.010	101	80	120			
Lead			0.913	mg/L	0.010	91	80	120			
Zinc			0.982	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/04/15 21:57	
Arsenic			2.41	mg/L	0.0085	97	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.49	mg/L	0.010	99	90	110			
Lead			2.45	mg/L	0.010	98	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/04/15 22:00	
Arsenic			-0.00124	mg/L	0.0085						
Cadmium			0.000850	mg/L	0.0010						
Copper			0.00335	mg/L	0.010						
Lead			-0.0126	mg/L	0.010						
Zinc			0.000860	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/04/15 22:41	
Arsenic			2.36	mg/L	0.0085	94	90	110			
Cadmium			2.39	mg/L	0.0010	96	90	110			
Copper			2.46	mg/L	0.010	98	90	110			
Lead			2.35	mg/L	0.010	94	90	110			
Zinc			2.41	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/04/15 22:45	
Arsenic			0.00102	mg/L	0.0085						
Cadmium			0.00106	mg/L	0.0010						
Copper			0.00177	mg/L	0.010						
Lead			-0.0120	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150204C	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/04/15 22:45	
Zinc			0.000420	mg/L	0.010						
Method:	**E200.7**									Analytical Run: ICP2-HE_150210B	
Lab ID:	**ICV**		Initial Calibration Verification Standard							02/10/15 10:17	
Lead			0.783	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							02/10/15 10:32	
Lead			-0.00108	mg/L	0.010		0	0			
Lab ID:	**ICSAB**		Interference Check Sample AB							02/10/15 10:36	
Lead			0.919	mg/L	0.010	92	80	120			
Lab ID:	**CCV**		Continuing Calibration Verification Standard							02/11/15 03:53	
Lead			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							02/11/15 03:57	
Lead			0.00485	mg/L	0.010						
Lab ID:	**CCV**		Continuing Calibration Verification Standard							02/11/15 04:38	
Lead			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							02/11/15 04:41	
Lead			0.00352	mg/L	0.010						
Lab ID:	**CCV**		Continuing Calibration Verification Standard							02/11/15 05:22	
Lead			2.53	mg/L	0.010	101	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							02/11/15 05:25	
Lead			0.0143	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150211B	
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							02/11/15 16:33	
Copper			0.771	mg/L	0.010	96	90	110			
Zinc			0.784	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							02/11/15 16:48	
Copper			-0.00338	mg/L	0.010		0	0			
Zinc			-0.000320	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	2	Interference Check Sample AB							02/11/15 16:52	
Copper			0.492	mg/L	0.010	98	80	120			
Zinc			0.979	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/12/15 01:50	
Copper			2.55	mg/L	0.010	102	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/12/15 01:54	
Copper			0.00357	mg/L	0.010						
Zinc			0.000520	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/12/15 02:35	
Copper			2.56	mg/L	0.010	102	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/12/15 02:39	
Copper			0.00559	mg/L	0.010						
Zinc			-0.000300	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/12/15 03:19	
Copper			2.58	mg/L	0.010	103	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/12/15 03:23	
Copper			0.00394	mg/L	0.010						
Zinc			0.000910	mg/L	0.010						
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							02/12/15 04:04	
Copper			2.59	mg/L	0.010	104	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							02/12/15 04:07	
Copper			0.00284	mg/L	0.010						
Zinc			0.00147	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.8**								Analytical Run: SUB-B238308		
Lab ID: **QCS**	2	Initial Calibration Verification Standard							02/12/15 12:05	
Arsenic		0.0491	mg/L	0.0050	98	90	110			
Lead		0.0508	mg/L	0.010	102	90	110			
Lab ID: **QCS**	2	Initial Calibration Verification Standard							02/12/15 17:01	
Arsenic		0.0491	mg/L	0.0050	98	90	110			
Lead		0.0497	mg/L	0.010	99	90	110			
Lab ID: **QCS**	2	Initial Calibration Verification Standard							02/14/15 03:47	
Arsenic		0.0488	mg/L	0.0050	98	90	110			
Lead		0.0496	mg/L	0.010	99	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27818
Lab ID:	**MB-27818**	5	Method Blank				Run: ICP2-HE_150203B				02/03/15 18:30
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27818**	5	Laboratory Fortified Blank				Run: ICP2-HE_150203B				02/03/15 18:34
Arsenic			48.5	mg/kg	1.0	97	80	120			
Cadmium			23.1	mg/kg	1.0	92	80	120			
Copper			48.5	mg/kg	1.0	96	80	120			
Lead			48.7	mg/kg	1.0	97	80	120			
Zinc			47.5	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27818**	5	Laboratory Control Sample				Run: ICP2-HE_150203B				02/03/15 18:38
Arsenic			279	mg/kg	1.8	81	72.3	106.4			
Cadmium			113	mg/kg	1.0	83	73	105.1			
Copper			240	mg/kg	1.1	86	77.5	109.6			
Lead			172	mg/kg	3.2	92	75.9	108.6			
Zinc			183	mg/kg	1.0	86	74.2	109.9			
Lab ID:	**H15010298-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150203B				02/03/15 20:05
Arsenic			256	mg/kg	1.9	94	75	125			
Cadmium			117	mg/kg	1.0	88	75	125			
Copper			267	mg/kg	1.2	91	75	125			
Lead			264	mg/kg	3.4	93	75	125			
Zinc			329	mg/kg	1.0	90	75	125			
Lab ID:	**H15010298-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150203B				02/03/15 20:09
Arsenic			55.3	mg/kg	1.9	94	75	125			
Cadmium			23.3	mg/kg	1.0	89	75	125			
Copper			75.8	mg/kg	1.1	99	75	125			
Lead			67.3	mg/kg	3.3	98	75	125			
Zinc			143	mg/kg	1.0	104	75	125			
Lab ID:	**H15010298-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150203B				02/03/15 20:13
Arsenic			53.6	mg/kg	1.9	91	75	125	3.1	20	
Cadmium			23.0	mg/kg	1.0	88	75	125	1.1	20	
Copper			76.4	mg/kg	1.1	100	75	125	0.8	20	
Lead			67.2	mg/kg	3.3	98	75	125	0.2	20	
Zinc			143	mg/kg	1.0	104	75	125	0.3	20	
Method:	**SW6010B**										Batch: 27819
Lab ID:	**MB-27819**	5	Method Blank				Run: ICP2-HE_150203B				02/03/15 20:50
Arsenic			ND	mg/kg	0.4						
Cadmium			0.01	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27819
Lab ID:	**MB-27819**	5	Method Blank				Run: ICP2-HE_150203B				02/03/15 20:50
Lead			ND	mg/kg	0.6						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LFB-27819**	5	Laboratory Fortified Blank				Run: ICP2-HE_150203B				02/03/15 20:54
Arsenic			46.1	mg/kg	1.0	92	80	120			
Cadmium			22.9	mg/kg	1.0	91	80	120			
Copper			48.0	mg/kg	1.0	95	80	120			
Lead			45.8	mg/kg	1.0	92	80	120			
Zinc			47.1	mg/kg	1.0	93	80	120			
Lab ID:	**LCS-27819**	5	Laboratory Control Sample				Run: ICP2-HE_150203B				02/03/15 20:58
Arsenic			267	mg/kg	1.8	78	72.3	106.4			
Cadmium			112	mg/kg	1.0	82	73	105.1			
Copper			246	mg/kg	1.1	88	77.5	109.6			
Lead			172	mg/kg	3.2	92	75.9	108.6			
Zinc			181	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H15010298-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150203B				02/03/15 22:22
Arsenic			257	mg/kg	1.8	89	75	125			
Cadmium			107	mg/kg	1.0	83	75	125			
Copper			420	mg/kg	1.1	91	75	125			
Lead			253	mg/kg	3.2	85	75	125			
Zinc			371	mg/kg	1.0	89	75	125			
Lab ID:	**H15010298-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150203B				02/03/15 22:26
Arsenic			72.6	mg/kg	1.8	87	75	125			
Cadmium			21.4	mg/kg	1.0	83	75	125			
Copper			233	mg/kg	1.1	92	75	125			
Lead			80.0	mg/kg	3.1	88	75	125			
Zinc			187	mg/kg	1.0	88	75	125			
Lab ID:	**H15010298-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150203B				02/03/15 22:30
Arsenic			72.3	mg/kg	1.8	86	75	125	0.5	20	
Cadmium			21.2	mg/kg	1.0	81	75	125	1.0	20	
Copper			233	mg/kg	1.1	90	75	125	0.2	20	
Lead			79.3	mg/kg	3.2	86	75	125	0.8	20	
Zinc			185	mg/kg	1.0	82	75	125	1.3	20	
Method:	**SW6010B**										Batch: 27820
Lab ID:	**MB-27820**	4	Method Blank				Run: ICP2-HE_150203B				02/03/15 22:34
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			5	mg/kg	0.2						
Lead			ND	mg/kg	0.6						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27820
Lab ID:	**LFB-27820**	4	Laboratory Fortified Blank				Run: ICP2-HE_150203B				02/03/15 22:37
Arsenic			45.9	mg/kg	1.0	92	80	120			
Cadmium			22.7	mg/kg	1.0	91	80	120			
Copper			46.7	mg/kg	1.0	83	80	120			
Lead			45.9	mg/kg	1.0	92	80	120			
Lab ID:	**LCS-27820**	4	Laboratory Control Sample				Run: ICP2-HE_150203B				02/03/15 22:41
Arsenic			268	mg/kg	1.8	78	72.3	106.4			
Cadmium			114	mg/kg	1.0	84	73	105.1			
Copper			241	mg/kg	1.1	84	77.5	109.6			
Lead			165	mg/kg	3.1	88	75.9	108.6			
Lab ID:	**H15010298-053APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150203B				02/03/15 23:59
Arsenic			242	mg/kg	1.9	90	75	125			
Cadmium			115	mg/kg	1.0	88	75	125			
Copper			268	mg/kg	1.1	93	75	125			
Lead			242	mg/kg	3.3	87	75	125			
Lab ID:	**H15010298-053AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150203B				02/04/15 00:02
Arsenic			50.4	mg/kg	1.8	87	75	125			
Cadmium			23.0	mg/kg	1.0	91	75	125			
Copper			75.5	mg/kg	1.1	96	75	125			
Lead			61.6	mg/kg	3.2	94	75	125			
Lab ID:	**H15010298-053AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150203B				02/04/15 00:06
Arsenic			52.7	mg/kg	1.8	91	75	125	4.5	20	
Cadmium			23.3	mg/kg	1.0	92	75	125	1.0	20	
Copper			76.8	mg/kg	1.1	98	75	125	1.7	20	
Lead			63.4	mg/kg	3.2	97	75	125	2.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27819	
Lab ID:	**H15010298-035APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150204C			02/04/15 22:34	
Arsenic			421	mg/kg	2.0	82	75	125			
Cadmium			121	mg/kg	1.0	82	75	125			
Copper			1530	mg/kg	1.2		75	125			A
Lead			504	mg/kg	3.5	81	75	125			
Zinc			1630	mg/kg	1.0		75	125			A
Lab ID:	**H15010298-035AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150204C			02/04/15 22:38	
Arsenic			206	mg/kg	1.7		75	125			A
Cadmium			28.3	mg/kg	1.0	76	75	125			
Copper			1220	mg/kg	1.0		75	125			A
Lead			284	mg/kg	3.0		75	125			A
Zinc			1260	mg/kg	1.0		75	125			A
Lab ID:	**H15010298-035AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150204C			02/04/15 22:49	
Arsenic			215	mg/kg	1.7		75	125	4.3	20	A
Cadmium			29.1	mg/kg	1.0	80	75	125	2.7	20	
Copper			1200	mg/kg	1.0		75	125	1.7	20	A
Lead			294	mg/kg	3.0		75	125	3.7	20	A
Zinc			1310	mg/kg	1.0		75	125	4.0	20	A
Method:	**SW6010B**									Batch: 27820	
Lab ID:	**MB-27820**	4	Method Blank				Run: ICP2-HE_150204C			02/04/15 20:13	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			5	mg/kg	0.2						
Lead			0.7	mg/kg	0.6						
Lab ID:	**LFB-27820**	4	Laboratory Fortified Blank				Run: ICP2-HE_150204C			02/04/15 20:17	
Arsenic			46.2	mg/kg	1.0	92	80	120			
Cadmium			23.0	mg/kg	1.0	92	80	120			
Copper			48.1	mg/kg	1.0	86	80	120			
Lead			47.0	mg/kg	1.0	93	80	120			
Lab ID:	**LCS-27820**	4	Laboratory Control Sample				Run: ICP2-HE_150204C			02/04/15 20:21	
Arsenic			262	mg/kg	1.8	76	72.3	106.4			
Cadmium			112	mg/kg	1.0	81	73	105.1			
Copper			254	mg/kg	1.1	89	77.5	109.6			
Lead			166	mg/kg	3.1	89	75.9	108.6			
Lab ID:	**H15010298-053APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150204C			02/04/15 21:38	
Arsenic			233	mg/kg	1.9	87	75	125			
Cadmium			111	mg/kg	1.0	85	75	125			
Copper			261	mg/kg	1.1	89	75	125			
Lead			234	mg/kg	3.3	85	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B										Batch: 27820
Lab ID: H15010298-053AMS	4	Sample Matrix Spike				Run: ICP2-HE_150204C			02/04/15 21:42	
Arsenic		53.4	mg/kg	1.8	91	75	125			
Cadmium		22.3	mg/kg	1.0	88	75	125			
Copper		76.1	mg/kg	1.1	93	75	125			
Lead		60.5	mg/kg	3.2	96	75	125			
Lab ID: H15010298-053AMSD	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150204C			02/04/15 21:45	
Arsenic		54.1	mg/kg	1.8	92	75	125	1.3	20	
Cadmium		22.7	mg/kg	1.0	90	75	125	1.4	20	
Copper		75.3	mg/kg	1.1	91	75	125	1.2	20	
Lead		59.9	mg/kg	3.2	94	75	125	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27818
Lab ID:	**MB-27818**	5	Method Blank				Run: ICP2-HE_150210B				02/11/15 04:23
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LCS-27818**	5	Laboratory Control Sample				Run: ICP2-HE_150210B				02/11/15 04:27
Arsenic			230	mg/kg	1.0	67	72.3	106.4			S
Cadmium			95.3	mg/kg	1.0	70	73	105.1			S
Copper			209	mg/kg	1.0	75	77.5	109.6			S
Lead			141	mg/kg	1.3	75	75.9	108.6			
Zinc			156	mg/kg	1.0	73	74.2	109.9			S
Lab ID:	**H15010298-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150210B				02/11/15 05:37
Arsenic			92.1	mg/kg	1.0	81	75	125			
Cadmium			42.0	mg/kg	1.0	79	75	125			
Copper			112	mg/kg	1.0	84	75	125			
Lead			97.4	mg/kg	1.4	80	75	125			
Zinc			171	mg/kg	1.0	81	75	125			
Lab ID:	**H15010298-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150210B				02/11/15 05:40
Arsenic			47.4	mg/kg	1.0	80	75	125			
Cadmium			20.6	mg/kg	1.0	80	75	125			
Copper			67.0	mg/kg	1.0	85	75	125			
Lead			52.3	mg/kg	1.3	77	75	125			
Zinc			128	mg/kg	1.0	83	75	125			
Lab ID:	**H15010298-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150210B				02/11/15 05:44
Arsenic			46.3	mg/kg	1.0	78	75	125	2.3	20	
Cadmium			20.1	mg/kg	1.0	78	75	125	2.3	20	
Copper			65.9	mg/kg	1.0	83	75	125	1.6	20	
Lead			54.8	mg/kg	1.3	82	75	125	4.7	20	
Zinc			126	mg/kg	1.0	81	75	125	1.1	20	
Method:	**SW6010B**										Batch: 27819
Lab ID:	**MB-27819**	5	Method Blank				Run: ICP2-HE_150210B				02/11/15 03:46
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LCS-27819**	5	Laboratory Control Sample				Run: ICP2-HE_150210B				02/11/15 03:50
Arsenic			231	mg/kg	1.0	67	72.3	106.4			S
Cadmium			95.7	mg/kg	1.0	70	73	105.1			S
Copper			212	mg/kg	1.0	76	77.5	109.6			S

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27819
Lab ID:	**LCS-27819**	5	Laboratory Control Sample				Run: ICP2-HE_150210B				02/11/15 03:50
Lead			144	mg/kg	1.3	77	75.9	108.6			
Zinc			157	mg/kg	1.0	74	74.2	109.9			
Method:	**SW6010B**										Batch: 27998
Lab ID:	**MB-27998**	2	Method Blank				Run: ICP2-HE_150211B				02/12/15 02:09
Copper			ND	mg/kg	0.2						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27998**	2	Laboratory Fortified Blank				Run: ICP2-HE_150211B				02/12/15 02:13
Copper			48.9	mg/kg	1.0	98	80	120			
Zinc			47.9	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27998**	2	Laboratory Control Sample				Run: ICP2-HE_150211B				02/12/15 02:17
Copper			250	mg/kg	2.1	89	77.5	109.6			
Zinc			184	mg/kg	1.0	86	74.2	109.9			
Lab ID:	**H15010298-053APDS**	2	Post Digestion/Distillation Spike				Run: ICP2-HE_150211B				02/12/15 03:34
Copper			262	mg/kg	1.1	92	75	125			
Zinc			289	mg/kg	1.0	92	75	125			
Lab ID:	**H15010298-053AMS**	2	Sample Matrix Spike				Run: ICP2-HE_150211B				02/12/15 03:38
Copper			74.3	mg/kg	1.1	94	75	125			
Zinc			104	mg/kg	1.0	98	75	125			
Lab ID:	**H15010298-053AMSD**	2	Sample Matrix Spike Duplicate				Run: ICP2-HE_150211B				02/12/15 03:42
Copper			74.3	mg/kg	1.1	94	75	125	0.0	20	
Zinc			106	mg/kg	1.0	101	75	125	1.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Analytical Run: SUB-B238337	
Lab ID:	**QCS**		Initial Calibration Verification Standard							02/13/15 09:09	
Lead			0.73	mg/L	0.050	91	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							02/13/15 09:13	
Lead			-0.0093	mg/L	0.050						
Lab ID:	**ICSAB**		Interference Check Sample AB							02/13/15 09:17	
Lead			0.78	mg/L	0.050	78	80	120			S
Lab ID:	**QCS**	4	Initial Calibration Verification Standard							02/13/15 10:20	
Cadmium			0.40	mg/L	0.010	100	90	110			
Copper			0.77	mg/L	0.010	96	90	110			
Lead			0.76	mg/L	0.050	95	90	110			
Zinc			0.76	mg/L	0.010	95	90	110			
Lab ID:	**ICSA**	4	Interference Check Sample A							02/13/15 10:23	
Cadmium			0.0081	mg/L	0.010						
Copper			-0.0013	mg/L	0.010						
Lead			0.0091	mg/L	0.050						
Zinc			0.0025	mg/L	0.010						
Lab ID:	**ICSAB**	4	Interference Check Sample AB							02/13/15 10:27	
Cadmium			0.84	mg/L	0.010	84	80	120			
Copper			0.45	mg/L	0.010	90	80	120			
Lead			0.86	mg/L	0.050	86	80	120			
Zinc			0.90	mg/L	0.010	90	80	120			
Method:	**SW6010B**										Batch: B_86942
Lab ID:	**MB-86942**		Method Blank				Run: SUB-B238337			02/13/15 12:05	
Zinc			ND	mg/kg	0.5						
Lab ID:	**LFB-86942**		Laboratory Fortified Blank				Run: SUB-B238337			02/13/15 12:09	
Zinc			46	mg/kg	5.0	92	80	120			
Lab ID:	**SRM-86942**		Standard Reference Material				Run: SUB-B238337			02/13/15 12:12	
Zinc			180	mg/kg	5.0	84	74	120			
Lab ID:	**H15010298-018A**		Serial Dilution				Run: SUB-B238337			02/13/15 13:21	
Zinc			99.6	mg/kg	2.5		0	0	6.5	10	
Lab ID:	**H15010298-018A**		Post Digestion/Distillation Spike				Run: SUB-B238337			02/13/15 13:24	
Zinc			138	mg/kg	1.0	84	75	125			
Lab ID:	**H15010298-018A**		Sample Matrix Spike				Run: SUB-B238337			02/13/15 13:28	
Zinc			141	mg/kg	1.0	93	75	125			
Lab ID:	**H15010298-018A**		Sample Matrix Spike Duplicate				Run: SUB-B238337			02/13/15 13:32	
Zinc			140	mg/kg	1.0	90	75	125	1.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_86944	
Lab ID:	**MB-86944**	4	Method Blank				Run: SUB-B238337			02/14/15 06:07	
Cadmium			ND	mg/kg	0.03						
Copper			5	mg/kg	0.2						
Lead			ND	mg/kg	0.8						
Zinc			30	mg/kg	0.5						
Lab ID:	**LFB-86944**	4	Laboratory Fortified Blank				Run: SUB-B238337			02/14/15 06:42	
Cadmium			21	mg/kg	5.0	83	80	120			
Copper			41	mg/kg	5.0	83	80	120			
Lead			42	mg/kg	5.0	84	80	120			
Zinc			42	mg/kg	5.0	84	80	120			
Lab ID:	**SRM-86944**	4	Standard Reference Material				Run: SUB-B238337			02/14/15 06:46	
Cadmium			110	mg/kg	5.0	79	73	120			
Copper			240	mg/kg	5.0	85	77	120			
Lead			160	mg/kg	5.0	86	75	120			
Zinc			180	mg/kg	5.0	86	74	120			
Lab ID:	**H15010298-053A**	4	Serial Dilution				Run: SUB-B238337			02/14/15 07:57	
Cadmium			ND	mg/kg	1.0		0	0		10	
Copper			28.7	mg/kg	1.0		0	0	7.7	10	
Lead			18.1	mg/kg	4.2		0	0		10	N
Zinc			61.7	mg/kg	2.5		0	0	9.7	10	
Lab ID:	**H15010298-053A**	4	Post Digestion/Distillation Spike				Run: SUB-B238337			02/14/15 08:01	
Cadmium			21.0	mg/kg	1.0	79	75	125			
Copper			70.6	mg/kg	1.0	85	75	125			
Lead			53.1	mg/kg	1.0	79	75	125			
Zinc			99.1	mg/kg	1.0	83	75	125			
Lab ID:	**H15010298-053A**	4	Sample Matrix Spike				Run: SUB-B238337			02/14/15 08:05	
Cadmium			20.7	mg/kg	1.0	80	75	125			
Copper			69.0	mg/kg	1.0	84	75	125			
Lead			52.6	mg/kg	1.0	81	75	125			
Zinc			101	mg/kg	1.0	89	75	125			
Lab ID:	**H15010298-053A**	4	Sample Matrix Spike Duplicate				Run: SUB-B238337			02/14/15 08:50	
Cadmium			21.1	mg/kg	1.0	82	75	125	1.8	20	
Copper			72.2	mg/kg	1.0	90	75	125	4.5	20	
Lead			52.8	mg/kg	1.0	81	75	125	0.4	20	
Zinc			102	mg/kg	1.0	90	75	125	0.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B238308	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/12/15 10:38	
Arsenic			0.0491	mg/L	0.0010	98	90	110			
Cadmium			0.0254	mg/L	0.0010	102	90	110			
Copper			0.0491	mg/L	0.0010	98	90	110			
Lead			0.0504	mg/L	0.0010	101	90	110			
Zinc			0.0503	mg/L	0.0010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/12/15 10:47	
Arsenic			-6.58E-05	mg/L	0.0010						
Cadmium			0.000520	mg/L	0.0010						
Copper			0.000329	mg/L	0.0010						
Lead			0.000183	mg/L	0.0010						
Zinc			0.00151	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/12/15 10:59	
Arsenic			0.00909	mg/L	0.0010	91	70	130			
Cadmium			0.00990	mg/L	0.0010	99	70	130			
Copper			0.0184	mg/L	0.0010	92	70	130			
Lead			8.80E-05	mg/L	0.0010		0	0			
Zinc			0.0102	mg/L	0.0010	102	70	130			
Method:	**SW6020**									Batch: B_86942	
Lab ID:	**MB-86942**	5	Method Blank				Run: SUB-B238308			02/13/15 02:57	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	10						
Lab ID:	**LFB-86942**	5	Laboratory Fortified Blank				Run: SUB-B238308			02/13/15 03:01	
Arsenic			47.7	mg/kg	1.0	95	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Copper			49.9	mg/kg	1.0	100	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Zinc			49.5	mg/kg	11	99	80	120			
Lab ID:	**SRM-86942**	5	Standard Reference Material				Run: SUB-B238308			02/13/15 03:06	
Arsenic			304	mg/kg	1.0	89	72	120			
Cadmium			131	mg/kg	1.0	95	73	120			
Copper			276	mg/kg	1.0	99	77	120			
Lead			189	mg/kg	1.0	101	75	120			
Zinc			208	mg/kg	11	98	74	120			
Lab ID:	**H15010298-018A**	5	Serial Dilution				Run: SUB-B238308			02/13/15 04:40	
Arsenic			7.06	mg/kg	2.1		0	0		10	N
Cadmium			ND	mg/kg	1.0		0	0		10	
Copper			27.9	mg/kg	3.5		0	0		10	N

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86942	
Lab ID:	**H15010298-018A**	5	Serial Dilution				Run: SUB-B238308			02/13/15 04:40	
Lead			12.9	mg/kg	3.9		0	0		10	N
Zinc			108	mg/kg	54		0	0		10	N
Lab ID:	**H15010298-018A**	5	Post Digestion/Distillation Spike				Run: SUB-B238308			02/13/15 04:45	
Arsenic			52.2	mg/kg	1.0	88	75	125			
Cadmium			49.3	mg/kg	1.0	95	75	125			
Copper			72.0	mg/kg	1.0	82	75	125			
Lead			61.9	mg/kg	1.0	93	75	125			
Zinc			147	mg/kg	11	70	75	125			S
Lab ID:	**H15010298-018A**	5	Sample Matrix Spike				Run: SUB-B238308			02/13/15 04:49	
Arsenic			57.9	mg/kg	1.0	99	75	125			
Cadmium			27.1	mg/kg	1.0	104	75	125			
Copper			78.9	mg/kg	1.0	95	75	125			
Lead			65.0	mg/kg	1.0	99	75	125			
Zinc			152	mg/kg	11	79	75	125			
Lab ID:	**H15010298-018A**	5	Sample Matrix Spike Duplicate				Run: SUB-B238308			02/13/15 04:54	
Arsenic			59.8	mg/kg	1.0	103	75	125	3.2	20	
Cadmium			28.6	mg/kg	1.0	110	75	125	5.4	20	
Copper			85.3	mg/kg	1.0	107	75	125	7.8	20	
Lead			67.4	mg/kg	1.0	104	75	125	3.6	20	
Zinc			163	mg/kg	11	101	75	125	7.3	20	
Method:	**SW6020**									Batch: B_86943	
Lab ID:	**MB-86943**	5	Method Blank				Run: SUB-B238308			02/13/15 05:03	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	10						
Lab ID:	**LFB-86943**	5	Laboratory Fortified Blank				Run: SUB-B238308			02/13/15 05:07	
Arsenic			48.7	mg/kg	1.0	97	80	120			
Cadmium			25.1	mg/kg	1.0	101	80	120			
Copper			50.9	mg/kg	1.0	102	80	120			
Lead			49.9	mg/kg	1.0	100	80	120			
Zinc			51.1	mg/kg	11	102	80	120			
Lab ID:	**SRM-86943**	5	Standard Reference Material				Run: SUB-B238308			02/13/15 05:12	
Arsenic			312	mg/kg	1.0	91	72	120			
Cadmium			136	mg/kg	1.0	99	73	120			
Copper			286	mg/kg	1.0	102	77	120			
Lead			196	mg/kg	1.0	105	75	120			
Zinc			214	mg/kg	11	100	74	120			

Qualifiers:

RL - Analyte reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Batch: B_86943	
Lab ID: B15020899-036ADIL	5	Serial Dilution				Run: SUB-B238308			02/13/15 06:05	
Arsenic		33.5	mg/kg	2.0		0	0	5.2	10	
Cadmium		ND	mg/kg	1.0		0	0		10	
Copper		200	mg/kg	3.4		0	0	4.2	10	
Lead		38.9	mg/kg	3.8		0	0	1.6	10	
Zinc		170	mg/kg	53		0	0		10	N
Lab ID: B15020899-036APDS1	5	Post Digestion/Distillation Spike				Run: SUB-B238308			02/13/15 06:10	
Arsenic		82.3	mg/kg	1.0	94	75	125			
Cadmium		50.8	mg/kg	1.0	100	75	125			
Copper		247	mg/kg	1.0		75	125			A
Lead		87.9	mg/kg	1.0	97	75	125			
Zinc		203	mg/kg	11	79	75	125			
Lab ID: B15020899-036AMS3	5	Sample Matrix Spike				Run: SUB-B238308			02/13/15 06:14	
Arsenic		88.8	mg/kg	1.0	107	75	125			
Cadmium		28.0	mg/kg	1.0	108	75	125			
Copper		269	mg/kg	1.0		75	125			A
Lead		91.3	mg/kg	1.0	104	75	125			
Zinc		222	mg/kg	11	118	75	125			
Lab ID: B15020899-036AMSD	5	Sample Matrix Spike Duplicate				Run: SUB-B238308			02/13/15 06:19	
Arsenic		82.9	mg/kg	1.0	95	75	125	6.9	20	
Cadmium		26.2	mg/kg	1.0	101	75	125	6.7	20	
Copper		245	mg/kg	1.0		75	125	9.3	20	A
Lead		87.2	mg/kg	1.0	95	75	125	4.6	20	
Zinc		207	mg/kg	11	87	75	125	7.3	20	
Method: SW6020									Batch: B_86944	
Lab ID: MB-86944	4	Method Blank				Run: SUB-B238308			02/13/15 06:41	
Arsenic		ND	mg/kg	0.4						
Cadmium		ND	mg/kg	0.2						
Copper		6	mg/kg	0.7						
Lead		ND	mg/kg	0.8						
Lab ID: LFB-86944	4	Laboratory Fortified Blank				Run: SUB-B238308			02/13/15 06:46	
Arsenic		47.1	mg/kg	1.0	94	80	120			
Cadmium		25.2	mg/kg	1.0	101	80	120			
Copper		49.7	mg/kg	1.0	87	80	120			
Lead		48.6	mg/kg	1.0	97	80	120			
Lab ID: SRM-86944	4	Standard Reference Material				Run: SUB-B238308			02/13/15 06:50	
Arsenic		308	mg/kg	1.0	90	72	120			
Cadmium		138	mg/kg	1.0	101	73	120			
Copper		286	mg/kg	1.0	102	77	120			
Lead		194	mg/kg	1.0	104	75	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010298

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86944	
Lab ID:	**H15010298-053A**	4	Serial Dilution				Run: SUB-B238308			02/13/15 08:34	
Arsenic			8.25	mg/kg	2.1		0	0		10	N
Cadmium			ND	mg/kg	1.0		0	0		10	
Copper			30.6	mg/kg	3.5		0	0		10	N
Lead			11.3	mg/kg	3.8		0	0		10	N
Lab ID:	**H15010298-053A**	4	Post Digestion/Distillation Spike				Run: SUB-B238308			02/13/15 08:38	
Arsenic			55.8	mg/kg	1.0	93	75	125			
Cadmium			48.1	mg/kg	1.0	95	75	125			
Copper			76.2	mg/kg	1.0	82	75	125			
Lead			58.8	mg/kg	1.0	90	75	125			
Lab ID:	**H15010298-053A**	4	Sample Matrix Spike				Run: SUB-B238308			02/13/15 08:43	
Arsenic			61.7	mg/kg	1.0	104	75	125			
Cadmium			28.4	mg/kg	1.0	112	75	125			
Copper			86.8	mg/kg	1.0	104	75	125			
Lead			66.0	mg/kg	1.0	104	75	125			
Lab ID:	**H15010298-053A**	4	Sample Matrix Spike Duplicate				Run: SUB-B238308			02/13/15 08:47	
Arsenic			91.8	mg/kg	1.0	164	75	125	39	20	SR
Cadmium			42.3	mg/kg	1.0	167	75	125	39	20	SR
Copper			135	mg/kg	1.0	198	75	125	43	20	SR
Lead			97.4	mg/kg	1.0	166	75	125	38	20	SR

Qualifiers:

RL - Analyte reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

S - Spike recovery outside of advisory limits.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

Work Order Receipt Checklist

MT DEQ-Federal Superfund H15010298

Login completed by: Austin H. Nearpass
Date Received: 1/22/2015
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 1/28/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample 4-214-3036 COC states time as 13:31, bag says "13:32" used COC at login.
Received samples 4-214-1218 collected on 1/14/15 @ 1335 and 4-214-1824 collected on 1/14/15 @ 1334 that are not on the COC. Per Erin, we are not to analyze. TI 1/23/15
Sample 4-213-1218 on COC but not present.
Sample 4-213-1824 on COC but not present. An 1/23/15

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-181-3036	837	1/14/15	Soil	A	B		1
4-181-3642	836	1/14/15	Soil	A	B		1
4-181-4248	835	1/14/15	Soil	A	B		1
4-182-1824	814	1/14/15	Soil	A	B		1
4-182-2430	813	1/14/15	Soil	A	B		1
4-182-3036	812	1/14/15	Soil	A	B		1
4-187-3036	1007	1/14/15	Soil	A	B		1
4-187-3642	1006	1/14/15	Soil	A	B		1
4-187-4248	1005	1/14/15	Soil	A	B		1
4-188-3036	1027	1/14/15	Soil	A	B		1
4-188-3642	1026	1/14/15	Soil	A	B		1
4-188-4248	1025	1/14/15	Soil	A	B		1
4-189-1218	935	1/14/15	Soil	A	B		1
4-189-1824	934	1/14/15	Soil	A	B		1
4-189-2430	933	1/14/15	Soil	A	B		1
4-196-3036	1152	1/14/15	Soil	A	B		1
4-196-3642	1151	1/14/15	Soil	A	B		1
4-196-4248	1150	1/14/15	Soil	A	B		1
4-197-1218	1100	1/14/15	Soil	A	B		1
4-197-1824	1059	1/14/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H150l0298

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1/22/15 1325

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 2.0 TB on ice hand del
Date/Time: 1/22/15 13:25

COC Blank.xls

CDM Smith

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

ompany Name:
DEQ - Remediation Division

eport Mail Address:
West 14th ST STE 200
elena, MT 59601

nvoice Address:
O Box 200901
elena, MT 5620-0901

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
4-197-2430	1058	1/14/15	Soil	A	B		1
4-198-1218	1405	1/14/15	Soil	A	B		1
4-198-1824	1404	1/14/15	Soil	A	B		1
4-198-2430	1403	1/14/15	Soil	A	B		1
4-205-1218	1240	1/14/15	Soil	A	B		1
4-205-1218D	1241	1/14/15	Soil	A	B		1
4-205-1824	1239	1/14/15	Soil	A	B		1
4-205-2430	1238	1/14/15	Soil	A	B		1
4-205-3036	1237	1/14/15	Soil	A	B		1
4-206-1824	1424	1/14/15	Soil	A	B		1
4-206-2430	1423	1/14/15	Soil	A	B		1
4-206-3036	1422	1/14/15	Soil	A	B		1
4-206W-1218	1546	1/14/15	Soil	A	B		1
4-206W-1824	1545	1/14/15	Soil	A	B		1
4-206W2-0006	1633	1/14/15	Soil	A	B		1
4-206W2-0612	1632	1/14/15	Soil	A	B		1
4-213-1218	1305	1/14/15	Soil	A	B		1
4-213-1824	1304	1/14/15	Soil	A	B		1
4-213-2430	1303	1/14/15	Soil	A	B		1
4-214-3036	1331	1/14/15	Soil	A	B		1

H15010298

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 1/22/15 1325

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
Date/Time: 2.0 °C on ice hand del 1/22/15 13:25

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-214-3642	1331	1/14/15	Soil	A	B		1
4-214-4248	1330	1/14/15	Soil	A	B		1
4-214W-0612	1617	1/14/15	Soil	A	B		1
4-214W-1218	1616	1/14/15	Soil	A	B		1
4-214W-1824	1615	1/14/15	Soil	A	B		1
4-224-2430	1503	1/14/15	Soil	A	B		1
4-224-3036	1502	1/14/15	Soil	A	B		1
4-224-3642	1501	1/14/15	Soil	A	B		1
4-224w-1218	1646	1/14/15	Soil	A	B		1
4-224w-1824	1645	1/14/15	Soil	A	B		1
4-224W2-0612	1707	1/14/15	Soil	A	B		1
4-224W2-1218	1706	1/14/15	Soil	A	B		1
4-224W2-1824	1705	1/14/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

H150102 98

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 1/22/15 1325

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

20 lb ice
hand del

Date/Time: 1/22/15 13:25

COC Blank.xls

ANALYTICAL SUMMARY REPORT

February 17, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010290

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 41 samples for MT DEQ-Federal Superfund on 1/22/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010290-001	4-080-3036	01/13/15 10:47	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010290-002	4-080-3642	01/13/15 10:46	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010290-003	4-080-4248	01/13/15 10:45	01/22/15	Soil	Same As Above
H15010290-004	4-169-1824	01/13/15 9:19	01/22/15	Soil	Same As Above
H15010290-005	4-169-2430	01/13/15 9:18	01/22/15	Soil	Same As Above
H15010290-006	4-169-3036	01/13/15 9:17	01/22/15	Soil	Same As Above
H15010290-007	4-174-1218	01/13/15 16:25	01/22/15	Soil	Same As Above
H15010290-008	4-174-1824	01/13/15 16:24	01/22/15	Soil	Same As Above
H15010290-009	4-174-2430	01/13/15 16:23	01/22/15	Soil	Same As Above
H15010290-010	4-175-1824	01/13/15 13:14	01/22/15	Soil	Same As Above
H15010290-011	4-175-2430	01/13/15 13:13	01/22/15	Soil	Same As Above
H15010290-012	4-175-3036	01/13/15 13:12	01/22/15	Soil	Same As Above
H15010290-013	4-176-1218	01/13/15 11:15	01/22/15	Soil	Same As Above
H15010290-014	4-176-1824	01/13/15 11:14	01/22/15	Soil	Same As Above
H15010290-015	4-176-2430	01/13/15 11:13	01/22/15	Soil	Same As Above
H15010290-016	4-177-0612	01/13/15 10:26	01/22/15	Soil	Same As Above
H15010290-017	4-177-1218	01/13/15 10:25	01/22/15	Soil	Same As Above
H15010290-018	4-177-1824	01/13/15 10:24	01/22/15	Soil	Same As Above
H15010290-019	4-178-3036	01/13/15 17:18	01/22/15	Soil	Same As Above
H15010290-020	4-178-3642	01/13/15 17:16	01/22/15	Soil	Same As Above
H15010290-021	4-178-4248	01/13/15 17:15	01/22/15	Soil	Same As Above
H15010290-022	4-184-1824	01/13/15 16:49	01/22/15	Soil	Same As Above
H15010290-023	4-184-2430	01/13/15 16:48	01/22/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010290-024	4-184-3036	01/13/15 16:47	01/22/15	Soil	Same As Above
H15010290-025	4-185-1218	01/13/15 11:40	01/22/15	Soil	Same As Above
H15010290-026	4-185-1824	01/13/15 11:39	01/22/15	Soil	Same As Above
H15010290-027	4-185-2430	01/13/15 11:38	01/22/15	Soil	Same As Above
H15010290-028	4-185NW-0006	01/13/15 14:40	01/22/15	Soil	Same As Above
H15010290-029	4-185NW-0612	01/13/15 14:39	01/22/15	Soil	Same As Above
H15010290-030	4-185NW-1218	01/13/15 14:38	01/22/15	Soil	Same As Above
H15010290-031	4-190-1824	01/13/15 13:39	01/22/15	Soil	Same As Above
H15010290-032	4-190-2430	01/13/15 13:38	01/22/15	Soil	Same As Above
H15010290-033	4-190-3036	01/13/15 13:37	01/22/15	Soil	Same As Above
H15010290-034	4-191-1824	01/13/15 12:14	01/22/15	Soil	Same As Above
H15010290-035	4-191-2430	01/13/15 12:13	01/22/15	Soil	Same As Above
H15010290-036	4-191-3036	01/13/15 12:12	01/22/15	Soil	Same As Above
H15010290-037	4-191W-0006	01/13/15 15:00	01/22/15	Soil	Same As Above
H15010290-038	4-191W-0612	01/13/15 14:59	01/22/15	Soil	Same As Above
H15010290-039	4-199-0612	01/13/15 15:31	01/22/15	Soil	Same As Above
H15010290-040	4-199-1218	01/13/15 15:30	01/22/15	Soil	Same As Above
H15010290-041	4-199-1824	01/13/15 15:29	01/22/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010290

Report Date: 02/17/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010290

Report Date: 02/17/15
Date Received: 01/22/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010290-001	4-080-3036	0	0	7.5	149	48	5810	559	8710
H15010290-002	4-080-3642	0	0	7.4	8	< 1	47	15	918
H15010290-003	4-080-4248	0	0	7.2	7	< 1	32	16	212
H15010290-004	4-169-1824	0	0	7.8	591	24	6010	617	5880
H15010290-005	4-169-2430	0	0	7.7	9	1	83	17	516
H15010290-006	4-169-3036	0	0	7.7	5	< 1	50	14	408
H15010290-007	4-174-1218	0	0	7.2	13	< 1	165	19	180
H15010290-008	4-174-1824	0	0	7.0	11	< 1	12	7	34
H15010290-009	4-174-2430	0	0	6.7	6	< 1	17	9	44
H15010290-010	4-175-1824	0	0	7.7	549	12	5980	557	2880
H15010290-011	4-175-2430	0	0	7.5	13	< 1	74	14	237
H15010290-012	4-175-3036	0	0	7.3	6	< 1	46	13	81
H15010290-013	4-176-1218	0	0	7.6	1200	13	9010	723	3880
H15010290-014	4-176-1824	0	0	7.6	12	< 1	70	15	92
H15010290-015	4-176-2430	0	0	7.4	7	< 1	37	13	61
H15010290-016	4-177-0612	0	0	7.7	551	7	1920	476	2400
H15010290-017	4-177-1218	0	0	7.7	18	< 1	74	19	176
H15010290-018	4-177-1824	0	0	7.7	27	< 1	223	31	288
H15010290-019	4-178-3036	0	0	6.9	7	12	4930	20	1460
H15010290-020	4-178-3642	0	0	6.2	7	< 1	48	12	135
H15010290-021	4-178-4248	0	0	7.1	16	< 1	51	20	84
H15010290-022	4-184-1824	0	0	7.8	1430	13	15000	1070	4050
H15010290-023	4-184-2430	0	0	7.6	27	4	344	23	2060
H15010290-024	4-184-3036	0	0	7.1	6	< 1	29	14	69
H15010290-025	4-185-1218	0	0	7.6	682	8	2680	547	2600
H15010290-026	4-185-1824	0	0	7.7	12	< 1	79	16	726
H15010290-027	4-185-2430	0	0	7.8	6	< 1	41	15	127
H15010290-028	4-185NW-0006	0	0	8.0	364	6	1630	296	1570
H15010290-029	4-185NW-0612	0	0	7.8	16	< 1	42	9	59
H15010290-030	4-185NW-1218	0	0	7.7	16	< 1	38	10	59
H15010290-031	4-190-1824	0	0	7.2	717	12	6340	789	3890
H15010290-032	4-190-2430	0	0	6.8	126	3	1060	129	1040
H15010290-033	4-190-3036	0	0	6.5	10	< 1	33	14	148
H15010290-034	4-191-1824	0	0	7.8	703	12	4670	625	3010
H15010290-035	4-191-2430	0	0	7.7	26	< 1	165	34	185
H15010290-036	4-191-3036	0	0	7.8	7	< 1	41	26	86
H15010290-037	4-191W-0006	0	0	7.6	103	3	406	87	406
H15010290-038	4-191W-0612	0	0	7.6	31	< 1	107	23	130
H15010290-039	4-199-0612	0	0	7.9	377	2	351	344	911
H15010290-040	4-199-1218	0	0	7.8	7	< 1	42	16	87

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010290

Report Date: 02/17/15
Date Received: 01/22/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010290-041	4-199-1824	0	0	7.6	42	2	358	40	568

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150129A		
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard								01/29/15 06:39
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard								01/29/15 07:01
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard								01/29/15 07:29
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150128_1		Continuing Calibration Verification Standard								01/29/15 07:52
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150128_1		Continuing Calibration Verification Standard								01/29/15 07:53
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard								01/29/15 07:53
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150128_1		Continuing Calibration Verification Standard								01/29/15 08:03
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150128_1		Continuing Calibration Verification Standard								01/29/15 08:16
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150128_1		Continuing Calibration Verification Standard								01/29/15 08:16
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard								01/29/15 08:17
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150128_1		Continuing Calibration Verification Standard								01/29/15 08:26
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150128_1		Continuing Calibration Verification Standard								01/29/15 08:35
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 27863
Lab ID: LCS-27863		Laboratory Control Sample				Run: SOIL PH METER_150129A				01/29/15 07:54
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H15010290-010ADUP		Sample Duplicate				Run: SOIL PH METER_150129A				01/29/15 08:02
pH, sat. paste		7.71	s.u.	0.10				0.4	30	
Lab ID: H15010290-020ADUP		Sample Duplicate				Run: SOIL PH METER_150129A				01/29/15 08:10
pH, sat. paste		6.21	s.u.	0.10				0.2	30	
Method: ASAM10-3.2										Batch: 27864
Lab ID: LCS-27864		Laboratory Control Sample				Run: SOIL PH METER_150129A				01/29/15 08:17
pH, sat. paste		7.66	s.u.	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27864
Lab ID: H15010290-030ADUP		Sample Duplicate				Run: SOIL PH METER_150129A			01/29/15 08:25	
pH, sat. paste		7.69	s.u.	0.10				0.3	30	
Lab ID: H15010290-040ADUP		Sample Duplicate				Run: SOIL PH METER_150129A			01/29/15 08:34	
pH, sat. paste		7.78	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150130B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/30/15 11:28	
Arsenic			0.789	mg/L	0.0085	99	90	110			
Cadmium			0.389	mg/L	0.0010	97	90	110			
Copper			0.801	mg/L	0.010	100	90	110			
Lead			0.775	mg/L	0.010	97	90	110			
Zinc			0.793	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/30/15 11:43	
Arsenic			0.00207	mg/L	0.0085		0	0			
Cadmium			0.000180	mg/L	0.0010		0	0			
Copper			-0.000460	mg/L	0.010		0	0			
Lead			-0.0126	mg/L	0.010		0	0			
Zinc			0.00348	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/30/15 11:47	
Arsenic			0.976	mg/L	0.0085	98	80	120			
Cadmium			0.903	mg/L	0.0010	90	80	120			
Copper			0.506	mg/L	0.010	101	80	120			
Lead			0.903	mg/L	0.010	90	80	120			
Zinc			0.979	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/30/15 20:36	
Arsenic			2.39	mg/L	0.0085	96	90	110			
Cadmium			2.37	mg/L	0.0010	95	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.38	mg/L	0.010	95	90	110			
Zinc			2.42	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/30/15 20:39	
Arsenic			-0.00882	mg/L	0.0085						
Cadmium			0.000810	mg/L	0.0010						
Copper			0.000280	mg/L	0.010						
Lead			0.00890	mg/L	0.010						
Zinc			0.000590	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/30/15 23:33	
Arsenic			2.40	mg/L	0.0085	96	90	110			
Cadmium			2.38	mg/L	0.0010	95	90	110			
Copper			2.46	mg/L	0.010	98	90	110			
Lead			2.36	mg/L	0.010	94	90	110			
Zinc			2.42	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/30/15 23:37	
Arsenic			-0.00823	mg/L	0.0085						
Cadmium			0.00104	mg/L	0.0010						
Copper			0.000730	mg/L	0.010						
Lead			0.0170	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.7**									Analytical Run: ICP2-HE_150130B	
Lab ID: **CCB**	5	Continuing Calibration Blank							01/30/15 23:37	
Zinc		0.000490	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150203B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							02/03/15 12:17	
Arsenic			0.782	mg/L	0.0085	98	90	110			
Cadmium			0.383	mg/L	0.0010	96	90	110			
Copper			0.795	mg/L	0.010	99	90	110			
Lead			0.804	mg/L	0.010	101	90	110			
Zinc			0.785	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/03/15 12:32	
Arsenic			0.0105	mg/L	0.0085		0	0			
Cadmium			0.00566	mg/L	0.0010		0	0			
Copper			-0.00322	mg/L	0.010		0	0			
Lead			0.0232	mg/L	0.010		0	0			
Zinc			0.00424	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/03/15 12:36	
Arsenic			0.966	mg/L	0.0085	97	80	120			
Cadmium			0.891	mg/L	0.0010	89	80	120			
Copper			0.504	mg/L	0.010	101	80	120			
Lead			0.914	mg/L	0.010	91	80	120			
Zinc			0.973	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/03/15 15:23	
Arsenic			2.46	mg/L	0.0085	98	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.56	mg/L	0.010	102	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/03/15 15:27	
Arsenic			0.0110	mg/L	0.0085						
Cadmium			0.000590	mg/L	0.0010						
Copper			0.000360	mg/L	0.010						
Lead			0.0328	mg/L	0.010						
Zinc			0.00163	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							02/03/15 18:04	
Arsenic			2.60	mg/L	0.0085	104	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.55	mg/L	0.010	102	90	110			
Lead			2.56	mg/L	0.010	103	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/03/15 18:08	
Arsenic			-0.00988	mg/L	0.0085						
Cadmium			0.000610	mg/L	0.0010						
Copper			0.00363	mg/L	0.010						
Lead			0.0189	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150203B	
Lab ID:	**CCB**	5	Continuing Calibration Blank							02/03/15 18:08	
Zinc			0.00166	mg/L	0.010						
Method:	**E200.7**									Analytical Run: ICP2-HE_150210B	
Lab ID:	**ICV**		Initial Calibration Verification Standard							02/10/15 10:17	
Lead			0.783	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							02/10/15 10:32	
Lead			-0.00108	mg/L	0.010		0	0			
Lab ID:	**ICSAB**		Interference Check Sample AB							02/10/15 10:36	
Lead			0.919	mg/L	0.010	92	80	120			
Lab ID:	**CCV**		Continuing Calibration Verification Standard							02/11/15 03:09	
Lead			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							02/11/15 03:12	
Lead			0.00823	mg/L	0.010						
Lab ID:	**CCV**		Continuing Calibration Verification Standard							02/11/15 03:53	
Lead			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							02/11/15 03:57	
Lead			0.00485	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS204-B_150203A	
Lab ID: CCV	3	Continuing Calibration Verification Standard							02/04/15 03:50	
Arsenic		0.0489	mg/L	0.0050	98	90	110			
Copper		0.0506	mg/L	0.010	101	90	110			
Lead		0.0495	mg/L	0.010	99	90	110			
Lab ID: CCB	3	Continuing Calibration Blank							02/04/15 03:59	
Arsenic		-2.10E-06	mg/L	0.0050						
Copper		-4.98E-05	mg/L	0.010						
Lead		5.30E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27814
Lab ID:	**MB-27814**	5	Method Blank				Run: ICP2-HE_150130B			01/30/15 20:24	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			0.7	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27814**	5	Laboratory Fortified Blank				Run: ICP2-HE_150130B			01/30/15 20:28	
Arsenic			46.6	mg/kg	1.0	93	80	120			
Cadmium			22.6	mg/kg	1.0	90	80	120			
Copper			48.4	mg/kg	1.0	97	80	120			
Lead			46.4	mg/kg	1.0	91	80	120			
Zinc			47.4	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27814**	5	Laboratory Control Sample				Run: ICP2-HE_150130B			01/30/15 20:32	
Arsenic			273	mg/kg	1.8	79	72.3	106.4			
Cadmium			113	mg/kg	1.0	83	73	105.1			
Copper			253	mg/kg	1.1	90	77.5	109.6			
Lead			171	mg/kg	3.2	91	75.9	108.6			
Zinc			187	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H15010290-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150130B			01/30/15 22:12	
Arsenic			70.3	mg/kg	1.9	84	75	125			
Cadmium			21.7	mg/kg	1.0	82	75	125			
Copper			274	mg/kg	1.1		75	125			A
Lead			76.6	mg/kg	3.3	83	75	125			
Zinc			333	mg/kg	1.0		75	125			A
Lab ID:	**H15010290-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150130B			01/30/15 22:16	
Arsenic			70.7	mg/kg	1.9	85	75	125	0.7	20	
Cadmium			21.8	mg/kg	1.0	82	75	125	0.5	20	
Copper			277	mg/kg	1.1		75	125	1.2	20	A
Lead			82.2	mg/kg	3.3	94	75	125	7.1	20	
Zinc			336	mg/kg	1.0		75	125	1.1	20	A
Method:	**SW6010B**										Batch: 27815
Lab ID:	**MB-27815**	5	Method Blank				Run: ICP2-HE_150130B			01/30/15 22:19	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			1	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27815**	5	Laboratory Fortified Blank				Run: ICP2-HE_150130B			01/30/15 22:23	
Arsenic			46.0	mg/kg	1.0	92	80	120			
Cadmium			22.8	mg/kg	1.0	91	80	120			
Copper			48.4	mg/kg	1.0	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27815
Lab ID:	**LFB-27815**	5	Laboratory Fortified Blank				Run: ICP2-HE_150130B				01/30/15 22:23
Lead			48.6	mg/kg	1.0	95	80	120			
Zinc			47.6	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27815**	5	Laboratory Control Sample				Run: ICP2-HE_150130B				01/30/15 22:27
Arsenic			264	mg/kg	1.8	77	72.3	106.4			
Cadmium			111	mg/kg	1.0	81	73	105.1			
Copper			237	mg/kg	1.1	84	77.5	109.6			
Lead			168	mg/kg	3.2	89	75.9	108.6			
Zinc			179	mg/kg	1.0	84	74.2	109.9			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27815
Lab ID:	**MB-27815**	5	Method Blank				Run: ICP2-HE_150203B				02/03/15 16:43
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			0.6	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**H15010290-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150203B				02/03/15 17:05
Arsenic			52.2	mg/kg	1.8	90	75	125			
Cadmium			22.3	mg/kg	1.0	87	75	125			
Copper			89.8	mg/kg	1.1	96	75	125			
Lead			64.1	mg/kg	3.2	75	75	125			
Zinc			133	mg/kg	1.0	93	75	125			
Lab ID:	**H15010290-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150203B				02/03/15 17:09
Arsenic			51.1	mg/kg	1.8	87	75	125	2.2	20	
Cadmium			21.9	mg/kg	1.0	85	75	125	2.0	20	
Copper			88.3	mg/kg	1.1	93	75	125	1.7	20	
Lead			65.4	mg/kg	3.2	78	75	125	2.1	20	
Zinc			131	mg/kg	1.0	88	75	125	2.0	20	
Method:	**SW6010B**										Batch: 27816
Lab ID:	**MB-27816**	5	Method Blank				Run: ICP2-HE_150203B				02/03/15 17:12
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27816**	5	Laboratory Fortified Blank				Run: ICP2-HE_150203B				02/03/15 17:16
Arsenic			49.2	mg/kg	1.0	98	80	120			
Cadmium			23.4	mg/kg	1.0	94	80	120			
Copper			49.5	mg/kg	1.0	98	80	120			
Lead			49.1	mg/kg	1.0	98	80	120			
Zinc			48.5	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27816**	5	Laboratory Control Sample				Run: ICP2-HE_150203B				02/03/15 17:27
Arsenic			278	mg/kg	1.8	81	72.3	106.4			
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			245	mg/kg	1.1	88	77.5	109.6			
Lead			173	mg/kg	3.1	92	75.9	108.6			
Zinc			186	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H15010290-041AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150203B				02/03/15 17:57
Arsenic			93.4	mg/kg	1.8	105	75	125			
Cadmium			23.7	mg/kg	1.0	89	75	125			
Copper			433	mg/kg	1.1		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6010B**										Batch: 27816
Lab ID: **H15010290-041AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150203B			02/03/15 17:57	
Lead		88.5	mg/kg	3.1	98	75	125			
Zinc		626	mg/kg	1.0		75	125			A
Lab ID: **H15010290-041AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150203B			02/03/15 18:01	
Arsenic		91.4	mg/kg	1.8	99	75	125	2.2	20	
Cadmium		23.7	mg/kg	1.0	88	75	125	0.2	20	
Copper		419	mg/kg	1.1		75	125	3.2	20	A
Lead		84.6	mg/kg	3.2	89	75	125	4.5	20	
Zinc		620	mg/kg	1.0		75	125	1.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**								Analytical Run: SUB-B238337		
Lab ID:	**QCS**		Initial Calibration Verification Standard							02/13/15 09:09	
Arsenic			0.73	mg/L	0.10	91	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							02/13/15 09:13	
Arsenic			0.0011	mg/L	0.10						
Lab ID:	**ICSAB**		Interference Check Sample AB							02/13/15 09:17	
Arsenic			0.84	mg/L	0.10	84	80	120			
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/13/15 10:20	
Arsenic			0.75	mg/L	0.10	94	90	110			
Cadmium			0.40	mg/L	0.010	100	90	110			
Copper			0.77	mg/L	0.010	96	90	110			
Lead			0.76	mg/L	0.050	95	90	110			
Zinc			0.76	mg/L	0.010	95	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/13/15 10:23	
Arsenic			0.0079	mg/L	0.10						
Cadmium			0.0081	mg/L	0.010						
Copper			-0.0013	mg/L	0.010						
Lead			0.0091	mg/L	0.050						
Zinc			0.0025	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/13/15 10:27	
Arsenic			0.91	mg/L	0.10	91	80	120			
Cadmium			0.84	mg/L	0.010	84	80	120			
Copper			0.45	mg/L	0.010	90	80	120			
Lead			0.86	mg/L	0.050	86	80	120			
Zinc			0.90	mg/L	0.010	90	80	120			
Method:	**SW6010B**									Batch: B_86948	
Lab ID:	**MB-86948**	5	Method Blank				Run: SUB-B238337			02/14/15 12:17	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.03						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	0.5						
Lab ID:	**LFB-86948**	5	Laboratory Fortified Blank				Run: SUB-B238337			02/14/15 12:20	
Arsenic			46	mg/kg	5.0	93	80	120			
Cadmium			23	mg/kg	5.0	91	80	120			
Copper			46	mg/kg	5.0	93	80	120			
Lead			45	mg/kg	5.0	91	80	120			
Zinc			46	mg/kg	5.0	92	80	120			
Lab ID:	**SRM-86948**	5	Standard Reference Material				Run: SUB-B238337			02/14/15 12:24	
Arsenic			280	mg/kg	5.0	81	72	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_86948	
Lab ID:	**SRM-86948**	5	Standard Reference Material				Run: SUB-B238337			02/14/15 12:24	
Cadmium			120	mg/kg	5.0	86	73	120			
Copper			250	mg/kg	5.0	89	77	120			
Lead			160	mg/kg	5.0	88	75	120			
Zinc			190	mg/kg	5.0	87	74	120			
Lab ID:	**B15020901-041ADIL**	5	Serial Dilution				Run: SUB-B238337			02/14/15 13:11	
Arsenic			40.9	mg/kg	9.1		0	0		10	N
Cadmium			2.94	mg/kg	1.2		0	0		10	N
Copper			321	mg/kg	3.8		0	0	2.1	10	
Lead			36.2	mg/kg	21		0	0		10	N
Zinc			541	mg/kg	12		0	0	5.7	10	
Lab ID:	**B15020901-041APDS**	5	Post Digestion/Distillation Spike				Run: SUB-B238337			02/14/15 13:15	
Arsenic			272	mg/kg	1.9	90	75	125			
Cadmium			119	mg/kg	1.0	91	75	125			
Copper			534	mg/kg	1.0	85	75	125			
Lead			252	mg/kg	4.3	85	75	125			
Zinc			721	mg/kg	2.5	81	75	125			
Lab ID:	**B15020901-041AMS3**	5	Sample Matrix Spike				Run: SUB-B238337			02/14/15 13:18	
Arsenic			90.3	mg/kg	1.8	102	75	125			
Cadmium			25.6	mg/kg	1.0	96	75	125			
Copper			418	mg/kg	1.0		75	125			A
Lead			82.5	mg/kg	4.2	98	75	125			
Zinc			614	mg/kg	2.5		75	125			A
Lab ID:	**B15020901-041AMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B238337			02/14/15 13:21	
Arsenic			88.8	mg/kg	1.8	99	75	125	1.6	20	
Cadmium			25.8	mg/kg	1.0	96	75	125	0.5	20	
Copper			391	mg/kg	1.0		75	125	6.8	20	A
Lead			81.3	mg/kg	4.2	96	75	125	1.6	20	
Zinc			612	mg/kg	2.5		75	125	0.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150203A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/02/15 23:09	
Arsenic			0.0581	mg/L	0.0010	97	90	110			
Copper			0.0602	mg/L	0.0010	100	90	110			
Lead			0.0571	mg/L	0.0010	95	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/03/15 13:29	
Arsenic			0.0582	mg/L	0.0010	97	90	110			
Copper			0.0594	mg/L	0.0010	99	90	110			
Lead			0.0599	mg/L	0.0010	100	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/03/15 19:41	
Arsenic			0.0586	mg/L	0.0010	98	90	110			
Copper			0.0600	mg/L	0.0010	100	90	110			
Lead			0.0595	mg/L	0.0010	99	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							02/03/15 19:45	
Arsenic			8.70E-05	mg/L	0.0010						
Copper			0.000330	mg/L	0.0010						
Lead			0.000253	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							02/03/15 19:49	
Arsenic			0.0104	mg/L	0.0010	104	70	130			
Copper			0.0205	mg/L	0.0010	103	70	130			
Lead			0.000247	mg/L	0.0010		0	0			
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							02/04/15 07:37	
Arsenic			0.0494	mg/L	0.0010	99	90	110			
Copper			0.0508	mg/L	0.0010	102	90	110			
Lead			0.0494	mg/L	0.0010	99	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/04/15 07:46	
Arsenic			5.10E-06	mg/L	0.0010						
Copper			-6.57E-05	mg/L	0.0010						
Lead			1.03E-05	mg/L	0.0010						
Method:	**SW6020**									Batch: 27814	
Lab ID:	**MB-27814**	3	Method Blank				Run: ICPMS204-B_150203A			02/04/15 03:37	
Arsenic			ND	mg/kg	0.3						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27814**	3	Laboratory Control Sample				Run: ICPMS204-B_150203A			02/04/15 03:41	
Arsenic			297	mg/kg	1.0	87	72.3	106.4			
Copper			272	mg/kg	1.0	97	77.5	109.6			
Lead			183	mg/kg	1.0	98	75.9	108.6			
Lab ID:	**LFB-27814**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150203A			02/04/15 03:45	
Arsenic			48.2	mg/kg	1.0	97	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/17/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 27814	
Lab ID:	**LFB-27814**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150203A			02/04/15 03:45	
Copper			50.5	mg/kg	1.0	101	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H15010290-018AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150203A			02/04/15 05:22	
Arsenic			80.2	mg/kg	1.0	99	75	125			
Copper			294	mg/kg	1.0		75	125			A
Lead			80.5	mg/kg	1.0	96	75	125			
Lab ID:	**H15010290-018AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150203A			02/04/15 05:26	
Arsenic			76.2	mg/kg	1.0	91	75	125	5.1	20	
Copper			284	mg/kg	1.0		75	125	3.5	20	A
Lead			78.5	mg/kg	1.0	92	75	125	2.6	20	
Method:	**SW6020**									Batch: 27815	
Lab ID:	**MB-27815**	2	Method Blank				Run: ICPMS204-B_150203A			02/04/15 05:35	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27815**	2	Laboratory Control Sample				Run: ICPMS204-B_150203A			02/04/15 05:39	
Arsenic			287	mg/kg	1.0	84	72.3	106.4			
Lead			178	mg/kg	1.0	95	75.9	108.6			
Lab ID:	**LFB-27815**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150203A			02/04/15 05:43	
Arsenic			47.4	mg/kg	1.0	95	80	120			
Lead			46.9	mg/kg	1.0	94	80	120			
Lab ID:	**H15010290-036AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150203A			02/04/15 07:28	
Arsenic			55.3	mg/kg	1.0	96	75	125			
Lead			66.0	mg/kg	1.0	96	75	125			
Lab ID:	**H15010290-036AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150203A			02/04/15 07:33	
Arsenic			55.4	mg/kg	1.0	96	75	125	0.2	20	
Lead			66.7	mg/kg	1.0	97	75	125	1.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Work Order Receipt Checklist

MT DEQ-Federal Superfund

H15010290

Login completed by: Austin H. Nearpass
Reviewed by: BL2000\rwilliams
Reviewed Date: 1/26/2015

Date Received: 1/22/2015
Received by: AHN
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	1.1°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-080-3036	1047	1/13/15	Soil	A	B		1
4-080-3642	1046	1/13/15	Soil	A	B		1
4-080-4248	1045	1/13/15	Soil	A	B		1
4-169-1824	919	1/13/15	Soil	A	B		1
4-169-2430	918	1/13/15	Soil	A	B		1
4-169-3036	917	1/13/15	Soil	A	B		1
4-174-1218	1625	1/13/15	Soil	A	B		1
4-174-1824	1624	1/13/15	Soil	A	B		1
4-174-2430	1623	1/13/15	Soil	A	B		1
4-175-1824	1314	1/13/15	Soil	A	B		1
4-175-2430	1313	1/13/15	Soil	A	B		1
4-175-3036	1312	1/13/15	Soil	A	B		1
4-176-1218	1115	1/13/15	Soil	A	B		1
4-176-1824	1114	1/13/15	Soil	A	B		1
4-176-2430	1113	1/13/15	Soil	A	B		1
4-177-0612	1026	1/13/15	Soil	A	B		1
4-177-1218	1025	1/13/15	Soil	A	B		1
4-177-1824	1024	1/13/15	Soil	A	B		1
4-178-3036	1718	1/13/15	Soil	A	B		1
4-178-3642	1716	1/13/15	Soil	A	B		1

H15010290

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1/22/15 1325

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

1.1 TB on ice handdel

Date/Time: 1/22/15 13:25

COC011315 EL.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-178-4248	1715	1/13/15	Soil	A	B		1
4-184-1824	1649	1/13/15	Soil	A	B		1
4-184-2430	1648	1/13/15	Soil	A	B		1
4-184-3036	1647	1/13/15	Soil	A	B		1
4-185-1218	1140	1/13/15	Soil	A	B		1
4-185-1824	1139	1/13/15	Soil	A	B		1
4-185-2430	1138	1/13/15	Soil	A	B		1
4-185NW-0006	1440	1/13/15	Soil	A	B		1
4-185NW-0612	1439	1/13/15	Soil	A	B		1
4-185NW-1218	1438	1/13/15	Soil	A	B		1
4-190-1824	1339	1/13/15	Soil	A	B		1
4-190-2430	1338	1/13/15	Soil	A	B		1
4-190-3036	1337	1/13/15	Soil	A	B		1
4-191-1824	1214	1/13/15	Soil	A	B		1
4-191-2430	1213	1/13/15	Soil	A	B		1
4-191-3036	1212	1/13/15	Soil	A	B		1
4-191W-0006	1500	1/13/15	Soil	A	B		1
4-191W-0612	1459	1/13/15	Soil	A	B		1
4-199-0612	1531	1/13/15	Soil	A	B		1
4-199-1218	1530	1/13/15	Soil	A	B		1

H15010290

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1/22/15 1325

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
1.1 TB in ice
hand del

Date/Time: 1/22/15 13:25

COC011315 EL.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-199-1824	1529	1/13/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15010290

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1/22/15 1325	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 1.1 TB on ice hand del	1/22/15 13:25

ANALYTICAL SUMMARY REPORT

February 05, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010289

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 32 samples for MT DEQ-Federal Superfund on 1/22/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010289-001	4-236-1824	01/16/15 13:29	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010289-002	4-236-2430	01/16/15 13:28	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010289-003	4-236-3036	01/16/15 13:27	01/22/15	Soil	Same As Above
H15010289-004	4-237-1824	01/16/15 12:29	01/22/15	Soil	Same As Above
H15010289-005	4-237-2430	01/16/15 12:28	01/22/15	Soil	Same As Above
H15010289-006	4-237-3036	01/16/15 12:27	01/22/15	Soil	Same As Above
H15010289-007	4-239-2430	01/16/15 8:08	01/22/15	Soil	Same As Above
H15010289-008	4-239-3036	01/16/15 8:07	01/22/15	Soil	Same As Above
H15010289-009	4-239-3642	01/16/15 8:06	01/22/15	Soil	Same As Above
H15010289-010	4-241-3036	01/16/15 8:37	01/22/15	Soil	Same As Above
H15010289-011	4-241-3642	01/16/15 8:36	01/22/15	Soil	Same As Above
H15010289-012	4-241-4248	01/16/15 8:35	01/22/15	Soil	Same As Above
H15010289-013	4-244-4248	01/16/15 13:10	01/22/15	Soil	Same As Above
H15010289-014	4-244-3642	01/16/15 13:11	01/22/15	Soil	Same As Above
H15010289-015	4-247-3642	01/16/15 12:46	01/22/15	Soil	Same As Above
H15010289-016	4-247-4248	01/16/15 12:45	01/22/15	Soil	Same As Above
H15010289-017	4-247-4854	01/16/15 13:00	01/22/15	Soil	Same As Above
H15010289-018	4-248-3036	01/16/15 11:37	01/22/15	Soil	Same As Above
H15010289-019	4-248-3642	01/16/15 11:36	01/22/15	Soil	Same As Above
H15010289-020	4-248-4248	01/16/15 11:35	01/22/15	Soil	Same As Above
H15010289-021	4-249-3036	01/16/15 10:12	01/22/15	Soil	Same As Above
H15010289-022	4-249-3642	01/16/15 10:11	01/22/15	Soil	Same As Above
H15010289-023	4-249-4248	01/16/15 10:10	01/22/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010289-024	4-250-3036	01/16/15 9:17	01/22/15	Soil	Same As Above
H15010289-025	4-250-3642	01/16/15 9:16	01/22/15	Soil	Same As Above
H15010289-026	4-250-4248	01/16/15 9:15	01/22/15	Soil	Same As Above
H15010289-027	4-259-2430	01/16/15 10:43	01/22/15	Soil	Same As Above
H15010289-028	4-259-3036	01/16/15 10:42	01/22/15	Soil	Same As Above
H15010289-029	4-259-3642	01/16/15 10:41	01/22/15	Soil	Same As Above
H15010289-030	4-260-1218	01/16/15 9:50	01/22/15	Soil	Same As Above
H15010289-031	4-260-1824	01/16/15 9:49	01/22/15	Soil	Same As Above
H15010289-032	4-260-2430	01/16/15 9:48	01/22/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010289

Report Date: 02/05/15
Date Received: 01/22/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010289-001	4-236-1824	0	0	6.6	441	3	6630	830	1150
H15010289-002	4-236-2430	0	0	7.0	12	2	2270	18	487
H15010289-003	4-236-3036	0	0	7.2	8	12	3260	13	1210
H15010289-004	4-237-1824	0	0	7.6	14	11	1170	26	2010
H15010289-005	4-237-2430	0	0	7.5	8	< 1	807	8	246
H15010289-006	4-237-3036	0	0	7.2	4	< 1	85	6	184
H15010289-007	4-239-2430	0	0	7.4	1980	12	21400	1430	3780
H15010289-008	4-239-3036	0	0	7.6	19	< 1	93	13	676
H15010289-009	4-239-3642	0	0	7.2	5	< 1	18	7	45
H15010289-010	4-241-3036	0	0	7.1	17	2	2010	11	1090
H15010289-011	4-241-3642	0	0	7.3	20	2	1370	19	961
H15010289-012	4-241-4248	0	0	7.4	70	2	506	20	1460
H15010289-013	4-244-4248	0	0	7.1	126	4	10700	105	1240
H15010289-014	4-244-3642	0	0	7.8	10	2	5650	12	691
H15010289-015	4-247-3642	0	0	5.7	21	6	6550	40	1030
H15010289-016	4-247-4248	0	0	7.0	4	< 1	33	13	69
H15010289-017	4-247-4854	0	0	7.2	3	< 1	19	14	55
H15010289-018	4-248-3036	0	0	7.0	12	8	943	27	1830
H15010289-019	4-248-3642	0	0	7.4	4	2	66	14	327
H15010289-020	4-248-4248	0	0	7.4	4	< 1	31	14	84
H15010289-021	4-249-3036	0	0	5.7	39	11	8910	46	1400
H15010289-022	4-249-3642	0	0	6.9	5	4	1210	13	697
H15010289-023	4-249-4248	0	0	7.5	4	< 1	29	12	480
H15010289-024	4-250-3036	0	0	7.8	1070	13	10100	839	3540
H15010289-025	4-250-3642	0	0	7.6	13	< 1	52	17	84
H15010289-026	4-250-4248	0	0	7.9	5	< 1	21	5	50
H15010289-027	4-259-2430	0	0	5.2	15	3	3040	17	494
H15010289-028	4-259-3036	0	0	6.1	6	2	2860	9	324
H15010289-029	4-259-3642	0	0	7.1	4	2	2590	7	306
H15010289-030	4-260-1218	0	0	7.8	25	5	613	23	1260
H15010289-031	4-260-1824	0	0	7.6	6	< 1	44	11	161
H15010289-032	4-260-2430	0	0	7.6	3	< 1	23	8	109

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010289

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150129A		
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard								01/29/15 06:39
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150128_1		Continuing Calibration Verification Standard								01/29/15 07:00
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150128_1		Continuing Calibration Verification Standard								01/29/15 07:00
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard								01/29/15 07:01
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150128_1		Continuing Calibration Verification Standard								01/29/15 07:10
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150128_1		Continuing Calibration Verification Standard								01/29/15 07:27
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150128_1		Continuing Calibration Verification Standard								01/29/15 07:28
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard								01/29/15 07:29
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150128_1		Continuing Calibration Verification Standard								01/29/15 07:38
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard								01/29/15 07:53
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard								01/29/15 08:17
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27854
Lab ID: LCS-27854		Laboratory Control Sample				Run: SOIL PH METER_150129A				01/29/15 07:02
pH, sat. paste		7.66	s.u.	0.10	102	95	105			
Lab ID: H15010289-010ADUP		Sample Duplicate				Run: SOIL PH METER_150129A				01/29/15 07:10
pH, sat. paste		7.16	s.u.	0.10				0.3	30	
Lab ID: H15010289-020ADUP		Sample Duplicate				Run: SOIL PH METER_150129A				01/29/15 07:20
pH, sat. paste		7.39	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 27855
Lab ID: H15010289-030ADUP		Sample Duplicate				Run: SOIL PH METER_150129A				01/29/15 07:38
pH, sat. paste		7.80	s.u.	0.10				0.0	30	
Lab ID: H15010289-032ADUP		Sample Duplicate				Run: SOIL PH METER_150129A				01/29/15 07:41
pH, sat. paste		7.55	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010289

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150130B	
Lab ID: ICV	5	Initial Calibration Verification Standard							01/30/15 11:28	
Arsenic		0.789	mg/L	0.0085	99	90	110			
Cadmium		0.389	mg/L	0.0010	97	90	110			
Copper		0.801	mg/L	0.010	100	90	110			
Lead		0.775	mg/L	0.010	97	90	110			
Zinc		0.793	mg/L	0.010	99	90	110			
Lab ID: ICSA	5	Interference Check Sample A							01/30/15 11:43	
Arsenic		0.00207	mg/L	0.0085		0	0			
Cadmium		0.000180	mg/L	0.0010		0	0			
Copper		-0.000460	mg/L	0.010		0	0			
Lead		-0.0126	mg/L	0.010		0	0			
Zinc		0.00348	mg/L	0.010		0	0			
Lab ID: ICSAB	5	Interference Check Sample AB							01/30/15 11:47	
Arsenic		0.976	mg/L	0.0085	98	80	120			
Cadmium		0.903	mg/L	0.0010	90	80	120			
Copper		0.506	mg/L	0.010	101	80	120			
Lead		0.903	mg/L	0.010	90	80	120			
Zinc		0.979	mg/L	0.010	98	80	120			
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/30/15 16:29	
Arsenic		2.52	mg/L	0.0085	101	90	110			
Cadmium		2.50	mg/L	0.0010	100	90	110			
Copper		2.51	mg/L	0.010	100	90	110			
Lead		2.50	mg/L	0.010	100	90	110			
Zinc		2.50	mg/L	0.010	100	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/30/15 16:32	
Arsenic		-0.0105	mg/L	0.0085						
Cadmium		0.000340	mg/L	0.0010						
Copper		0.00358	mg/L	0.010						
Lead		-0.00923	mg/L	0.010						
Zinc		-0.000720	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/30/15 20:36	
Arsenic		2.39	mg/L	0.0085	96	90	110			
Cadmium		2.37	mg/L	0.0010	95	90	110			
Copper		2.48	mg/L	0.010	99	90	110			
Lead		2.38	mg/L	0.010	95	90	110			
Zinc		2.42	mg/L	0.010	97	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/30/15 20:39	
Arsenic		-0.00882	mg/L	0.0085						
Cadmium		0.000810	mg/L	0.0010						
Copper		0.000280	mg/L	0.010						
Lead		0.00890	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010289

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150130B	
Lab ID: CCB	5	Continuing Calibration Blank							01/30/15 20:39	
Zinc		0.000590	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010289

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150203A		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							02/03/15 23:54	
Arsenic			0.0489	mg/L	0.0050	98	90	110			
Cadmium			0.0477	mg/L	0.0010	95	90	110			
Lead			0.0497	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/04/15 00:03	
Arsenic			1.22E-05	mg/L	0.0050						
Cadmium			5.70E-06	mg/L	0.0010						
Lead			7.30E-06	mg/L	0.010						
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							02/04/15 03:50	
Arsenic			0.0489	mg/L	0.0050	98	90	110			
Cadmium			0.0485	mg/L	0.0010	97	90	110			
Lead			0.0495	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/04/15 03:59	
Arsenic			-2.10E-06	mg/L	0.0050						
Cadmium			5.50E-06	mg/L	0.0010						
Lead			5.30E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010289

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27812
Lab ID:	**MB-27812**	5	Method Blank				Run: ICP2-HE_150130B			01/30/15 16:40	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27812**	5	Laboratory Fortified Blank				Run: ICP2-HE_150130B			01/30/15 16:44	
Arsenic			47.8	mg/kg	1.0	96	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			49.4	mg/kg	1.0	96	80	120			
Lead			47.4	mg/kg	1.0	95	80	120			
Zinc			48.7	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27812**	5	Laboratory Control Sample				Run: ICP2-HE_150130B			01/30/15 16:48	
Arsenic			302	mg/kg	1.8	89	72.3	106.4			
Cadmium			127	mg/kg	1.0	94	73	105.1			
Copper			270	mg/kg	1.1	97	77.5	109.6			
Lead			188	mg/kg	3.2	101	75.9	108.6			
Zinc			201	mg/kg	1.0	95	74.2	109.9			
Lab ID:	**H15010289-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150130B			01/30/15 18:19	
Arsenic			51.8	mg/kg	1.7	86	75	125			
Cadmium			28.6	mg/kg	1.0	84	75	125			
Copper			957	mg/kg	1.1		75	125			A
Lead			67.3	mg/kg	3.1	83	75	125			
Zinc			1810	mg/kg	1.0		75	125			A
Lab ID:	**H15010289-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150130B			01/30/15 18:22	
Arsenic			51.4	mg/kg	1.7	85	75	125	0.9	20	
Cadmium			28.8	mg/kg	1.0	85	75	125	0.6	20	
Copper			955	mg/kg	1.1		75	125	0.2	20	A
Lead			70.9	mg/kg	3.1	90	75	125	5.2	20	
Zinc			1810	mg/kg	1.0		75	125	0.1	20	A
Method:	**SW6010B**										Batch: 27813
Lab ID:	**MB-27813**	5	Method Blank				Run: ICP2-HE_150130B			01/30/15 18:26	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27813**	5	Laboratory Fortified Blank				Run: ICP2-HE_150130B			01/30/15 18:30	
Arsenic			47.1	mg/kg	1.0	94	80	120			
Cadmium			23.5	mg/kg	1.0	94	80	120			
Copper			49.1	mg/kg	1.0	98	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010289

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27813
Lab ID:	**LFB-27813**	5	Laboratory Fortified Blank				Run: ICP2-HE_150130B				01/30/15 18:30
Lead			47.5	mg/kg	1.0	95	80	120			
Zinc			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27813**	5	Laboratory Control Sample				Run: ICP2-HE_150130B				01/30/15 18:34
Arsenic			281	mg/kg	1.8	81	72.3	106.4			
Cadmium			118	mg/kg	1.0	85	73	105.1			
Copper			249	mg/kg	1.1	88	77.5	109.6			
Lead			176	mg/kg	3.2	93	75.9	108.6			
Zinc			193	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H15010289-032AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150130B				01/30/15 20:17
Arsenic			45.1	mg/kg	1.8	91	75	125			
Cadmium			21.7	mg/kg	1.0	87	75	125			
Copper			69.9	mg/kg	1.1	96	75	125			
Lead			59.2	mg/kg	3.2	101	75	125			
Zinc			154	mg/kg	1.0	90	75	125			
Lab ID:	**H15010289-032AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150130B				01/30/15 20:21
Arsenic			43.9	mg/kg	1.8	89	75	125	2.8	20	
Cadmium			21.7	mg/kg	1.0	87	75	125	0.3	20	
Copper			68.5	mg/kg	1.1	93	75	125	2.0	20	
Lead			55.5	mg/kg	3.2	93	75	125	6.5	20	
Zinc			155	mg/kg	1.0	91	75	125	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010289

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150203A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/02/15 23:09	
Arsenic			0.0581	mg/L	0.0010	97	90	110			
Cadmium			0.0299	mg/L	0.0010	100	90	110			
Lead			0.0571	mg/L	0.0010	95	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/03/15 13:29	
Arsenic			0.0582	mg/L	0.0010	97	90	110			
Cadmium			0.0305	mg/L	0.0010	102	90	110			
Lead			0.0599	mg/L	0.0010	100	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/03/15 19:41	
Arsenic			0.0586	mg/L	0.0010	98	90	110			
Cadmium			0.0305	mg/L	0.0010	102	90	110			
Lead			0.0595	mg/L	0.0010	99	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							02/03/15 19:45	
Arsenic			8.70E-05	mg/L	0.0010						
Cadmium			0.000387	mg/L	0.0010						
Lead			0.000253	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							02/03/15 19:49	
Arsenic			0.0104	mg/L	0.0010	104	70	130			
Cadmium			0.00978	mg/L	0.0010	98	70	130			
Lead			0.000247	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 27812	
Lab ID:	**MB-27812**	2	Method Blank				Run: ICPMS204-B_150203A			02/04/15 00:07	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27812**	2	Laboratory Control Sample				Run: ICPMS204-B_150203A			02/04/15 00:12	
Arsenic			325	mg/kg	1.0	96	72.3	106.4			
Lead			198	mg/kg	1.0	107	75.9	108.6			
Lab ID:	**LFB-27812**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150203A			02/04/15 00:16	
Arsenic			48.4	mg/kg	1.0	97	80	120			
Lead			50.1	mg/kg	1.0	100	80	120			
Lab ID:	**H15010289-018AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150203A			02/04/15 01:30	
Arsenic			57.9	mg/kg	1.0	96	75	125			
Lead			79.3	mg/kg	1.0	101	75	125			
Lab ID:	**H15010289-018AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150203A			02/04/15 01:34	
Arsenic			58.0	mg/kg	1.0	96	75	125	0.3	20	
Lead			77.9	mg/kg	1.0	98	75	125	1.8	20	
Method:	**SW6020**									Batch: 27813	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010289

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27813
Lab ID:	**MB-27813**	3	Method Blank				Run: ICPMS204-B_150203A			02/04/15 01:43	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27813**	3	Laboratory Control Sample				Run: ICPMS204-B_150203A			02/04/15 01:47	
Arsenic			298	mg/kg	1.0	86	72.3	106.4			
Cadmium			121	mg/kg	1.0	88	73	105.1			
Lead			187	mg/kg	1.0	99	75.9	108.6			
Lab ID:	**LFB-27813**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150203A			02/04/15 01:52	
Arsenic			49.1	mg/kg	1.0	98	80	120			
Cadmium			24.6	mg/kg	1.0	98	80	120			
Lead			48.8	mg/kg	1.0	98	80	120			
Lab ID:	**H15010289-032AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150203A			02/04/15 03:23	
Arsenic			51.4	mg/kg	1.0	97	75	125			
Cadmium			23.8	mg/kg	1.0	95	75	125			
Lead			55.4	mg/kg	1.0	97	75	125			
Lab ID:	**H15010289-032AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150203A			02/04/15 03:28	
Arsenic			48.8	mg/kg	1.0	92	75	125	5.3	20	
Cadmium			23.0	mg/kg	1.0	92	75	125	3.6	20	
Lead			53.9	mg/kg	1.0	93	75	125	2.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H15010289

Login completed by: Austin H. Nearpass

Reviewed by: BL2000\rwilliams

Reviewed Date: 1/27/2015

Date Received: 1/22/2015

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	1.4°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
4-236-1824	1329	1/16/15	Soil	A	B		1
4-236-2430	1328	1/16/15	Soil	A	B		1
4-236-3036	1327	1/16/15	Soil	A	B		1
4-237-1824	1229	1/16/15	Soil	A	B		1
4-237-2430	1228	1/16/15	Soil	A	B		1
4-237-3036	1227	1/16/15	Soil	A	B		1
4-239-2430	808	1/16/15	Soil	A	B		1
4-239-3036	807	1/16/15	Soil	A	B		1
4-239-3642	806	1/16/15	Soil	A	B		1
4-241-3036	837	1/16/15	Soil	A	B		1
4-241-3642	836	1/16/15	Soil	A	B		1
4-241-4248	835	1/16/15	Soil	A	B		1
4-244-4248	1310	1/16/15	Soil	A	B		1
4-244-~~4248~~ 3642	~~1925~~ 1311	1/16/15	Soil	A	B		1
4-247-3642	1246	1/16/15	Soil	A	B		1
4-247-4248	1245	1/16/15	Soil	A	B		1
4-247-4854	1300	1/16/15	Soil	A	B		1
4-248-3036	1137	1/16/15	Soil	A	B		1
4-248-3642	1136	1/16/15	Soil	A	B		1
4-248-4248	1135	1/16/15	Soil	A	B		1

H15010289

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 1/22/15 1325

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

1.4 TB on ice hand del

Date/Time: 1/22/15 17:25

COC Blank.xls

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-249-3036	1012	1/16/15	Soil	A	B		1
4-249-3642	1011	1/16/15	Soil	A	B		1
4-249-4248	1010	1/16/15	Soil	A	B		1
4-250-3036	917	1/16/15	Soil	A	B		1
4-250-3642	916	1/16/15	Soil	A	B		1
4-250-4248	915	1/16/15	Soil	A	B		1
4-259-2430	1043	1/16/15	Soil	A	B		1
4-259-3036	1042	1/16/15	Soil	A	B		1
4-259-3642	1041	1/16/15	Soil	A	B		1
4-260-1218	950	1/16/15	Soil	A	B		1
4-260-1824	949	1/16/15	Soil	A	B		1
4-260-2430	948	1/16/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15010289

Preservatives Used:
1 - Ice

Relinquished By (sign):
(1) [signature]
Date/Time: 1/22/15 1325

Received By (sign):
(1)
Date/Time:

Relinquished By (sign):
(2)
Date/Time:

Received By (sign):
(2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 1,4 TB on ice hmd del

Date/Time: 1/22/15 13:25

COC Blank.xls

ANALYTICAL SUMMARY REPORT

February 05, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010288

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 12 samples for MT DEQ-Federal Superfund on 1/22/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010288-001	3-309-1218	12/11/14 8:15	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010288-002	3-405-1218	12/11/14 14:13	01/22/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010288-003	3-298-1218	12/10/14 13:55	01/22/15	Soil	Same As Above
H15010288-004	3-298-1824	12/10/14 13:54	01/22/15	Soil	Same As Above
H15010288-005	3-299-4854	12/10/14 11:01	01/22/15	Soil	Same As Above
H15010288-006	3-299-5460	12/10/14 11:00	01/22/15	Soil	Same As Above
H15010288-007	3-322-3036	12/10/14 15:57	01/22/15	Soil	Same As Above
H15010288-008	3-322-3642	12/10/14 15:56	01/22/15	Soil	Same As Above
H15010288-009	3-326-3036	12/10/14 9:32	01/22/15	Soil	Same As Above
H15010288-010	3-326-3642	12/10/14 9:31	01/22/15	Soil	Same As Above
H15010288-011	3-275-4854	12/18/14 9:31	01/22/15	Soil	Same As Above
H15010288-012	3-275-5460	12/18/14 9:30	01/22/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010288

Report Date: 02/05/15
Date Received: 01/22/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010288-001	3-309-1218	0	0	7.6	11	< 1	49	16	97
H15010288-002	3-405-1218	0	0	7.3	64	2	472	69	562
H15010288-003	3-298-1218	0	0	8.0	32	< 1	198	45	212
H15010288-004	3-298-1824	0	0	7.8	8	< 1	39	10	71
H15010288-005	3-299-4854	0	0	7.3	40	2	1020	11	749
H15010288-006	3-299-5460	0	0	7.4	34	1	1290	31	423
H15010288-007	3-322-3036	0	0	6.7	7	< 1	49	21	82
H15010288-008	3-322-3642	0	0	3.5	13	< 1	21	11	56
H15010288-009	3-326-3036	0	0	6.3	132	4	1080	117	1180
H15010288-010	3-326-3642	0	0	6.9	197	3	921	89	1130
H15010288-011	3-275-4854	0	0	7.5	2	< 1	27	7	64
H15010288-012	3-275-5460	0	0	7.8	7	< 1	63	12	70

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010288

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150129A		
Lab ID: CCV_1_150128_1		Continuing Calibration Verification Standard							01/29/15 06:38	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150128_1		Continuing Calibration Verification Standard							01/29/15 06:39	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard							01/29/15 06:39	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150128_1		Continuing Calibration Verification Standard							01/29/15 06:49	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard							01/29/15 07:01	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard							01/29/15 07:29	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard							01/29/15 07:53	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150128_1		Initial Calibration Verification Standard							01/29/15 08:17	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27853
Lab ID: LCS-27853		Laboratory Control Sample				Run: SOIL PH METER_150129A			01/29/15 06:40	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H15010288-010ADUP		Sample Duplicate				Run: SOIL PH METER_150129A			01/29/15 06:49	
pH, sat. paste		6.93	s.u.	0.10				0.3	30	
Lab ID: H15010288-012ADUP		Sample Duplicate				Run: SOIL PH METER_150129A			01/29/15 06:53	
pH, sat. paste		7.74	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010288

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150128A	
Lab ID: ICV	5	Initial Calibration Verification Standard							01/28/15 10:39	
Arsenic		0.807	mg/L	0.0085	101	90	110			
Cadmium		0.389	mg/L	0.0010	97	90	110			
Copper		0.803	mg/L	0.010	100	90	110			
Lead		0.743	mg/L	0.010	93	90	110			
Zinc		0.794	mg/L	0.010	99	90	110			
Lab ID: ICSA	5	Interference Check Sample A							01/28/15 10:54	
Arsenic		0.00896	mg/L	0.0085		0	0			
Cadmium		0.000530	mg/L	0.0010		0	0			
Copper		0.000240	mg/L	0.010		0	0			
Lead		-0.0267	mg/L	0.010		0	0			
Zinc		0.00267	mg/L	0.010		0	0			
Lab ID: ICSAB	5	Interference Check Sample AB							01/28/15 10:58	
Arsenic		0.972	mg/L	0.0085	97	80	120			
Cadmium		0.896	mg/L	0.0010	90	80	120			
Copper		0.513	mg/L	0.010	103	80	120			
Lead		0.890	mg/L	0.010	89	80	120			
Zinc		0.973	mg/L	0.010	97	80	120			
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/28/15 11:29	
Arsenic		2.47	mg/L	0.0085	99	90	110			
Cadmium		2.46	mg/L	0.0010	98	90	110			
Copper		2.52	mg/L	0.010	101	90	110			
Lead		2.42	mg/L	0.010	97	90	110			
Zinc		2.45	mg/L	0.010	98	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/28/15 11:32	
Arsenic		0.0139	mg/L	0.0085						
Cadmium		0.000660	mg/L	0.0010						
Copper		0.00215	mg/L	0.010						
Lead		-0.0228	mg/L	0.010						
Zinc		-0.000160	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/28/15 13:43	
Arsenic		2.50	mg/L	0.0085	100	90	110			
Cadmium		2.50	mg/L	0.0010	100	90	110			
Copper		2.54	mg/L	0.010	102	90	110			
Lead		2.49	mg/L	0.010	100	90	110			
Zinc		2.53	mg/L	0.010	101	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/28/15 13:46	
Arsenic		0.0111	mg/L	0.0085						
Cadmium		0.000610	mg/L	0.0010						
Copper		0.00372	mg/L	0.010						
Lead		-0.0173	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010288

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150128A	
Lab ID: CCB	5	Continuing Calibration Blank							01/28/15 13:46	
Zinc		-0.000220	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010288

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8								Analytical Run: ICPMS204-B_150203A		
Lab ID: CCV	2	Continuing Calibration Verification Standard							02/03/15 21:12	
Arsenic		0.0491	mg/L	0.0050	98	90	110			
Lead		0.0498	mg/L	0.010	100	90	110			
Lab ID: CCB	2	Continuing Calibration Blank							02/03/15 21:21	
Arsenic		1.89E-05	mg/L	0.0050						
Lead		2.90E-06	mg/L	0.010						
Lab ID: CCV	2	Continuing Calibration Verification Standard							02/03/15 23:54	
Arsenic		0.0489	mg/L	0.0050	98	90	110			
Lead		0.0497	mg/L	0.010	99	90	110			
Lab ID: CCB	2	Continuing Calibration Blank							02/04/15 00:03	
Arsenic		1.22E-05	mg/L	0.0050						
Lead		7.30E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010288

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27802	
Lab ID:	**MB-27802**	5	Method Blank				Run: ICP2-HE_150128A			01/28/15 12:29	
Arsenic			0.9	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27802**	5	Laboratory Fortified Blank				Run: ICP2-HE_150128A			01/28/15 12:33	
Arsenic			48.6	mg/kg	1.0	95	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			50.1	mg/kg	1.0	100	80	120			
Lead			47.4	mg/kg	1.0	95	80	120			
Zinc			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27802**	5	Laboratory Control Sample				Run: ICP2-HE_150128A			01/28/15 12:36	
Arsenic			288	mg/kg	1.7	87	72.3	106.4			
Cadmium			121	mg/kg	1.0	92	73	105.1			
Copper			263	mg/kg	1.1	98	77.5	109.6			
Lead			173	mg/kg	3.1	96	75.9	108.6			
Zinc			194	mg/kg	1.0	95	74.2	109.9			
Lab ID:	**H15010288-012APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150128A			01/28/15 13:35	
Arsenic			225	mg/kg	1.8	88	75	125			
Cadmium			106	mg/kg	1.0	87	75	125			
Copper			314	mg/kg	1.1	104	75	125			
Lead			220	mg/kg	3.1	87	75	125			
Zinc			290	mg/kg	1.0	91	75	125			
Lab ID:	**H15010288-012AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150128A			01/28/15 13:39	
Arsenic			48.5	mg/kg	1.7	79	75	125			
Cadmium			20.0	mg/kg	1.0	85	75	125			
Copper			114	mg/kg	1.0	111	75	125			
Lead			54.1	mg/kg	3.0	100	75	125			
Zinc			114	mg/kg	1.0	94	75	125			
Lab ID:	**H15010288-012AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150128A			01/28/15 13:50	
Arsenic			45.9	mg/kg	1.7	73	75	125	5.4	20	S
Cadmium			19.5	mg/kg	1.0	82	75	125	2.7	20	
Copper			115	mg/kg	1.0	111	75	125	0.6	20	
Lead			50.5	mg/kg	3.0	92	75	125	6.8	20	
Zinc			110	mg/kg	1.0	85	75	125	3.3	20	

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010288

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150203A		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							02/02/15 23:09	
Arsenic			0.0581	mg/L	0.0010	97	90	110			
Lead			0.0571	mg/L	0.0010	95	90	110			
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							02/03/15 13:29	
Arsenic			0.0582	mg/L	0.0010	97	90	110			
Lead			0.0599	mg/L	0.0010	100	90	110			
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							02/03/15 19:41	
Arsenic			0.0586	mg/L	0.0010	98	90	110			
Lead			0.0595	mg/L	0.0010	99	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							02/03/15 19:45	
Arsenic			8.70E-05	mg/L	0.0010						
Lead			0.000253	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							02/03/15 19:49	
Arsenic			0.0104	mg/L	0.0010	104	70	130			
Lead			0.000247	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 27802	
Lab ID:	**MB-27802**	2	Method Blank				Run: ICPMS204-B_150203A			02/03/15 22:21	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27802**	2	Laboratory Control Sample				Run: ICPMS204-B_150203A			02/03/15 22:26	
Arsenic			312	mg/kg	1.0	95	72.3	106.4			
Lead			194	mg/kg	1.0	108	75.9	108.6			
Lab ID:	**LFB-27802**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150203A			02/03/15 22:30	
Arsenic			47.3	mg/kg	1.0	95	80	120			
Lead			48.7	mg/kg	1.0	97	80	120			
Lab ID:	**H15010288-012AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150203A			02/03/15 23:44	
Arsenic			50.6	mg/kg	1.0	93	75	125			
Lead			56.1	mg/kg	1.0	94	75	125			
Lab ID:	**H15010288-012AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150203A			02/03/15 23:49	
Arsenic			51.7	mg/kg	1.0	94	75	125	2.2	20	
Lead			58.1	mg/kg	1.0	98	75	125	3.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H15010288

Login completed by: Austin H. Nearpass

Reviewed by: BL2000\rwilliams

Reviewed Date: 1/26/2015

Date Received: 1/22/2015

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-309-1218	815	12/11/14	Soil	A	B		1
3-405-1218	1413	12/11/14	Soil	A	B		1
3-298-1218	1355	12/10/14	Soil	A	B		1
3-298-1824	1354	12/10/14	Soil	A	B		1
3-299-4854	1101	12/10/14	Soil	A	B		1
3-299-5460	1100	12/10/14	Soil	A	B		1
3-322-3036	1557	12/10/14	Soil	A	B		1
3-322-3642	1556	12/10/14	Soil	A	B		1
3-326-3036	932	12/10/14	Soil	A	B		1
3-326-3642	931	12/10/14	Soil	A	B		1
3-275-4854	931	12/18/14	Soil	A	B		1
3-275-5460	930	12/18/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H15010288

Preservatives Used:

1 - Ice

Relinquished By (sign):
(1) [signature]
Date/Time: 1/22/15 1325

Received By (sign):
(1) _____
Date/Time:

Relinquished By (sign):
(2) _____
Date/Time:

Received By (sign):
(2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

2.0 TB on ice handdel

Date/Time: 1/23/15 13:25

COC011415additional samples.xls

ANALYTICAL SUMMARY REPORT

February 03, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010184

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 80 samples for MT DEQ-Federal Superfund on 1/14/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010184-001	FB44-120114	12/01/14 11:55	01/14/15	Aqueous	Metals by ICP/ICPMS, Total pH Metals Digestion by EPA 200.2
H15010184-002	FB45-120114	12/01/14 14:45	01/14/15	Aqueous	Same As Above
H15010184-003	CCB19-120114	12/01/14 16:15	01/14/15	Aqueous	Same As Above
H15010184-004	FB47-120214	12/02/14 9:40	01/14/15	Aqueous	Same As Above
H15010184-005	FB49-120214	12/02/14 16:10	01/14/15	Aqueous	Same As Above
H15010184-006	FB50-120314	12/03/14 9:25	01/14/15	Aqueous	Same As Above
H15010184-007	FB51-120314	12/03/14 12:40	01/14/15	Aqueous	Same As Above
H15010184-008	CCB20-120314	12/03/14 12:45	01/14/15	Aqueous	Same As Above
H15010184-009	FB51-120414	12/04/14 9:10	01/14/15	Aqueous	Same As Above
H15010184-010	CCB21-120414	12/04/14 11:45	01/14/15	Aqueous	Same As Above
H15010184-011	FB52-120414	12/04/14 15:00	01/14/15	Aqueous	Same As Above
H15010184-012	CCB22-120414	12/04/14 16:00	01/14/15	Aqueous	Same As Above
H15010184-013	FB53-120414	12/04/14 16:00	01/14/15	Aqueous	Same As Above
H15010184-014	FB54-120514	12/05/14 9:30	01/14/15	Aqueous	Same As Above
H15010184-015	CCB23-120514	12/05/14 11:56	01/14/15	Aqueous	Same As Above
H15010184-016	FB55-120814	12/08/14 10:25	01/14/15	Aqueous	Same As Above
H15010184-017	FB56-120814	12/08/14 13:20	01/14/15	Aqueous	Same As Above
H15010184-018	FB57-120814	12/08/14 16:20	01/14/15	Aqueous	Same As Above
H15010184-019	CCB24-120814	12/08/14 16:25	01/14/15	Aqueous	Same As Above
H15010184-020	FB58-120914	12/09/14 10:40	01/14/15	Aqueous	Same As Above
H15010184-021	FB59-120814	12/09/14 13:40	01/14/15	Aqueous	Same As Above
H15010184-022	FB60-120914	12/09/14 16:20	01/14/15	Aqueous	Same As Above
H15010184-023	CCB25-120914	12/09/14 16:25	01/14/15	Aqueous	Same As Above
H15010184-024	CCB26-121014	12/10/14 9:20	01/14/15	Aqueous	Same As Above
H15010184-025	FB61-121014	12/10/14 9:15	01/14/15	Aqueous	Same As Above
H15010184-026	FB62-121014	12/10/14 10:15	01/14/15	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

H15010184-027	CCB27-121014	12/10/14 16:20	01/14/15	Aqueous	Same As Above
H15010184-028	FB63-121014	12/10/14 16:25	01/14/15	Aqueous	Same As Above
H15010184-029	FB64-121114	12/11/14 10:05	01/14/15	Aqueous	Same As Above
H15010184-030	FB65-121114	12/11/14 13:25	01/14/15	Aqueous	Same As Above
H15010184-031	CCB28-121114	12/11/14 13:30	01/14/15	Aqueous	Same As Above
H15010184-032	FB66-121114	12/11/14 16:10	01/14/15	Aqueous	Same As Above
H15010184-033	CCB29-121114	12/11/14 16:12	01/14/15	Aqueous	Same As Above
H15010184-034	FB67-121514	12/15/14 10:55	01/14/15	Aqueous	Same As Above
H15010184-035	FB68-121514	12/15/14 14:05	01/14/15	Aqueous	Same As Above
H15010184-036	FB69-121514	12/15/14 16:30	01/14/15	Aqueous	Same As Above
H15010184-037	CCB30-121514	12/15/14 16:35	01/14/15	Aqueous	Same As Above
H15010184-038	FB70-121614	12/16/14 11:45	01/14/15	Aqueous	Same As Above
H15010184-039	FB71-121614	12/16/14 16:40	01/14/15	Aqueous	Same As Above
H15010184-040	FB72-121614	12/16/14 16:45	01/14/15	Aqueous	Same As Above
H15010184-041	CCB31-121614	12/16/14 16:50	01/14/15	Aqueous	Same As Above
H15010184-042	FB73-121714	12/17/14 10:01	01/14/15	Aqueous	Same As Above
H15010184-043	FB74-121714	12/17/14 12:06	01/14/15	Aqueous	Same As Above
H15010184-044	FB75-121714	12/17/14 15:05	01/14/15	Aqueous	Same As Above
H15010184-045	FB76-121714	12/17/14 16:50	01/14/15	Aqueous	Same As Above
H15010184-046	CCB32-121714	12/17/14 16:55	01/14/15	Aqueous	Same As Above
H15010184-047	FB77-121814	12/18/14 12:20	01/14/15	Aqueous	Same As Above
H15010184-048	FB78-121814	12/18/14 12:30	01/14/15	Aqueous	Same As Above
H15010184-049	FB79-121814	12/18/14 16:45	01/14/15	Aqueous	Same As Above
H15010184-050	CCB33-121814	12/18/14 16:50	01/14/15	Aqueous	Same As Above
H15010184-051	FB80-122214	12/22/14 10:05	01/14/15	Aqueous	Same As Above
H15010184-052	FB81-122214	12/22/14 11:50	01/14/15	Aqueous	Same As Above
H15010184-053	FB82-122214	12/22/14 14:25	01/14/15	Aqueous	Same As Above
H15010184-054	FB83-122214	12/22/14 16:55	01/14/15	Aqueous	Same As Above
H15010184-055	CCB34-122214	12/22/14 17:00	01/14/15	Aqueous	Same As Above
H15010184-056	FB84-122314	12/23/14 9:50	01/14/15	Aqueous	Same As Above
H15010184-057	FB85-122314	12/23/14 11:50	01/14/15	Aqueous	Same As Above
H15010184-058	FB86-122314	12/23/14 13:40	01/14/15	Aqueous	Same As Above
H15010184-059	FB87-122314	12/23/14 16:20	01/14/15	Aqueous	Same As Above
H15010184-060	CCB35-122314	12/23/14 16:25	01/14/15	Aqueous	Same As Above
H15010184-061	FB88-122414	12/24/14 10:25	01/14/15	Aqueous	Same As Above
H15010184-062	FB89-122414	12/24/14 11:40	01/14/15	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

H15010184-063	CCB36-122414	12/24/14 11:45	01/14/15	Aqueous	Same As Above
H15010184-064	FB90-010515	01/05/15 12:00	01/14/15	Aqueous	Same As Above
H15010184-065	FB91-010515	01/05/15 15:11	01/14/15	Aqueous	Same As Above
H15010184-066	FB92-010515	01/05/15 16:55	01/14/15	Aqueous	Same As Above
H15010184-067	FB93-010615	01/06/15 11:10	01/14/15	Aqueous	Same As Above
H15010184-068	FB94-010615	01/06/15 14:20	01/14/15	Aqueous	Same As Above
H15010184-069	CCB38-010615	01/06/15 14:25	01/14/15	Aqueous	Same As Above
H15010184-070	FB95-010715	01/07/15 10:15	01/14/15	Aqueous	Same As Above
H15010184-071	FB96-010715	01/07/15 12:45	01/14/15	Aqueous	Same As Above
H15010184-072	FB97-010715	01/07/15 16:05	01/14/15	Aqueous	Same As Above
H15010184-073	CCB39-010715	01/07/15 16:45	01/14/15	Aqueous	Same As Above
H15010184-074	FB98-010815	01/08/15 10:20	01/14/15	Aqueous	Same As Above
H15010184-075	FB99-010815	01/08/15 12:05	01/14/15	Aqueous	Same As Above
H15010184-076	FB100-010815	01/08/15 15:25	01/14/15	Aqueous	Same As Above
H15010184-077	CCB40-010815	01/08/15 16:30	01/14/15	Aqueous	Same As Above
H15010184-078	FB101-010915	01/09/15 10:45	01/14/15	Aqueous	Same As Above
H15010184-079	CCB41-010915	01/09/15 11:30	01/14/15	Aqueous	Same As Above
H15010184-080	CCB37-010515	01/05/15 16:50	01/14/15	Aqueous	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010184

Report Date: 02/03/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-001
Client Sample ID: FB44-120114

Report Date: 02/03/15
Collection Date: 12/01/14 11:55
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	01/16/15 09:35 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 22:18 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 17:01 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 22:18 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 17:01 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 22:18 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-002
Client Sample ID: FB45-120114

Report Date: 02/03/15
Collection Date: 12/01/14 14:45
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 09:38 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 22:20 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 17:06 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 22:20 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 17:06 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 22:20 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-003
Client Sample ID: CCB19-120114

Report Date: 02/03/15
Collection Date: 12/01/14 16:15
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.8	s.u.	H	0.1		A4500-H B	01/16/15 09:41 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 22:23 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 17:10 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 22:23 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 17:10 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 22:23 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-004
Client Sample ID: FB47-120214

Report Date: 02/03/15
Collection Date: 12/02/14 09:40
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 09:44 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 17:32 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 17:32 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 22:26 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 17:32 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 17:32 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-005
Client Sample ID: FB49-120214

Report Date: 02/03/15
Collection Date: 12/02/14 16:10
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 09:47 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 17:37 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 17:37 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 22:28 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 17:37 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 17:37 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-006
Client Sample ID: FB50-120314

Report Date: 02/03/15
Collection Date: 12/03/14 09:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 09:49 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 17:41 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 17:41 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 22:39 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 17:41 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 17:41 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-007
Client Sample ID: FB51-120314

Report Date: 02/03/15
Collection Date: 12/03/14 12:40
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 09:52 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 17:46 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 17:46 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 22:42 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 17:46 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 17:46 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-008
Client Sample ID: CCB20-120314

Report Date: 02/03/15
Collection Date: 12/03/14 12:45
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.7	s.u.	H	0.1		A4500-H B	01/16/15 09:55 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 17:50 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 17:50 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 22:44 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 17:50 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 17:50 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-009
Client Sample ID: FB51-120414

Report Date: 02/03/15
Collection Date: 12/04/14 09:10
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 09:58 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 17:55 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 17:55 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 22:47 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 17:55 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 17:55 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-010
Client Sample ID: CCB21-120414

Report Date: 02/03/15
Collection Date: 12/04/14 11:45
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 10:01 / SRW
METALS, TOTAL							
Arsenic	0.002	mg/L		0.001		E200.8	01/30/15 17:59 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 17:59 / eli-b22
Copper	0.007	mg/L		0.005		E200.8	02/02/15 22:50 / eli-b22
Lead	0.002	mg/L		0.001		E200.8	01/30/15 17:59 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 17:59 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-011
Client Sample ID: FB52-120414

Report Date: 02/03/15
Collection Date: 12/04/14 15:00
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 10:04 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 18:35 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 18:35 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 18:35 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 18:35 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 18:35 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-012
Client Sample ID: CCB22-120414

Report Date: 02/03/15
Collection Date: 12/04/14 16:00
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.8	s.u.	H	0.1		A4500-H B	01/16/15 10:07 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 18:39 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 18:39 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 18:39 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 18:39 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 18:39 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-013
Client Sample ID: FB53-120414

Report Date: 02/03/15
Collection Date: 12/04/14 16:00
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 10:09 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 18:44 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 18:44 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 18:44 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 18:44 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 18:44 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-014
Client Sample ID: FB54-120514

Report Date: 02/03/15
Collection Date: 12/05/14 09:30
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 10:12 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 18:48 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 18:48 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 18:48 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 18:48 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 18:48 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-015
Client Sample ID: CCB23-120514

Report Date: 02/03/15
Collection Date: 12/05/14 11:56
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.9	s.u.	H	0.1		A4500-H B	01/16/15 10:15 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 18:52 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 18:52 / eli-b22
Copper	0.006	mg/L		0.005		E200.8	01/30/15 18:52 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 18:52 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 18:52 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-016
Client Sample ID: FB55-120814

Report Date: 02/03/15
Collection Date: 12/08/14 10:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 10:18 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 18:57 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 18:57 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 18:57 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 18:57 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 18:57 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-017
Client Sample ID: FB56-120814

Report Date: 02/03/15
Collection Date: 12/08/14 13:20
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 10:21 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 19:01 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 19:01 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 19:01 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 19:01 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 19:01 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-018
Client Sample ID: FB57-120814

Report Date: 02/03/15
Collection Date: 12/08/14 16:20
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 10:23 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 19:06 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 19:06 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 19:06 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 19:06 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 19:06 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-019
Client Sample ID: CCB24-120814

Report Date: 02/03/15
Collection Date: 12/08/14 16:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.4	s.u.	H	0.1		A4500-H B	01/16/15 10:26 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 19:10 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 19:10 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 19:10 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 19:10 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 19:10 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-020
Client Sample ID: FB58-120914

Report Date: 02/03/15
Collection Date: 12/09/14 10:40
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 10:40 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 10:28 / eli-b22
Cadmium	0.014	mg/L		0.001		E200.8	01/30/15 09:08 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 09:08 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 17:31 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 10:28 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-021
Client Sample ID: FB59-120814

Report Date: 02/03/15
Collection Date: 12/09/14 13:40
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 10:46 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 10:46 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 09:25 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 09:25 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 17:41 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 10:46 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-022
Client Sample ID: FB60-120914

Report Date: 02/03/15
Collection Date: 12/09/14 16:20
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 10:48 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 10:51 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 09:30 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 09:30 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 10:51 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 10:51 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-023
Client Sample ID: CCB25-120914

Report Date: 02/03/15
Collection Date: 12/09/14 16:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.0	s.u.	H	0.1		A4500-H B	01/16/15 10:51 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 10:55 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 09:34 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 09:34 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 10:55 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 10:55 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-024
Client Sample ID: CCB26-121014

Report Date: 02/03/15
Collection Date: 12/10/14 09:20
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	01/16/15 10:54 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 11:17 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 09:52 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 09:52 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 17:44 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 09:52 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-025
Client Sample ID: FB61-121014

Report Date: 02/03/15
Collection Date: 12/10/14 09:15
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 10:57 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 11:22 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 11:22 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 11:22 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 17:47 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 11:22 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-026
Client Sample ID: FB62-121014

Report Date: 02/03/15
Collection Date: 12/10/14 10:15
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 11:00 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 11:26 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 11:26 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 11:26 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 17:49 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 11:26 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-027
Client Sample ID: CCB27-121014

Report Date: 02/03/15
Collection Date: 12/10/14 16:20
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.8	s.u.	H	0.1		A4500-H B	01/16/15 11:03 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 11:30 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 11:30 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 11:30 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 17:52 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 11:30 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-028
Client Sample ID: FB63-121014

Report Date: 02/03/15
Collection Date: 12/10/14 16:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 11:05 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 11:35 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 11:35 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 11:35 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 18:03 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 11:35 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-029
Client Sample ID: FB64-121114

Report Date: 02/03/15
Collection Date: 12/11/14 10:05
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 11:08 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 11:39 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 11:39 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 11:39 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 18:05 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 11:39 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-030
Client Sample ID: FB65-121114

Report Date: 02/03/15
Collection Date: 12/11/14 13:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.3	s.u.	H	0.1		A4500-H B	01/16/15 11:11 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 11:44 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 11:44 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 11:44 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 18:08 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 11:44 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-031
Client Sample ID: CCB28-121114

Report Date: 02/03/15
Collection Date: 12/11/14 13:30
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.0	s.u.	H	0.1		A4500-H B	01/16/15 11:14 / SRW
METALS, TOTAL							
Arsenic	0.002	mg/L		0.001		E200.8	01/30/15 12:19 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 12:19 / eli-b22
Copper	0.013	mg/L		0.005		E200.8	01/30/15 12:19 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	02/02/15 18:18 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 12:19 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-032
Client Sample ID: FB66-121114

Report Date: 02/03/15
Collection Date: 12/11/14 16:10
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 11:17 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 12:24 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 12:24 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 12:24 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 18:21 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 12:24 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-033
Client Sample ID: CCB29-121114

Report Date: 02/03/15
Collection Date: 12/11/14 16:12
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.7	s.u.	H	0.1		A4500-H B	01/16/15 11:20 / SRW
METALS, TOTAL							
Arsenic	0.002	mg/L		0.001		E200.8	02/02/15 18:24 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	02/02/15 18:24 / eli-b22
Copper	0.009	mg/L		0.005		E200.8	02/02/15 18:24 / eli-b22
Lead	0.002	mg/L		0.001		E200.8	02/02/15 18:24 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 18:24 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-034
Client Sample ID: FB67-121514

Report Date: 02/03/15
Collection Date: 12/15/14 10:55
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 11:22 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 12:33 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 12:33 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 12:33 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 18:26 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 12:33 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-035
Client Sample ID: FB68-121514

Report Date: 02/03/15
Collection Date: 12/15/14 14:05
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 11:25 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 12:37 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 12:37 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 12:37 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 18:37 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 12:37 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-036
Client Sample ID: FB69-121514

Report Date: 02/03/15
Collection Date: 12/15/14 16:30
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 11:28 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 12:41 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 12:41 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 12:41 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 18:40 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 12:41 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-037
Client Sample ID: CCB30-121514

Report Date: 02/03/15
Collection Date: 12/15/14 16:35
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	01/16/15 11:31 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 12:46 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 12:46 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 12:46 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 18:43 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 12:46 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-038
Client Sample ID: FB70-121614

Report Date: 02/03/15
Collection Date: 12/16/14 11:45
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 11:34 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 12:50 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 12:50 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 12:50 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 18:45 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 12:50 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-039
Client Sample ID: FB71-121614

Report Date: 02/03/15
Collection Date: 12/16/14 16:40
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 11:36 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 12:55 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 12:55 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 12:55 / eli-b22
Lead	ND	mg/L		0.001		E200.8	02/02/15 18:48 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 12:55 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-040
Client Sample ID: FB72-121614

Report Date: 02/03/15
Collection Date: 12/16/14 16:45
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 11:51 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 13:35 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 13:35 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 13:35 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 13:35 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 13:35 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-041
Client Sample ID: CCB31-121614

Report Date: 02/03/15
Collection Date: 12/16/14 16:50
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 11:56 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 13:52 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 13:52 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 13:52 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 13:52 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 13:52 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-042
Client Sample ID: FB73-121714

Report Date: 02/03/15
Collection Date: 12/17/14 10:01
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 11:59 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 13:57 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 13:57 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 13:57 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 13:57 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 13:57 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-043
Client Sample ID: FB74-121714

Report Date: 02/03/15
Collection Date: 12/17/14 12:06
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:02 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 14:01 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 14:01 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 14:01 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 14:01 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 14:01 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-044
Client Sample ID: FB75-121714

Report Date: 02/03/15
Collection Date: 12/17/14 15:05
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:05 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 14:23 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 14:23 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 20:42 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 14:23 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 14:23 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-045
Client Sample ID: FB76-121714

Report Date: 02/03/15
Collection Date: 12/17/14 16:50
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:08 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 14:28 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 14:28 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 20:45 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 14:28 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 14:28 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-046
Client Sample ID: CCB32-121714

Report Date: 02/03/15
Collection Date: 12/17/14 16:55
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.7	s.u.	H	0.1		A4500-H B	01/16/15 12:11 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 14:32 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 14:32 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 20:56 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 14:32 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 14:32 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-047
Client Sample ID: FB77-121814

Report Date: 02/03/15
Collection Date: 12/18/14 12:20
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:14 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 14:37 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 14:37 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 20:58 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 14:37 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 14:37 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-048
Client Sample ID: FB78-121814

Report Date: 02/03/15
Collection Date: 12/18/14 12:30
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:16 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 14:41 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 14:41 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:01 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 14:41 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 14:41 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-049
Client Sample ID: FB79-121814

Report Date: 02/03/15
Collection Date: 12/18/14 16:45
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:19 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 14:46 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 14:46 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:04 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 14:46 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 14:46 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-050
Client Sample ID: CCB33-121814

Report Date: 02/03/15
Collection Date: 12/18/14 16:50
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	01/16/15 12:22 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 14:50 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 14:50 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:06 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 14:50 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 14:50 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-051
Client Sample ID: FB80-122214

Report Date: 02/03/15
Collection Date: 12/22/14 10:05
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:25 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 21:17 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 15:28 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:17 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 15:28 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 21:17 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-052
Client Sample ID: FB81-122214

Report Date: 02/03/15
Collection Date: 12/22/14 11:50
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:28 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 21:19 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 15:33 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:19 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 15:33 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 21:19 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-053
Client Sample ID: FB82-122214

Report Date: 02/03/15
Collection Date: 12/22/14 14:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:30 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 21:30 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 15:37 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:30 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 15:37 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 21:30 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-054
Client Sample ID: FB83-122214

Report Date: 02/03/15
Collection Date: 12/22/14 16:55
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:33 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 21:33 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 15:41 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:33 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 15:41 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 21:33 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-055
Client Sample ID: CCB34-122214

Report Date: 02/03/15
Collection Date: 12/22/14 17:00
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	01/16/15 12:36 / SRW
METALS, TOTAL							
Arsenic	0.002	mg/L		0.001		E200.8	02/02/15 21:35 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 15:46 / eli-b22
Copper	0.015	mg/L		0.005		E200.8	02/02/15 21:35 / eli-b22
Lead	0.002	mg/L		0.001		E200.8	01/30/15 15:46 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 21:35 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-056
Client Sample ID: FB84-122314

Report Date: 02/03/15
Collection Date: 12/23/14 09:50
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	01/16/15 12:39 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 21:38 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 15:50 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:38 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 15:50 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 21:38 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-057
Client Sample ID: FB85-122314

Report Date: 02/03/15
Collection Date: 12/23/14 11:50
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:42 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 21:41 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 15:55 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:41 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 15:55 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 21:41 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-058
Client Sample ID: FB86-122314

Report Date: 02/03/15
Collection Date: 12/23/14 13:40
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	4.8	s.u.	H	0.1		A4500-H B	01/16/15 12:44 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 21:43 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 15:59 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:43 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 15:59 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 21:43 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-059
Client Sample ID: FB87-122314

Report Date: 02/03/15
Collection Date: 12/23/14 16:20
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 12:47 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 21:46 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 16:04 / eli-b22
Copper	ND	mg/L		0.005		E200.8	02/02/15 21:46 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 16:04 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 21:46 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-060
Client Sample ID: CCB35-122314

Report Date: 02/03/15
Collection Date: 12/23/14 16:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	01/16/15 13:01 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 06:14 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 06:14 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 06:14 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 06:14 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 15:48 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-061
Client Sample ID: FB88-122414

Report Date: 02/03/15
Collection Date: 12/24/14 10:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 13:07 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 06:32 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 06:32 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 06:32 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 06:32 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 15:58 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-062
Client Sample ID: FB89-122414

Report Date: 02/03/15
Collection Date: 12/24/14 11:40
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 13:09 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 06:36 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 06:36 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 06:36 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 06:36 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:00 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-063
Client Sample ID: CCB36-122414

Report Date: 02/03/15
Collection Date: 12/24/14 11:45
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	01/16/15 13:12 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 06:41 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 06:41 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 06:41 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 06:41 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:03 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-064
Client Sample ID: FB90-010515

Report Date: 02/03/15
Collection Date: 01/05/15 12:00
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 13:15 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 06:59 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 06:59 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 06:59 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 06:59 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:06 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-065
Client Sample ID: FB91-010515

Report Date: 02/03/15
Collection Date: 01/05/15 15:11
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 13:18 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 07:03 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 07:03 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 07:03 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 07:03 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:09 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-066
Client Sample ID: FB92-010515

Report Date: 02/03/15
Collection Date: 01/05/15 16:55
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 13:21 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 07:08 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 07:08 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 07:08 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 07:08 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:19 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-067
Client Sample ID: FB93-010615

Report Date: 02/03/15
Collection Date: 01/06/15 11:10
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 13:23 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 07:12 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 07:12 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 07:12 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 07:12 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:22 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-068
Client Sample ID: FB94-010615

Report Date: 02/03/15
Collection Date: 01/06/15 14:20
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.2	s.u.	H	0.1		A4500-H B	01/16/15 13:26 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 07:16 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 07:16 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 07:16 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 07:16 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:25 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-069
Client Sample ID: CCB38-010615

Report Date: 02/03/15
Collection Date: 01/06/15 14:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.2	s.u.	H	0.1		A4500-H B	01/16/15 13:29 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 07:21 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 07:21 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 07:21 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 07:21 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:27 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-070
Client Sample ID: FB95-010715

Report Date: 02/03/15
Collection Date: 01/07/15 10:15
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 13:32 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 07:25 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 07:25 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 07:25 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 07:25 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:30 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-071
Client Sample ID: FB96-010715

Report Date: 02/03/15
Collection Date: 01/07/15 12:45
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 13:34 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 07:56 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 07:56 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 07:56 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 07:56 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:40 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-072
Client Sample ID: FB97-010715

Report Date: 02/03/15
Collection Date: 01/07/15 16:05
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 13:37 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 08:01 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 08:01 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 08:01 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 08:01 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:43 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-073
Client Sample ID: CCB39-010715

Report Date: 02/03/15
Collection Date: 01/07/15 16:45
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	01/16/15 13:40 / SRW
METALS, TOTAL							
Arsenic	0.009	mg/L		0.001		E200.8	01/30/15 08:05 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 08:05 / eli-b22
Copper	0.020	mg/L		0.005		E200.8	01/30/15 08:05 / eli-b22
Lead	0.008	mg/L		0.001		E200.8	01/30/15 08:05 / eli-b22
Zinc	0.03	mg/L		0.01		E200.8	02/02/15 16:54 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-074
Client Sample ID: FB98-010815

Report Date: 02/03/15
Collection Date: 01/08/15 10:20
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 13:43 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 08:10 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 08:10 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 08:10 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 08:10 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:56 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-075
Client Sample ID: FB99-010815

Report Date: 02/03/15
Collection Date: 01/08/15 12:05
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 13:46 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 08:14 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 08:14 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 08:14 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 08:14 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 16:59 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-076
Client Sample ID: FB100-010815

Report Date: 02/03/15
Collection Date: 01/08/15 15:25
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 13:48 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 08:19 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 08:19 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 08:19 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 08:19 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 17:02 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-077
Client Sample ID: CCB40-010815

Report Date: 02/03/15
Collection Date: 01/08/15 16:30
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 13:51 / SRW
METALS, TOTAL							
Arsenic	0.001	mg/L		0.001		E200.8	01/30/15 08:23 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 08:23 / eli-b22
Copper	0.007	mg/L		0.005		E200.8	01/30/15 08:23 / eli-b22
Lead	0.002	mg/L		0.001		E200.8	01/30/15 08:23 / eli-b22
Zinc	0.01	mg/L		0.01		E200.8	02/02/15 17:04 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-078
Client Sample ID: FB101-010915

Report Date: 02/03/15
Collection Date: 01/09/15 10:45
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	01/16/15 13:54 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 08:28 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 08:28 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 08:28 / eli-b22
Lead	ND	mg/L		0.001		E200.8	01/30/15 08:28 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 17:07 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-079
Client Sample ID: CCB41-010915

Report Date: 02/03/15
Collection Date: 01/09/15 11:30
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.8	s.u.	H	0.1		A4500-H B	01/16/15 13:57 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	01/30/15 08:32 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 08:32 / eli-b22
Copper	ND	mg/L		0.005		E200.8	01/30/15 08:32 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 08:32 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	02/02/15 17:10 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H15010184-080
Client Sample ID: CCB37-010515

Report Date: 02/03/15
Collection Date: 01/05/15 16:50
DateReceived: 01/14/15
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	01/16/15 14:11 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	02/02/15 23:16 / eli-b22
Cadmium	ND	mg/L		0.001		E200.8	01/30/15 20:57 / eli-b22
Copper	0.006	mg/L		0.005		E200.8	01/30/15 20:57 / eli-b22
Lead	0.001	mg/L		0.001		E200.8	01/30/15 20:57 / eli-b22
Zinc	ND	mg/L		0.01		E200.8	01/30/15 20:57 / eli-b22

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**A4500-H B**								Analytical Run: PHSC_101-H_150116A		
Lab ID:	**pH 7**	Initial Calibration Verification Standard								01/16/15 09:13	
pH			7.0	s.u.	0.1	100	98	102			
Lab ID:	**CCV - pH 7**	Continuing Calibration Verification Standard								01/16/15 10:32	
pH			7.0	s.u.	0.1	100	98	102			
Lab ID:	**CCV - pH 7**	Continuing Calibration Verification Standard								01/16/15 11:42	
pH			7.0	s.u.	0.1	100	98	102			
Lab ID:	**CCV - pH 7**	Continuing Calibration Verification Standard								01/16/15 12:52	
pH			7.0	s.u.	0.1	100	98	102			
Lab ID:	**CCV - pH 7**	Continuing Calibration Verification Standard								01/16/15 14:02	
pH			7.0	s.u.	0.1	100	98	102			
Method:	**A4500-H B**									Batch: R103472	
Lab ID:	**H15010184-019BDUP**	Sample Duplicate					Run: PHSC_101-H_150116A			01/16/15 10:29	
pH			6.3	s.u.	0.1				0.5	3	
Lab ID:	**H15010184-020BDUP**	Sample Duplicate					Run: PHSC_101-H_150116A			01/16/15 10:43	
pH			5.6	s.u.	0.1				2.4	3	
Lab ID:	**H15010184-039BDUP**	Sample Duplicate					Run: PHSC_101-H_150116A			01/16/15 11:39	
pH			5.5	s.u.	0.1				0.7	3	
Lab ID:	**H15010184-040BDUP**	Sample Duplicate					Run: PHSC_101-H_150116A			01/16/15 11:53	
pH			5.6	s.u.	0.1				3.8	3	R
Lab ID:	**H15010184-059BDUP**	Sample Duplicate					Run: PHSC_101-H_150116A			01/16/15 12:50	
pH			5.4	s.u.	0.1				0.4	3	
Lab ID:	**H15010184-060BDUP**	Sample Duplicate					Run: PHSC_101-H_150116A			01/16/15 13:04	
pH			5.7	s.u.	0.1				0.4	3	
Lab ID:	**H15010184-079BDUP**	Sample Duplicate					Run: PHSC_101-H_150116A			01/16/15 14:00	
pH			5.9	s.u.	0.1				1.9	3	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Analytical Run: SUB-B237525	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							01/30/15 05:34	
Arsenic			0.0544	mg/L	0.0050	109	90	110			
Cadmium			0.0249	mg/L	0.0010	100	90	110			
Copper			0.0539	mg/L	0.010	108	90	110			
Lead			0.0494	mg/L	0.010	99	90	110			
Zinc			0.0531	mg/L	0.010	106	90	110			
Method:	**E200.8**									Batch: B_86594	
Lab ID:	**MB-86594**	5	Method Blank				Run: SUB-B237525			01/30/15 06:01	
Arsenic			0.0002	mg/L	7E-05						
Cadmium			3E-05	mg/L	2E-05						
Copper			ND	mg/L	0.0009						
Lead			0.0002	mg/L	3E-05						
Zinc			0.001	mg/L	0.0004						
Lab ID:	**LCS-86594**	5	Laboratory Control Sample				Run: SUB-B237525			01/30/15 06:05	
Arsenic			0.517	mg/L	0.0010	103	85	115			
Cadmium			0.254	mg/L	0.0010	102	85	115			
Copper			0.531	mg/L	0.0010	106	85	115			
Lead			0.500	mg/L	0.0010	100	85	115			
Zinc			0.532	mg/L	0.0010	106	85	115			
Lab ID:	**H15010184-060A**	5	Sample Matrix Spike				Run: SUB-B237525			01/30/15 06:19	
Arsenic			0.491	mg/L	0.0010	98	70	130			
Cadmium			0.256	mg/L	0.0010	102	70	130			
Copper			0.508	mg/L	0.0050	101	70	130			
Lead			0.494	mg/L	0.0010	99	70	130			
Zinc			0.506	mg/L	0.010	100	70	130			
Lab ID:	**H15010184-060A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 06:23	
Arsenic			0.530	mg/L	0.0010	106	70	130	7.6	20	
Cadmium			0.253	mg/L	0.0010	101	70	130	0.8	20	
Copper			0.549	mg/L	0.0050	109	70	130	7.7	20	
Lead			0.498	mg/L	0.0010	99	70	130	0.6	20	
Zinc			0.542	mg/L	0.010	108	70	130	7.0	20	
Lab ID:	**H15010184-070A**	5	Sample Matrix Spike				Run: SUB-B237525			01/30/15 07:30	
Arsenic			0.486	mg/L	0.0010	97	70	130			
Cadmium			0.255	mg/L	0.0010	102	70	130			
Copper			0.518	mg/L	0.0050	103	70	130			
Lead			0.502	mg/L	0.0010	100	70	130			
Zinc			0.499	mg/L	0.010	100	70	130			
Lab ID:	**H15010184-070A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 07:34	
Arsenic			0.489	mg/L	0.0010	98	70	130	0.7	20	
Cadmium			0.256	mg/L	0.0010	102	70	130	0.3	20	
Copper			0.514	mg/L	0.0050	103	70	130	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Batch: B_86594	
Lab ID:	**H15010184-070A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 07:34	
Lead			0.501	mg/L	0.0010	100	70	130	0.1	20	
Zinc			0.503	mg/L	0.010	100	70	130	0.7	20	
Method:	**E200.8**									Batch: B_86595	
Lab ID:	**MB-86595**	5	Method Blank				Run: SUB-B237525			01/30/15 10:15	
Arsenic			0.0001	mg/L	7E-05						
Cadmium			4E-05	mg/L	2E-05						
Copper			0.001	mg/L	0.0009						
Lead			0.001	mg/L	3E-05						
Zinc			0.001	mg/L	0.0004						
Lab ID:	**LCS-86595**	5	Laboratory Control Sample				Run: SUB-B237525			01/30/15 10:20	
Arsenic			0.507	mg/L	0.0010	101	85	115			
Cadmium			0.258	mg/L	0.0010	103	85	115			
Copper			0.523	mg/L	0.0010	104	85	115			
Lead			0.495	mg/L	0.0010	99	85	115			
Zinc			0.509	mg/L	0.0010	102	85	115			
Lab ID:	**H15010184-020A**	5	Sample Matrix Spike				Run: SUB-B237525			01/30/15 10:33	
Arsenic			0.497	mg/L	0.0010	99	70	130			
Cadmium			0.247	mg/L	0.0010	93	70	130			
Copper			0.520	mg/L	0.0050	104	70	130			
Lead			0.491	mg/L	0.0010	98	70	130			
Zinc			0.507	mg/L	0.010	101	70	130			
Lab ID:	**H15010184-020A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 10:37	
Arsenic			0.496	mg/L	0.0010	99	70	130	5.1	20	
Cadmium			0.246	mg/L	0.0010	99	70	130	4.9	20	
Copper			0.527	mg/L	0.0050	105	70	130	6.7	20	
Lead			0.495	mg/L	0.0010	99	70	130	0.7	20	
Zinc			0.512	mg/L	0.010	102	70	130	4.4	20	
Lab ID:	**H15010184-030A**	5	Sample Matrix Spike				Run: SUB-B237525			01/30/15 11:48	
Arsenic			0.499	mg/L	0.0010	100	70	130			
Cadmium			0.260	mg/L	0.0010	104	70	130			
Copper			0.522	mg/L	0.0050	104	70	130			
Lead			0.498	mg/L	0.0010	99	70	130			
Zinc			0.505	mg/L	0.010	101	70	130			
Lab ID:	**H15010184-030A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 11:53	
Arsenic			0.487	mg/L	0.0010	97	70	130	2.4	20	
Cadmium			0.257	mg/L	0.0010	103	70	130	1.1	20	
Copper			0.514	mg/L	0.0050	103	70	130	1.6	20	
Lead			0.499	mg/L	0.0010	100	70	130	0.2	20	
Zinc			0.504	mg/L	0.010	101	70	130	0.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**										Batch: B_86595
Lab ID:	**MB-86595**	5	Method Blank				Run: SUB-B237525				01/30/15 08:54
Arsenic			0.0003	mg/L	7E-05						
Cadmium			ND	mg/L	2E-05						
Copper			0.001	mg/L	0.0009						
Lead			0.001	mg/L	3E-05						
Zinc			0.001	mg/L	0.0004						
Lab ID:	**LCS-86595**	5	Laboratory Control Sample				Run: SUB-B237525				01/30/15 08:59
Arsenic			0.533	mg/L	0.0010	107	85	115			
Cadmium			0.259	mg/L	0.0010	104	85	115			
Copper			0.560	mg/L	0.0010	112	85	115			
Lead			0.496	mg/L	0.0010	99	85	115			
Zinc			0.547	mg/L	0.0010	109	85	115			
Lab ID:	**H15010184-020A**	5	Sample Matrix Spike				Run: SUB-B237525				01/30/15 09:12
Arsenic			0.471	mg/L	0.0010	94	70	130			
Cadmium			0.259	mg/L	0.0010	98	70	130			
Copper			0.493	mg/L	0.0050	98	70	130			
Lead			0.498	mg/L	0.0010	99	70	130			
Zinc			0.490	mg/L	0.010	98	70	130			
Lab ID:	**H15010184-020A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525				01/30/15 09:16
Arsenic			0.493	mg/L	0.0010	99	70	130	4.6	20	
Cadmium			0.242	mg/L	0.0010	91	70	130	6.8	20	
Copper			0.494	mg/L	0.0050	98	70	130	0.2	20	
Lead			0.493	mg/L	0.0010	98	70	130	1.0	20	
Zinc			0.509	mg/L	0.010	102	70	130	3.8	20	
Method:	**E200.8**										Batch: B_86596
Lab ID:	**MB-86596**	5	Method Blank				Run: SUB-B237525				01/30/15 13:21
Arsenic			0.0004	mg/L	7E-05						
Cadmium			ND	mg/L	2E-05						
Copper			0.002	mg/L	0.0009						
Lead			0.0010	mg/L	3E-05						
Zinc			0.0007	mg/L	0.0004						
Lab ID:	**LCS-86596**	5	Laboratory Control Sample				Run: SUB-B237525				01/30/15 13:26
Arsenic			0.550	mg/L	0.0010	110	85	115			
Cadmium			0.262	mg/L	0.0010	105	85	115			
Copper			0.579	mg/L	0.0010	115	85	115			
Lead			0.506	mg/L	0.0010	101	85	115			
Zinc			0.562	mg/L	0.0010	112	85	115			
Lab ID:	**H15010184-040A**	5	Sample Matrix Spike				Run: SUB-B237525				01/30/15 13:39
Arsenic			0.473	mg/L	0.0010	95	70	130			
Cadmium			0.258	mg/L	0.0010	103	70	130			
Copper			0.488	mg/L	0.0050	97	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Batch: B_86596	
Lab ID:	**H15010184-040A**	5	Sample Matrix Spike				Run: SUB-B237525			01/30/15 13:39	
Lead			0.504	mg/L	0.0010	101	70	130			
Zinc			0.476	mg/L	0.010	95	70	130			
Lab ID:	**H15010184-040A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 13:44	
Arsenic			0.490	mg/L	0.0010	98	70	130	3.6	20	
Cadmium			0.260	mg/L	0.0010	104	70	130	0.6	20	
Copper			0.522	mg/L	0.0050	104	70	130	6.7	20	
Lead			0.505	mg/L	0.0010	101	70	130	0.2	20	
Zinc			0.514	mg/L	0.010	103	70	130	7.5	20	
Lab ID:	**H15010184-050A**	5	Sample Matrix Spike				Run: SUB-B237525			01/30/15 14:57	
Arsenic			0.498	mg/L	0.0010	100	70	130			
Cadmium			0.262	mg/L	0.0010	105	70	130			
Copper			0.532	mg/L	0.0050	105	70	130			
Lead			0.506	mg/L	0.0010	101	70	130			
Zinc			0.528	mg/L	0.010	105	70	130			
Lab ID:	**H15010184-050A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 15:01	
Arsenic			0.526	mg/L	0.0010	105	70	130	5.4	20	
Cadmium			0.260	mg/L	0.0010	104	70	130	0.6	20	
Copper			0.552	mg/L	0.0050	109	70	130	3.6	20	
Lead			0.502	mg/L	0.0010	100	70	130	0.6	20	
Zinc			0.539	mg/L	0.010	107	70	130	1.9	20	
Method:	**E200.8**									Batch: B_86597	
Lab ID:	**MB-86597**	5	Method Blank				Run: SUB-B237525			01/30/15 16:30	
Arsenic			0.0003	mg/L	7E-05						
Cadmium			3E-05	mg/L	2E-05						
Copper			0.001	mg/L	0.0009						
Lead			0.0006	mg/L	3E-05						
Zinc			0.001	mg/L	0.0004						
Lab ID:	**LCS-86597**	5	Laboratory Control Sample				Run: SUB-B237525			01/30/15 16:35	
Arsenic			0.501	mg/L	0.0010	100	85	115			
Cadmium			0.266	mg/L	0.0010	107	85	115			
Copper			0.525	mg/L	0.0010	105	85	115			
Lead			0.523	mg/L	0.0010	104	85	115			
Zinc			0.511	mg/L	0.0010	102	85	115			
Lab ID:	**B15011804-001CMS3**	5	Sample Matrix Spike				Run: SUB-B237525			01/30/15 16:48	
Arsenic			0.579	mg/L	0.0010	115	70	130			
Cadmium			0.260	mg/L	0.0010	104	70	130			
Copper			0.574	mg/L	0.0050	114	70	130			
Lead			0.509	mg/L	0.0010	101	70	130			
Zinc			0.559	mg/L	0.010	108	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Batch: B_86597	
Lab ID:	**B15011804-001CMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 16:52	
Arsenic			0.604	mg/L	0.0010	120	70	130	4.2	20	
Cadmium			0.257	mg/L	0.0010	103	70	130	1.2	20	
Copper			0.613	mg/L	0.0050	122	70	130	6.6	20	
Lead			0.506	mg/L	0.0010	100	70	130	0.7	20	
Zinc			0.621	mg/L	0.010	120	70	130	11	20	
Lab ID:	**H15010184-010A**	5	Sample Matrix Spike				Run: SUB-B237525			01/30/15 18:04	
Arsenic			0.523	mg/L	0.0010	104	70	130			
Cadmium			0.262	mg/L	0.0010	105	70	130			
Copper			0.560	mg/L	0.0050	110	70	130			
Lead			0.514	mg/L	0.0010	102	70	130			
Zinc			0.527	mg/L	0.010	105	70	130			
Lab ID:	**H15010184-010A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 18:08	
Arsenic			0.518	mg/L	0.0010	103	70	130	0.9	20	
Cadmium			0.258	mg/L	0.0010	103	70	130	1.7	20	
Copper			0.548	mg/L	0.0050	108	70	130	2.0	20	
Lead			0.505	mg/L	0.0010	101	70	130	1.8	20	
Zinc			0.534	mg/L	0.010	106	70	130	1.4	20	
Method:	**E200.8**									Batch: B_86600	
Lab ID:	**MB-86600**	5	Method Blank				Run: SUB-B237525			01/30/15 20:43	
Arsenic			0.0002	mg/L	7E-05						
Cadmium			ND	mg/L	2E-05						
Copper			0.001	mg/L	0.0009						
Lead			0.0003	mg/L	3E-05						
Zinc			0.0008	mg/L	0.0004						
Lab ID:	**LCS-86600**	5	Laboratory Control Sample				Run: SUB-B237525			01/30/15 20:48	
Arsenic			0.507	mg/L	0.0010	101	85	115			
Cadmium			0.257	mg/L	0.0010	103	85	115			
Copper			0.528	mg/L	0.0010	105	85	115			
Lead			0.501	mg/L	0.0010	100	85	115			
Zinc			0.515	mg/L	0.0010	103	85	115			
Lab ID:	**H15010184-080A**	5	Sample Matrix Spike				Run: SUB-B237525			01/30/15 21:01	
Arsenic			0.498	mg/L	0.0010	99	70	130			
Cadmium			0.259	mg/L	0.0010	103	70	130			
Copper			0.516	mg/L	0.0050	102	70	130			
Lead			0.505	mg/L	0.0010	101	70	130			
Zinc			0.504	mg/L	0.010	100	70	130			
Lab ID:	**H15010184-080A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 21:05	
Arsenic			0.501	mg/L	0.0010	100	70	130	0.8	20	
Cadmium			0.261	mg/L	0.0010	104	70	130	0.7	20	
Copper			0.542	mg/L	0.0050	107	70	130	4.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8										Batch: B_86600
Lab ID: H15010184-080A	5	Sample Matrix Spike Duplicate				Run: SUB-B237525			01/30/15 21:05	
Lead		0.500	mg/L	0.0010	100	70	130	1.0	20	
Zinc		0.532	mg/L	0.010	106	70	130	5.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Analytical Run: SUB-B237664	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/02/15 15:34	
Arsenic			0.0499	mg/L	0.0050	100	90	110			
Cadmium			0.0257	mg/L	0.0010	103	90	110			
Copper			0.0514	mg/L	0.010	103	90	110			
Lead			0.0492	mg/L	0.010	98	90	110			
Zinc			0.0513	mg/L	0.010	103	90	110			
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/02/15 19:32	
Arsenic			0.0502	mg/L	0.0050	100	90	110			
Cadmium			0.0257	mg/L	0.0010	103	90	110			
Copper			0.0521	mg/L	0.010	104	90	110			
Lead			0.0492	mg/L	0.010	99	90	110			
Zinc			0.0518	mg/L	0.010	104	90	110			
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/03/15 01:28	
Arsenic			0.0502	mg/L	0.0050	100	90	110			
Cadmium			0.0259	mg/L	0.0010	103	90	110			
Copper			0.0518	mg/L	0.010	104	90	110			
Lead			0.0508	mg/L	0.010	102	90	110			
Zinc			0.0531	mg/L	0.010	106	90	110			
Method:	**E200.8**									Batch: B_86594	
Lab ID:	**MB-86594**	5	Method Blank				Run: SUB-B237664			02/02/15 15:00	
Arsenic			ND	mg/L	7E-05						
Cadmium			ND	mg/L	1.0E-05						
Copper			0.0003	mg/L	6E-05						
Lead			ND	mg/L	4E-05						
Zinc			0.0008	mg/L	0.0003						
Lab ID:	**LCS-86594**	5	Laboratory Control Sample				Run: SUB-B237664			02/02/15 15:02	
Arsenic			0.508	mg/L	0.0010	102	85	115			
Cadmium			0.259	mg/L	0.0010	103	85	115			
Copper			0.494	mg/L	0.0010	99	85	115			
Lead			0.501	mg/L	0.0010	100	85	115			
Zinc			0.494	mg/L	0.0010	99	85	115			
Lab ID:	**H15010184-060A**	5	Sample Matrix Spike				Run: SUB-B237664			02/02/15 15:50	
Arsenic			0.493	mg/L	0.0010	99	70	130			
Cadmium			0.249	mg/L	0.0010	100	70	130			
Copper			0.489	mg/L	0.0050	97	70	130			
Lead			0.475	mg/L	0.0010	95	70	130			
Zinc			0.485	mg/L	0.010	96	70	130			
Lab ID:	**H15010184-060A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237664			02/02/15 15:53	
Arsenic			0.486	mg/L	0.0010	97	70	130	1.5	20	
Cadmium			0.251	mg/L	0.0010	101	70	130	1.0	20	
Copper			0.482	mg/L	0.0050	96	70	130	1.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Batch: B_86594	
Lab ID:	**H15010184-060A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237664			02/02/15 15:53	
Lead			0.485	mg/L	0.0010	97	70	130	2.1	20	
Zinc			0.481	mg/L	0.010	96	70	130	0.8	20	
Lab ID:	**H15010184-070A**	5	Sample Matrix Spike				Run: SUB-B237664			02/02/15 16:33	
Arsenic			0.491	mg/L	0.0010	98	70	130			
Cadmium			0.254	mg/L	0.0010	102	70	130			
Copper			0.486	mg/L	0.0050	97	70	130			
Lead			0.485	mg/L	0.0010	97	70	130			
Zinc			0.480	mg/L	0.010	96	70	130			
Lab ID:	**H15010184-070A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237664			02/02/15 16:35	
Arsenic			0.510	mg/L	0.0010	102	70	130	3.7	20	
Cadmium			0.256	mg/L	0.0010	102	70	130	0.8	20	
Copper			0.499	mg/L	0.0050	100	70	130	2.5	20	
Lead			0.500	mg/L	0.0010	100	70	130	3.1	20	
Zinc			0.501	mg/L	0.010	100	70	130	4.3	20	
Method:	**E200.8**									Batch: B_86595	
Lab ID:	**MB-86595**	5	Method Blank				Run: SUB-B237664			02/02/15 17:15	
Arsenic			ND	mg/L	7E-05						
Cadmium			ND	mg/L	1.0E-05						
Copper			0.0002	mg/L	6E-05						
Lead			ND	mg/L	4E-05						
Zinc			0.0008	mg/L	0.0003						
Lab ID:	**LCS-86595**	5	Laboratory Control Sample				Run: SUB-B237664			02/02/15 17:18	
Arsenic			0.498	mg/L	0.0010	100	85	115			
Cadmium			0.257	mg/L	0.0010	103	85	115			
Copper			0.480	mg/L	0.0010	96	85	115			
Lead			0.478	mg/L	0.0010	96	85	115			
Zinc			0.478	mg/L	0.0010	95	85	115			
Lab ID:	**H15010184-020A**	5	Sample Matrix Spike				Run: SUB-B237664			02/02/15 17:34	
Arsenic			0.500	mg/L	0.0010	100	70	130			
Cadmium			0.258	mg/L	0.0010	97	70	130			
Copper			0.494	mg/L	0.0050	99	70	130			
Lead			0.482	mg/L	0.0010	96	70	130			
Zinc			0.488	mg/L	0.010	98	70	130			
Lab ID:	**H15010184-020A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237664			02/02/15 17:36	
Arsenic			0.500	mg/L	0.0010	100	70	130	0.0	20	
Cadmium			0.239	mg/L	0.0010	90	70	130	7.7	20	
Copper			0.497	mg/L	0.0050	99	70	130	0.7	20	
Lead			0.488	mg/L	0.0010	98	70	130	1.4	20	
Zinc			0.477	mg/L	0.010	95	70	130	2.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Batch: B_86595	
Lab ID:	**H15010184-030A**	5	Sample Matrix Spike				Run: SUB-B237664			02/02/15 18:11	
Arsenic			0.494	mg/L	0.0010	99	70	130			
Cadmium			0.256	mg/L	0.0010	102	70	130			
Copper			0.481	mg/L	0.0050	96	70	130			
Lead			0.479	mg/L	0.0010	96	70	130			
Zinc			0.475	mg/L	0.010	95	70	130			
Lab ID:	**H15010184-030A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237664			02/02/15 18:13	
Arsenic			0.507	mg/L	0.0010	101	70	130	2.6	20	
Cadmium			0.261	mg/L	0.0010	104	70	130	1.7	20	
Copper			0.489	mg/L	0.0050	98	70	130	1.6	20	
Lead			0.479	mg/L	0.0010	96	70	130	0.0	20	
Zinc			0.485	mg/L	0.010	97	70	130	2.0	20	
Method:	**E200.8**									Batch: B_86596	
Lab ID:	**MB-86596**	5	Method Blank				Run: SUB-B237664			02/02/15 20:24	
Arsenic			ND	mg/L	7E-05						
Cadmium			3E-05	mg/L	1.0E-05						
Copper			0.0003	mg/L	6E-05						
Lead			9E-05	mg/L	4E-05						
Zinc			0.0008	mg/L	0.0003						
Lab ID:	**LCS-86596**	5	Laboratory Control Sample				Run: SUB-B237664			02/02/15 20:27	
Arsenic			0.505	mg/L	0.0010	101	85	115			
Cadmium			0.255	mg/L	0.0010	102	85	115			
Copper			0.507	mg/L	0.0010	101	85	115			
Lead			0.488	mg/L	0.0010	98	85	115			
Zinc			0.501	mg/L	0.0010	100	85	115			
Lab ID:	**H15010184-040A**	5	Sample Matrix Spike				Run: SUB-B237664			02/02/15 20:35	
Arsenic			0.497	mg/L	0.0010	99	70	130			
Cadmium			0.258	mg/L	0.0010	103	70	130			
Copper			0.512	mg/L	0.0050	102	70	130			
Lead			0.493	mg/L	0.0010	99	70	130			
Zinc			0.514	mg/L	0.010	102	70	130			
Lab ID:	**H15010184-040A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237664			02/02/15 20:37	
Arsenic			0.494	mg/L	0.0010	99	70	130	0.6	20	
Cadmium			0.256	mg/L	0.0010	103	70	130	0.6	20	
Copper			0.510	mg/L	0.0050	102	70	130	0.3	20	
Lead			0.491	mg/L	0.0010	98	70	130	0.5	20	
Zinc			0.520	mg/L	0.010	103	70	130	1.1	20	
Lab ID:	**H15010184-050A**	5	Sample Matrix Spike				Run: SUB-B237664			02/02/15 21:09	
Arsenic			0.508	mg/L	0.0010	102	70	130			
Cadmium			0.268	mg/L	0.0010	107	70	130			
Copper			0.503	mg/L	0.0050	100	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Batch: B_86596	
Lab ID:	**H15010184-050A**	5	Sample Matrix Spike				Run: SUB-B237664			02/02/15 21:09	
Lead			0.487	mg/L	0.0010	97	70	130			
Zinc			0.500	mg/L	0.010	100	70	130			
Lab ID:	**H15010184-050A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237664			02/02/15 21:11	
Arsenic			0.500	mg/L	0.0010	100	70	130	1.6	20	
Cadmium			0.265	mg/L	0.0010	106	70	130	1.1	20	
Copper			0.490	mg/L	0.0050	98	70	130	2.6	20	
Lead			0.491	mg/L	0.0010	98	70	130	0.8	20	
Zinc			0.493	mg/L	0.010	98	70	130	1.5	20	
Method:	**E200.8**									Batch: B_86597	
Lab ID:	**MB-86597**	5	Method Blank				Run: SUB-B237664			02/02/15 21:51	
Arsenic			ND	mg/L	7E-05						
Cadmium			3E-05	mg/L	1.0E-05						
Copper			0.0002	mg/L	6E-05						
Lead			ND	mg/L	4E-05						
Zinc			0.001	mg/L	0.0003						
Lab ID:	**LCS-86597**	5	Laboratory Control Sample				Run: SUB-B237664			02/02/15 21:54	
Arsenic			0.504	mg/L	0.0010	101	85	115			
Cadmium			0.266	mg/L	0.0010	106	85	115			
Copper			0.492	mg/L	0.0010	98	85	115			
Lead			0.493	mg/L	0.0010	99	85	115			
Zinc			0.499	mg/L	0.0010	99	85	115			
Lab ID:	**B15011804-001CMS3**	5	Sample Matrix Spike				Run: SUB-B237664			02/02/15 22:10	
Arsenic			0.490	mg/L	0.0010	98	70	130			
Cadmium			0.260	mg/L	0.0010	104	70	130			
Copper			0.496	mg/L	0.0050	98	70	130			
Lead			0.499	mg/L	0.0010	100	70	130			
Zinc			0.504	mg/L	0.010	97	70	130			
Lab ID:	**B15011804-001CMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B237664			02/02/15 22:12	
Arsenic			0.480	mg/L	0.0010	96	70	130	2.0	20	
Cadmium			0.252	mg/L	0.0010	101	70	130	3.3	20	
Copper			0.484	mg/L	0.0050	96	70	130	2.6	20	
Lead			0.489	mg/L	0.0010	97	70	130	2.2	20	
Zinc			0.490	mg/L	0.010	95	70	130	2.8	20	
Lab ID:	**H15010184-010A**	5	Sample Matrix Spike				Run: SUB-B237664			02/02/15 22:52	
Arsenic			0.502	mg/L	0.0010	100	70	130			
Cadmium			0.266	mg/L	0.0010	106	70	130			
Copper			0.515	mg/L	0.0050	102	70	130			
Lead			0.493	mg/L	0.0010	98	70	130			
Zinc			0.494	mg/L	0.010	98	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/03/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010184

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Batch: B_86597	
Lab ID:	**H15010184-010A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237664			02/02/15 22:55	
Arsenic			0.498	mg/L	0.0010	99	70	130	0.8	20	
Cadmium			0.260	mg/L	0.0010	104	70	130	2.2	20	
Copper			0.498	mg/L	0.0050	98	70	130	3.4	20	
Lead			0.487	mg/L	0.0010	97	70	130	1.4	20	
Zinc			0.494	mg/L	0.010	98	70	130	0.0	20	
Method:	**E200.8**									Batch: B_86600	
Lab ID:	**MB-86600**	5	Method Blank				Run: SUB-B237664			02/02/15 23:00	
Arsenic			ND	mg/L	7E-05						
Cadmium			3E-05	mg/L	1.0E-05						
Copper			0.0002	mg/L	6E-05						
Lead			9E-05	mg/L	4E-05						
Zinc			0.0009	mg/L	0.0003						
Lab ID:	**LCS-86600**	5	Laboratory Control Sample				Run: SUB-B237664			02/02/15 23:03	
Arsenic			0.487	mg/L	0.0010	97	85	115			
Cadmium			0.248	mg/L	0.0010	99	85	115			
Copper			0.483	mg/L	0.0010	96	85	115			
Lead			0.467	mg/L	0.0010	93	85	115			
Zinc			0.483	mg/L	0.0010	96	85	115			
Lab ID:	**H15010184-080A**	5	Sample Matrix Spike				Run: SUB-B237664			02/02/15 23:18	
Arsenic			0.491	mg/L	0.0010	98	70	130			
Cadmium			0.267	mg/L	0.0010	107	70	130			
Copper			0.502	mg/L	0.0050	99	70	130			
Lead			0.486	mg/L	0.0010	97	70	130			
Zinc			0.502	mg/L	0.010	100	70	130			
Lab ID:	**H15010184-080A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237664			02/02/15 23:21	
Arsenic			0.488	mg/L	0.0010	97	70	130	0.7	20	
Cadmium			0.255	mg/L	0.0010	102	70	130	4.7	20	
Copper			0.498	mg/L	0.0050	99	70	130	0.7	20	
Lead			0.482	mg/L	0.0010	96	70	130	0.6	20	
Zinc			0.492	mg/L	0.010	98	70	130	1.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H15010184

Login completed by: Tracy L. Lorash
Date Received: 1/14/2015
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 1/19/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Samples were received frozen.
Sample ID on COC is FB45-120114 -ID on unpreserved bottle is FB45-12114. Logged in with ID from COC.
Sample ID on COC is FB51-120314 -ID on bottles is FB51120414. Logged in with ID from COC.
Sample ID on COC contains a dash between identifier and date - ID on samples 10-15 does not. Logged in with ID from COC.
Sample ID on COC contains a dash between identifier and date - ID on samples 26-33 contains a dash between letters and identifying numbers. Logged in with ID from COC.
Collection time on COC for FB62-121014 is 10:15 - time on bottles is 12:45. Logged in with time from COC.
Collection time on COC for FB91-010515 is 15:11 - time on metals bottle is 1512. Logged in with time from COC.
Cooler 1 was received at -4.5°C, Cooler 2 at -1.3°C, Cooler 3 at -1.7°C. Samples were received on wet ice.
FB65-121114 and CCB26-121014 metals samples were preserved with 2 mL nitric acid upon receipt to pH <2 in the laboratory. In accordance with the Clean Water Act, these samples must be held for 24 hours prior to analysis. Tl

Workorder Receipt Checklist - Continued

MT DEQ-Federal Superfund H15010184

1/16/15

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15010184

SAMPLE ID C1	DATE	TIME	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
FB44-120114	12/1/14	1155	Water	A	B		A = HNO3, B = Ice
FB45-120114	12/1/14	1445	Water	A	B		A = HNO3, B = Ice
~~FB46-120114~~	121/14	1610	Water	A	B		A = HNO3, B = Ice
CCB19-120114	12/1/14	1615	Water	A	B		A = HNO3, B = Ice
FB47-120214	12/2/14	940	Water	A	B		A = HNO3, B = Ice
~~FB48-120214~~	12/2/14	1220	Water	A	B		A = HNO3, B = Ice
FB49-120214	12/2/14	1610	Water	A	B		A = HNO3, B = Ice
FB50-120314	12/3/14	925	Water	A	B		A = HNO3, B = Ice
FB51-120314	12/3/14	1240	Water	A	B		A = HNO3, B = Ice
CCB20-120314	12/3/14	1245	Water	A	B		A = HNO3, B = Ice
FB51-120414	12/4/14	910	Water	A	B		A = HNO3, B = Ice
CCB21-120414	12/4/14	1145	Water	A	B		A = HNO3, B = Ice
FB52-120414	12/4/14	1500	Water	A	B		A = HNO3, B = Ice
CCB22-120414	12/4/14	1600	Water	A	B		A = HNO3, B = Ice
FB53-120414	12/4/14	1600	Water	A	B		A = HNO3, B = Ice
FB54-120514	12/5/14	930	Water	A	B		A = HNO3, B = Ice
CCB23-120514	12/5/14	1156	Water	A	B		A = HNO3, B = Ice
FB55-120814	12/8/14	1025	Water	A	B		A = HNO3, B = Ice
FB56-120814	12/8/14	1320	Water	A	B		A = HNO3, B = Ice
FB57-120814	12/8/14	1620	Water	A	B		A = HNO3, B = Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1/14/15 1210

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

and Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 = 4.5 TB on ice
C2 = -1.3
C3 = -1.7
hand del

Date/Time: 1/14/15 12:10

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15010184

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
CCB24-120814 (C1)	1625	12/08/14	Water	A	B		A = HNO3, B = Ice
FB58-120914	1040	12/9/14	Water	A	B		A = HNO3, B = Ice
FB59-120814	1340	12/9/14	Water	A	B		A = HNO3, B = Ice
FB60-120914	1620	12/9/14	Water	A	B		A = HNO3, B = Ice
CCB25-120914	1625	12/9/14	Water	A	B		A = HNO3, B = Ice
CCB26-121014	920	12/10/14	Water	A	B		A = HNO3, B = Ice
FB61-121014	915	12/10/14	Water	A	B		A = HNO3, B = Ice
FB62-121014	1015	12/10/14	Water	A	B		A = HNO3, B = Ice
CCB27-121014	1620	12/10/14	Water	A	B		A = HNO3, B = Ice
FB63-121014	1625	12/10/14	Water	A	B		A = HNO3, B = Ice
FB64-121114	1005	12/11/14	Water	A	B		A = HNO3, B = Ice
FB65-121114	1325	12/11/14	Water	A	B		A = HNO3, B = Ice
CCB28-121114 (C2)	1330	12/11/14	Water	A	B		A = HNO3, B = Ice
FB66-121114	1610	12/11/14	Water	A	B		A = HNO3, B = Ice
CCB29-121114	1612	12/11/14	Water	A	B		A = HNO3, B = Ice
FB67-121514	1055	12/15/14	Water	A	B		A = HNO3, B = Ice
FB68-121514	1405	12/15/14	Water	A	B		A = HNO3, B = Ice
FB69-121514	1630	12/15/14	Water	A	B		A = HNO3, B = Ice
CCB30-121514	1635	12/15/14	Water	A	B		A = HNO3, B = Ice
FB70-121614	1145	12/16/14	Water	A	B		A = HNO3, B = Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1210 1/14/15

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 -4.5
C2 -1.3 > TB on ice
C3 -1.7
hand del

Date/Time: 1/14/15 12:10

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15010184

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
FB71-121614	1640	12/16/14	Water	A	B		A = HNO3, B = Ice
FB72-121614	1645	12/16/14	Water	A	B		A = HNO3, B = Ice
CCB31-121614	1650	12/16/14	Water	A	B		A = HNO3, B = Ice
FB73-121714	1001	12/17/14	Water	A	B		A = HNO3, B = Ice
FB74-121714	1206	12/17/14	Water	A	B		A = HNO3, B = Ice
FB75-121714	1505	12/17/14	Water	A	B		A = HNO3, B = Ice
FB76-121714	1650	12/17/14	Water	A	B		A = HNO3, B = Ice
CCB32-121714	1655	12/17/14	Water	A	B		A = HNO3, B = Ice
FB77-121814	1220	12/18/14	Water	A	B		A = HNO3, B = Ice
FB78-121814	1230	12/18/14	Water	A	B		A = HNO3, B = Ice
FB79-121814	1645	12/18/14	Water	A	B		A = HNO3, B = Ice
CCB33-121814	1650	12/18/14	Water	A	B		A = HNO3, B = Ice
FB80-122214	1005	12/22/14	Water	A	B		A = HNO3, B = Ice
FB81-122214	1150	12/22/14	Water	A	B		A = HNO3, B = Ice
FB82-122214	1425	12/22/14	Water	A	B		A = HNO3, B = Ice
FB83-122214	1655	12/22/14	Water	A	B		A = HNO3, B = Ice
CCB34-122214	1700	12/22/14	Water	A	B		A = HNO3, B = Ice
FB84-122314	950	12/23/14	Water	A	B		A = HNO3, B = Ice
FB85-122314	1150	12/23/14	Water	A	B		A = HNO3, B = Ice
FB86-122314	1340	12/23/14	Water	A	B		A = HNO3, B = Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1/14/15 1210

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 -4.5
C2 -1.3 } TB on ice
C3 -1.7
handled

Date/Time: 1/14/15 12:10

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15010184

SAMPLE ID C3	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
FB87-122314	1620	12/23/14	Water	A	B		A = HNO3, B = Ice
CCB35-122314	1625	12/23/14	Water	A	B		A = HNO3, B = Ice
FB88-122414	1025	12/24/14	Water	A	B		A = HNO3, B = Ice
FB89-122414	1140	12/24/14	Water	A	B		A = HNO3, B = Ice
CCB36-122414	1145	12/24/14	Water	A	B		A = HNO3, B = Ice
FB90-010515	1200	1/5/15	Water	A	B		A = HNO3, B = Ice
FB91-010515	1511	1/5/15	Water	A	B		A = HNO3, B = Ice
FB92-010515	1655	1/5/15	Water	A	B		A = HNO3, B = Ice
FB93-010615	1110	1/6/15	Water	A	B		A = HNO3, B = Ice
FB94-010615	1420	1/6/15	Water	A	B		A = HNO3, B = Ice
CCB38-010615	1425	1/6/15	Water	A	B		A = HNO3, B = Ice
FB95-010715	1015	1/7/15	Water	A	B		A = HNO3, B = Ice
FB96-010715	1245	1/7/15	Water	A	B		A = HNO3, B = Ice
FB97-010715	1605	1/7/15	Water	A	B		A = HNO3, B = Ice
CCB39-010715	1645	1/7/15	Water	A	B		A = HNO3, B = Ice
FB98-010815	1020	1/8/15	Water	A	B		A = HNO3, B = Ice
FB99-010815	1205	1/8/15	Water	A	B		A = HNO3, B = Ice
FB100-010815	1525	1/8/15	Water	A	B		A = HNO3, B = Ice
CCB40-010815	1630	1/8/15	Water	A	B		A = HNO3, B = Ice
FB101-010915	1045	1/9/15	Water	A	B		A = HNO3, B = Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1210 1/14/15

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = -4.5
C2 = 7.3
C3 = -1.7
TB on ice

Date/Time: 1/14/15 12:10 handdel

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15010184

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
CCB41-010915	1130	1/9/15	Water	A	B		A = HNO3, B = Ice
CCB37-010515 C3	1650	1/5/15	Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice
			Water	A	B		A = HNO3, B = Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) Erin M Ford	(1)	(2)	(2)
Date/Time: 1/14/15 1210	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	C1=4.5 C2=-1.3 C3=-1.7 hand del	TB on ice 1/14/15 12:10

COC 120114-010915 CCB-FB.xls

ANALYTICAL SUMMARY REPORT

February 05, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010160

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 31 samples for MT DEQ-Federal Superfund on 1/14/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010160-001	3-331-0612	11/20/14 11:31	01/14/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010160-002	3-329w-1218	11/19/14 8:00	01/14/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010160-003	3-329w-1218d	11/19/14 8:01	01/14/15	Soil	Same As Above
H15010160-004	3-370-3642	11/19/14 10:21	01/14/15	Soil	Same As Above
H15010160-005	3-370-4248	11/19/14 10:20	01/14/15	Soil	Same As Above
H15010160-006	3-370n-0006	11/19/14 12:30	01/14/15	Soil	Same As Above
H15010160-007	3-371-4854	11/19/14 11:05	01/14/15	Soil	Same As Above
H15010160-008	3-372-4248	11/19/14 11:20	01/14/15	Soil	Same As Above
H15010160-009	3-037-4248	11/25/14 10:05	01/14/15	Soil	Same As Above
H15010160-010	3-040-2430	11/26/14 11:23	01/14/15	Soil	Same As Above
H15010160-011	3-040-3036	11/26/14 11:22	01/14/15	Soil	Same As Above
H15010160-012	3-053-5460	11/26/14 12:54	01/14/15	Soil	Same As Above
H15010160-013	3-059-3642	11/26/14 14:46	01/14/15	Soil	Same As Above
H15010160-014	3-059-4248	11/26/14 14:45	01/14/15	Soil	Same As Above
H15010160-015	3-068-2430	11/26/14 15:01	01/14/15	Soil	Same As Above
H15010160-016	3-068-3036	11/26/14 15:00	01/14/15	Soil	Same As Above
H15010160-017	3-005-3642	11/24/14 10:51	01/14/15	Soil	Same As Above
H15010160-018	3-049-4248	12/01/14 10:45	01/14/15	Soil	Same As Above
H15010160-019	3-058-4248	12/02/14 8:45	01/14/15	Soil	Same As Above
H15010160-020	3-058-4854	12/02/14 9:17	01/14/15	Soil	Same As Above
H15010160-021	3-084-3642	12/02/14 11:16	01/14/15	Soil	Same As Above
H15010160-022	3-084-4248	12/02/14 11:15	01/14/15	Soil	Same As Above
H15010160-023	3-103-4248	12/02/14 14:30	01/14/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010160-024	3-136S-0006	12/08/14 13:28	01/14/15	Soil	Same As Above
H15010160-025	3-136S-0612	12/08/14 13:27	01/14/15	Soil	Same As Above
H15010160-026	3-113-4854	12/04/14 15:20	01/14/15	Soil	Same As Above
H15010160-027	3-150-6672	12/04/14 10:30	01/14/15	Soil	Same As Above
H15010160-028	3-170-2430	12/04/14 9:43	01/14/15	Soil	Same As Above
H15010160-029	3-170-3036	12/04/14 9:42	01/14/15	Soil	Same As Above
H15010160-030	3-170-3642	12/04/14 9:41	01/14/15	Soil	Same As Above
H15010160-031	3-184-4248	12/04/14 10:10	01/14/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010160

Report Date: 02/05/15
Date Received: 01/14/15

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010160-001	3-331-0612	0	0	7.5	1530	10	10300	1210	3170
H15010160-002	3-329w-1218	0	0	7.4	158	27	7230	80	4650
H15010160-003	3-329w-1218d	0	0	7.5	36	11	1400	26	2430
H15010160-004	3-370-3642	0	0	7.4	22	< 1	78	19	233
H15010160-005	3-370-4248	0	0	7.4	14	< 1	50	15	132
H15010160-006	3-370n-0006	0	0	7.6	760	11	6110	693	3100
H15010160-007	3-371-4854	0	0	4.2	17	< 1	49	14	173
H15010160-008	3-372-4248	0	0	7.3	21	< 1	1360	14	411
H15010160-009	3-037-4248	0	0	7.0	6	< 1	1900	10	323
H15010160-010	3-040-2430	0	0	7.1	9	< 1	3340	13	338
H15010160-011	3-040-3036	0	0	7.4	28	1	2970	15	411
H15010160-012	3-053-5460	0	0	7.2	4	< 1	3000	14	427
H15010160-013	3-059-3642	0	0	7.4	5	< 1	868	10	100
H15010160-014	3-059-4248	0	0	7.3	30	< 1	1320	33	208
H15010160-015	3-068-2430	0	0	7.3	11	< 1	2400	13	281
H15010160-016	3-068-3036	0	0	7.3	14	< 1	3880	9	332
H15010160-017	3-005-3642	0	0	7.2	7	< 1	183	16	405
H15010160-018	3-049-4248	0	0	7.2	102	4	690	101	1150
H15010160-019	3-058-4248	0	0	7.1	7	< 1	109	12	265
H15010160-020	3-058-4854	0	0	5.8	4	< 1	64	10	156
H15010160-021	3-084-3642	0	0	7.4	10	< 1	544	12	184
H15010160-022	3-084-4248	0	0	7.8	13	< 1	80	12	63
H15010160-023	3-103-4248	0	0	7.4	5	< 1	1110	11	111
H15010160-024	3-136S-0006	0	0	7.7	590	16	4210	607	3760
H15010160-025	3-136S-0612	0	0	7.6	19	< 1	82	15	86
H15010160-026	3-113-4854	0	0	7.5	13	1	1420	33	382
H15010160-027	3-150-6672	0	0	7.3	70	1	3390	61	455
H15010160-028	3-170-2430	0	0	6.9	7	29	27100	14	6100
H15010160-029	3-170-3036	0	0	6.5	4	< 1	113	9	478
H15010160-030	3-170-3642	0	0	6.2	7	< 1	46	12	125
H15010160-031	3-184-4248	0	0	7.2	9	1	1500	16	198

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010160

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150128A	
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 09:25
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 09:51
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 10:13
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 10:40
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150126_1		Continuing Calibration Verification Standard								01/27/15 11:07
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150126_1		Continuing Calibration Verification Standard								01/27/15 11:07
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 11:08
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150126_1		Continuing Calibration Verification Standard								01/27/15 11:16
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150126_1		Continuing Calibration Verification Standard								01/27/15 11:28
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150126_1		Continuing Calibration Verification Standard								01/27/15 11:28
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 11:29
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150126_1		Continuing Calibration Verification Standard								01/27/15 11:39
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150126_1		Continuing Calibration Verification Standard								01/27/15 11:48
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150127_1		Initial Calibration Verification Standard								01/28/15 07:05
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 08:49
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 06:52
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150127_1		Initial Calibration Verification Standard								01/28/15 06:49
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010160

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27807
Lab ID: LCS-27807		Laboratory Control Sample				Run: SOIL PH METER_150128A				01/27/15 11:09
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H15010160-010ADUP		Sample Duplicate				Run: SOIL PH METER_150128A				01/27/15 11:23
pH, sat. paste		7.14	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27808
Lab ID: LCS-27808		Laboratory Control Sample				Run: SOIL PH METER_150128A				01/27/15 11:29
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15010160-020ADUP		Sample Duplicate				Run: SOIL PH METER_150128A				01/27/15 11:39
pH, sat. paste		5.84	s.u.	0.10				0.2	30	
Lab ID: H15010160-030ADUP		Sample Duplicate				Run: SOIL PH METER_150128A				01/27/15 11:48
pH, sat. paste		6.20	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010160

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150123A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/23/15 09:38
Arsenic			0.804	mg/L	0.0085	101	90	110			
Cadmium			0.385	mg/L	0.0010	96	90	110			
Copper			0.790	mg/L	0.010	99	90	110			
Lead			0.766	mg/L	0.010	96	90	110			
Zinc			0.787	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/23/15 09:53
Arsenic			0.0105	mg/L	0.0085		0	0			
Cadmium			0.000150	mg/L	0.0010		0	0			
Copper			-0.00314	mg/L	0.010		0	0			
Lead			-0.0190	mg/L	0.010		0	0			
Zinc			-0.00123	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/23/15 09:57
Arsenic			0.966	mg/L	0.0085	97	80	120			
Cadmium			0.879	mg/L	0.0010	88	80	120			
Copper			0.492	mg/L	0.010	98	80	120			
Lead			0.869	mg/L	0.010	87	80	120			
Zinc			0.957	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/23/15 13:55
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/23/15 13:58
Arsenic			0.00209	mg/L	0.0085						
Cadmium			0.000920	mg/L	0.0010						
Copper			0.00528	mg/L	0.010						
Lead			0.0174	mg/L	0.010						
Zinc			-0.000300	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/23/15 18:45
Arsenic			2.38	mg/L	0.0085	95	90	110			
Cadmium			2.34	mg/L	0.0010	94	90	110			
Copper			2.46	mg/L	0.010	98	90	110			
Lead			2.35	mg/L	0.010	94	90	110			
Zinc			2.37	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/23/15 18:49
Arsenic			-0.0134	mg/L	0.0085						
Cadmium			-9.00E-05	mg/L	0.0010						
Copper			-0.00178	mg/L	0.010						
Lead			-0.00719	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010160

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150123A	
Lab ID: CCB	5	Continuing Calibration Blank							01/23/15 18:49	
Zinc		-0.000890	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010160

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS204-B_150203A	
Lab ID: CCV	3	Continuing Calibration Verification Standard							02/03/15 08:51	
Arsenic		0.0486	mg/L	0.0050	97	90	110			
Cadmium		0.0495	mg/L	0.0010	99	90	110			
Lead		0.0492	mg/L	0.010	98	90	110			
Lab ID: CCB	3	Continuing Calibration Blank							02/03/15 09:00	
Arsenic		-1.13E-05	mg/L	0.0050						
Cadmium		-1.70E-06	mg/L	0.0010						
Lead		1.40E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010160

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27763
Lab ID:	**MB-27763**	5	Method Blank				Run: ICP2-HE_150123A			01/23/15 14:20	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			0.8	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27763**	5	Laboratory Fortified Blank				Run: ICP2-HE_150123A			01/23/15 14:24	
Arsenic			49.3	mg/kg	1.0	99	80	120			
Cadmium			24.3	mg/kg	1.0	97	80	120			
Copper			49.8	mg/kg	1.0	99	80	120			
Lead			48.0	mg/kg	1.0	94	80	120			
Zinc			50.1	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-27763**	5	Laboratory Control Sample				Run: ICP2-HE_150123A			01/23/15 14:28	
Arsenic			280	mg/kg	1.8	81	72.3	106.4			
Cadmium			119	mg/kg	1.0	86	73	105.1			
Copper			246	mg/kg	1.1	87	77.5	109.6			
Lead			177	mg/kg	3.2	93	75.9	108.6			
Zinc			190	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H15010160-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150123A			01/23/15 15:59	
Arsenic			150	mg/kg	1.8	96	75	125			
Cadmium			27.8	mg/kg	1.0	94	75	125			
Copper			738	mg/kg	1.1		75	125			A
Lead			145	mg/kg	3.2	89	75	125			
Zinc			1230	mg/kg	1.0		75	125			A
Lab ID:	**H15010160-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150123A			01/23/15 16:03	
Arsenic			147	mg/kg	1.8	91	75	125	1.9	20	
Cadmium			27.2	mg/kg	1.0	92	75	125	2.1	20	
Copper			743	mg/kg	1.1		75	125	0.7	20	A
Lead			145	mg/kg	3.2	87	75	125	0.6	20	
Zinc			1220	mg/kg	1.0		75	125	0.5	20	A
Method:	**SW6010B**										Batch: 27764
Lab ID:	**MB-27764**	5	Method Blank				Run: ICP2-HE_150123A			01/23/15 16:14	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.03	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			0.8	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27764**	5	Laboratory Fortified Blank				Run: ICP2-HE_150123A			01/23/15 16:18	
Arsenic			47.2	mg/kg	1.0	94	80	120			
Cadmium			23.4	mg/kg	1.0	93	80	120			
Copper			48.4	mg/kg	1.0	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010160

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27764
Lab ID:	**LFB-27764**	5	Laboratory Fortified Blank				Run: ICP2-HE_150123A			01/23/15 16:18	
Lead			48.5	mg/kg	1.0	95	80	120			
Zinc			47.8	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27764**	5	Laboratory Control Sample				Run: ICP2-HE_150123A			01/23/15 16:21	
Arsenic			290	mg/kg	1.8	85	72.3	106.4			
Cadmium			123	mg/kg	1.0	90	73	105.1			
Copper			267	mg/kg	1.1	96	77.5	109.6			
Lead			187	mg/kg	3.2	100	75.9	108.6			
Zinc			196	mg/kg	1.0	93	74.2	109.9			
Lab ID:	**H15010111-017AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150123A			01/23/15 16:36	
Arsenic			2090	mg/kg	1.8		75	125			A
Cadmium			33.7	mg/kg	1.0	91	75	125			
Copper			3390	mg/kg	1.1		75	125			A
Lead			460	mg/kg	3.2		75	125			A
Zinc			4550	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-017AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150123A			01/23/15 16:39	
Arsenic			2150	mg/kg	1.8		75	125	2.8	20	A
Cadmium			34.3	mg/kg	1.0	94	75	125	1.7	20	
Copper			3450	mg/kg	1.1		75	125	1.9	20	A
Lead			479	mg/kg	3.2		75	125	4.0	20	A
Zinc			4680	mg/kg	1.0		75	125	2.8	20	A
Lab ID:	**H15010160-031AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150123A			01/23/15 18:19	
Arsenic			54.9	mg/kg	1.8	93	75	125			
Cadmium			23.6	mg/kg	1.0	91	75	125			
Copper			1390	mg/kg	1.1		75	125			A
Lead			61.9	mg/kg	3.2	99	75	125			
Zinc			231	mg/kg	1.0		75	125			A
Lab ID:	**H15010160-031AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150123A			01/23/15 18:23	
Arsenic			51.2	mg/kg	1.8	86	75	125	7.0	20	
Cadmium			23.9	mg/kg	1.0	92	75	125	1.1	20	
Copper			1340	mg/kg	1.1		75	125	3.5	20	A
Lead			59.7	mg/kg	3.2	94	75	125	3.7	20	
Zinc			220	mg/kg	1.0		75	125	4.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010160

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150203A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/02/15 23:09	
Arsenic			0.0581	mg/L	0.0010	97	90	110			
Cadmium			0.0299	mg/L	0.0010	100	90	110			
Lead			0.0571	mg/L	0.0010	95	90	110			
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							02/03/15 12:36	
Arsenic			0.0483	mg/L	0.0010	97	90	110			
Cadmium			0.0490	mg/L	0.0010	98	90	110			
Lead			0.0498	mg/L	0.0010	100	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/03/15 12:44	
Arsenic			-1.13E-05	mg/L	0.0010						
Cadmium			-1.00E-07	mg/L	0.0010						
Lead			2.40E-06	mg/L	0.0010						
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/03/15 13:29	
Arsenic			0.0582	mg/L	0.0010	97	90	110			
Cadmium			0.0305	mg/L	0.0010	102	90	110			
Lead			0.0599	mg/L	0.0010	100	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							02/03/15 13:33	
Arsenic			7.40E-05	mg/L	0.0010						
Cadmium			0.000352	mg/L	0.0010						
Lead			0.000294	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							02/03/15 13:37	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Cadmium			0.00992	mg/L	0.0010	99	70	130			
Lead			0.000274	mg/L	0.0010		0	0			
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							02/03/15 18:27	
Arsenic			0.0497	mg/L	0.0010	99	90	110			
Cadmium			0.0498	mg/L	0.0010	100	90	110			
Lead			0.0498	mg/L	0.0010	100	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							02/03/15 18:35	
Arsenic			-1.17E-05	mg/L	0.0010						
Cadmium			-1.00E-06	mg/L	0.0010						
Lead			-2.20E-06	mg/L	0.0010						
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							02/03/15 19:41	
Arsenic			0.0586	mg/L	0.0010	98	90	110			
Cadmium			0.0305	mg/L	0.0010	102	90	110			
Lead			0.0595	mg/L	0.0010	99	90	110			
Method:	**SW6020**									Batch: 27763	
Lab ID:	**MB-27763**	3	Method Blank				Run: ICPMS204-B_150203A			02/03/15 09:18	
Arsenic			ND	mg/kg	0.3						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010160

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27763
Lab ID:	**MB-27763**	3	Method Blank				Run: ICPMS204-B_150203A				02/03/15 09:18
Cadmium			ND	mg/kg	0.2						
Lead			0.6	mg/kg	0.2						
Lab ID:	**LCS-27763**	3	Laboratory Control Sample				Run: ICPMS204-B_150203A				02/03/15 09:22
Arsenic			301	mg/kg	1.0	87	72.3	106.4			
Cadmium			126	mg/kg	1.0	91	73	105.1			
Lead			192	mg/kg	1.0	101	75.9	108.6			
Lab ID:	**LFB-27763**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150203A				02/03/15 09:27
Arsenic			48.4	mg/kg	1.0	97	80	120			
Cadmium			25.1	mg/kg	1.0	100	80	120			
Lead			50.6	mg/kg	1.0	100	80	120			
Lab ID:	**H15010160-018AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150203A				02/03/15 12:27
Arsenic			155	mg/kg	1.0	100	75	125			
Cadmium			29.4	mg/kg	1.0	100	75	125			
Lead			155	mg/kg	1.0	108	75	125			
Lab ID:	**H15010160-018AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150203A				02/03/15 12:31
Arsenic			153	mg/kg	1.0	95	75	125	1.8	20	
Cadmium			29.2	mg/kg	1.0	100	75	125	0.4	20	
Lead			152	mg/kg	1.0	101	75	125	2.3	20	
Method:	**SW6020**										Batch: 27764
Lab ID:	**MB-27764**	3	Method Blank				Run: ICPMS204-B_150203A				02/03/15 14:56
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27764**	3	Laboratory Control Sample				Run: ICPMS204-B_150203A				02/03/15 15:01
Arsenic			328	mg/kg	1.0	97	72.3	106.4			
Cadmium			128	mg/kg	1.0	95	73	105.1			
Lead			196	mg/kg	1.0	106	75.9	108.6			
Lab ID:	**LFB-27764**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150203A				02/03/15 15:05
Arsenic			48.3	mg/kg	1.0	97	80	120			
Cadmium			24.3	mg/kg	1.0	97	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Lab ID:	**H15010160-031AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150203A				02/03/15 16:28
Arsenic			57.8	mg/kg	1.0	99	75	125			
Cadmium			25.0	mg/kg	1.0	96	75	125			
Lead			65.1	mg/kg	1.0	100	75	125			
Lab ID:	**H15010160-031AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150203A				02/03/15 16:32
Arsenic			55.8	mg/kg	1.0	95	75	125	3.4	20	
Cadmium			24.9	mg/kg	1.0	95	75	125	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/05/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010160

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 27764
Lab ID: H15010160-031AMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150203A				02/03/15 16:32
Lead		61.1	mg/kg	1.0	92	75	125	6.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H15010160

Login completed by: Tracy L. Lorash
Date Received: 1/14/2015
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 1/16/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	4.5°C No Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection time on COC for 3-058-4248 is 845 - time on sample bag is 0855.
Collection date on COC for 3-170-2430, 3036, 3642 & 3-184-4248 is 12/4/14 - bags have date of 12/5/14. Logged in with date from sample bags per Erin.
The temperature was taken using a client sample. TI 1/15/15

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15010160

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-331-0612	1131 ~~12:51~~	11/20/14	Soil	A	B		1
3-329w-1218	800	11/19/14	Soil	A	B		1
3-329w-1218d	801	11/19/14	Soil	A	B		1
3-370-3642	1021	11/19/14	Soil	A	B		1
3-370-4248	1020	11/19/14	Soil	A	B		1
3-370n-0006	1230	11/19/14	Soil	A	B		1
3-371-4854	1105	11/19/14	Soil	A	B		1
3-372-4248	1120	11/19/14	Soil	A	B		1
3-037-4248	1005	11/25/14	Soil	A	B		1
3-040-2430	1123	11/26/14	Soil	A	B		1
3-040-3036	1122	11/26/14	Soil	A	B		1
3-053-5460	1254	11/26/14	Soil	A	B		1
3-059-3642	1446	11/26/14	Soil	A	B		1
3-059-4248	1445	11/26/14	Soil	A	B		1
3-068-2430	1501	11/26/14	Soil	A	B		1
3-068-3036	1500	11/26/14	Soil	A	B		1
3-005-~~3542~~ 3642	1051	11/24/14	Soil	A	B		1
3-049-4248	1045	12/1/14	Soil	A	B		1
3-058-4248	845	12/2/14	Soil	A	B		1
3-058-4854	917	12/2/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature] Date/Time: 1/14/15 1210

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) _____ Date/Time:

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 45 ice TB hand del

Date/Time: 1/14/15 1210

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010160

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-084-3642	1116	12/2/14	Soil	A	B		1
3-084-4248	1115	12/2/14	Soil	A	B		1
3-103-4248	1430	12/2/14	Soil	A	B		1
3-136S-0006	1328	12/8/14	Soil	A	B		1
3-136S-0612	1327	12/8/14	Soil	A	B		1
3-113-4854	1520	12/4/14	Soil	A	B		1
3-150-6672	1030	12/4/14	Soil	A	B		1
3-170-2430	943	12/4/14	Soil	A	B		1
3-170-3036	942	12/4/14	Soil	A	B		1
3-170-3642	941	12/4/14	Soil	A	B		1
3-184-4248	1010	12/4/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1/14/15 1210	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 4.5 ice hand del	TB 1/14/15 12:10

COC011215 additional samples.xls

ANALYTICAL SUMMARY REPORT

February 06, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010113

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 48 samples for MT DEQ-Federal Superfund on 1/12/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010113-001	4-075-2430	01/07/15 8:33	01/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010113-002	4-075-3036	01/07/15 8:32	01/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010113-003	4-075-3642	01/07/15 8:31	01/12/15	Soil	Same As Above
H15010113-004	4-084-3642	01/07/15 8:51	01/12/15	Soil	Same As Above
H15010113-005	4-084-4248	01/07/15 8:50	01/12/15	Soil	Same As Above
H15010113-006	4-074-3036	01/07/15 9:12	01/12/15	Soil	Same As Above
H15010113-007	4-074-3642	01/07/15 9:11	01/12/15	Soil	Same As Above
H15010113-008	4-074-4248	01/07/15 9:10	01/12/15	Soil	Same As Above
H15010113-009	4-078-4854	01/07/15 9:51	01/12/15	Soil	Same As Above
H15010113-010	4-078-5460	01/07/15 9:50	01/12/15	Soil	Same As Above
H15010113-011	4-073-2430	01/07/15 10:11	01/12/15	Soil	Same As Above
H15010113-012	4-073-3036	01/07/15 10:10	01/12/15	Soil	Same As Above
H15010113-013	4-066-3642	01/07/15 10:21	01/12/15	Soil	Same As Above
H15010113-014	4-066-4248	01/07/15 10:20	01/12/15	Soil	Same As Above
H15010113-015	4-077-1824	01/07/15 11:14	01/12/15	Soil	Same As Above
H15010113-016	4-077-1824d	01/07/15 11:15	01/12/15	Soil	Same As Above
H15010113-017	4-077-2430	01/07/15 11:13	01/12/15	Soil	Same As Above
H15010113-018	4-077-3036	01/07/15 11:12	01/12/15	Soil	Same As Above
H15010113-019	4-068-3642	01/07/15 11:36	01/12/15	Soil	Same As Above
H15010113-020	4-068-4248	01/07/15 11:35	01/12/15	Soil	Same As Above
H15010113-021	4-068-4854	01/07/15 11:56	01/12/15	Soil	Same As Above
H15010113-022	4-076-4854	01/07/15 12:26	01/12/15	Soil	Same As Above
H15010113-023	4-076-5460	01/07/15 12:25	01/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010113-024	4-077n-0612	01/07/15 13:36	01/12/15	Soil	Same As Above
H15010113-025	4-077n-1218	01/07/15 13:35	01/12/15	Soil	Same As Above
H15010113-026	4-077n-1824	01/07/15 13:34	01/12/15	Soil	Same As Above
H15010113-027	4-086-3036	01/07/15 13:52	01/12/15	Soil	Same As Above
H15010113-028	4-086-3642	01/07/15 13:51	01/12/15	Soil	Same As Above
H15010113-029	4-086-4248	01/07/15 13:50	01/12/15	Soil	Same As Above
H15010113-030	4-077nw-0612	01/07/15 14:17	01/12/15	Soil	Same As Above
H15010113-031	4-077nw-1218	01/07/15 14:16	01/12/15	Soil	Same As Above
H15010113-032	4-077nw-1824	01/07/15 14:15	01/12/15	Soil	Same As Above
H15010113-033	4-102w-1218	01/07/15 14:35	01/12/15	Soil	Same As Above
H15010113-034	4-102w-1218d	01/07/15 14:36	01/12/15	Soil	Same As Above
H15010113-035	4-102w-1824	01/07/15 14:34	01/12/15	Soil	Same As Above
H15010113-036	4-102w-2430	01/07/15 14:33	01/12/15	Soil	Same As Above
H15010113-037	4-102w2-1218	01/07/15 15:15	01/12/15	Soil	Same As Above
H15010113-038	4-102w2-1824	01/07/15 15:14	01/12/15	Soil	Same As Above
H15010113-039	4-102w2-2430	01/07/15 15:13	01/12/15	Soil	Same As Above
H15010113-040	4-112w-1824	01/07/15 15:29	01/12/15	Soil	Same As Above
H15010113-041	4-112w-2430	01/07/15 15:28	01/12/15	Soil	Same As Above
H15010113-042	4-112w-3036	01/07/15 15:27	01/12/15	Soil	Same As Above
H15010113-043	4-112w2-1824	01/07/15 15:40	01/12/15	Soil	Same As Above
H15010113-044	4-112w2-2430	01/07/15 15:56	01/12/15	Soil	Same As Above
H15010113-045	4-112w2-3036	01/07/15 15:55	01/12/15	Soil	Same As Above
H15010113-046	4-122-1824	01/07/15 16:24	01/12/15	Soil	Same As Above
H15010113-047	4-122-2430	01/07/15 16:23	01/12/15	Soil	Same As Above
H15010113-048	4-122-3036	01/07/15 16:22	01/12/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010113

Report Date: 02/06/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010113

Report Date: 02/06/15
Date Received: 01/12/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010113-001	4-075-2430		7.2	54	11	3290	303	3240
H15010113-002	4-075-3036		7.4	17	3	308	24	1440
H15010113-003	4-075-3642		7.2	14	2	206	18	756
H15010113-004	4-084-3642		7.2	309	11	7630	1830	1520
H15010113-005	4-084-4248		7.5	111	2	486	698	766
H15010113-006	4-074-3036		6.5	4	6	1750	12	801
H15010113-007	4-074-3642		7.3	3	2	1300	9	296
H15010113-008	4-074-4248		7.2	4	10	581	7	494
H15010113-009	4-078-4854		7.1	243	16	3570	160	5690
H15010113-010	4-078-5460		7.2	235	10	3030	138	3140
H15010113-011	4-073-2430		6.9	1280	9	6680	602	2120
H15010113-012	4-073-3036		7.5	2730	28	20600	1420	4940
H15010113-013	4-066-3642		7.3	2140	13	12500	885	3470
H15010113-014	4-066-4248		7.0	2720	11	7080	716	5260
H15010113-015	4-077-1824		7.8	296	4	1890	165	1180
H15010113-016	4-077-1824d		7.8	395	5	2590	222	1470
H15010113-017	4-077-2430		7.2	37	< 1	70	14	115
H15010113-018	4-077-3036		6.6	13	< 1	78	14	87
H15010113-019	4-068-3642		7.1	729	12	8760	698	2800
H15010113-020	4-068-4248		7.2	10	< 1	68	15	75
H15010113-021	4-068-4854		7.4	6	< 1	29	11	63
H15010113-022	4-076-4854		7.8	6	16	204	11	1210
H15010113-023	4-076-5460		8.1	3	< 1	32	8	202
H15010113-024	4-077n-0612		7.6	485	6	2630	384	1910
H15010113-025	4-077n-1218		7.6	119	2	1030	124	664
H15010113-026	4-077n-1824		7.5	31	< 1	74	20	98
H15010113-027	4-086-3036		6.3	170	8	1460	334	1870
H15010113-028	4-086-3642		6.7	135	1	838	87	716
H15010113-029	4-086-4248		7.3	17	< 1	58	12	397
H15010113-030	4-077nw-0612		7.5	414	3	852	342	1140
H15010113-031	4-077nw-1218		7.4	21	< 1	47	12	417
H15010113-032	4-077nw-1824		7.4	9	< 1	46	21	105
H15010113-033	4-102w-1218		7.6	541	8	3960	579	1850
H15010113-034	4-102w-1218d		7.6	620	9	4050	604	2070
H15010113-035	4-102w-1824		6.6	8	< 1	31	13	53
H15010113-036	4-102w-2430		6.4	3	< 1	19	12	46
H15010113-037	4-102w2-1218		7.7	888	9	10500	1110	2170
H15010113-038	4-102w2-1824		7.6	72	< 1	321	49	221
H15010113-039	4-102w2-2430		7.0	4	< 1	26	12	59
H15010113-040	4-112w-1824		7.7	513	9	3020	417	2460

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010113

Report Date: 02/06/15
Date Received: 01/12/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010113-041	4-112w-2430		7.3	96	< 1	256	49	541
H15010113-042	4-112w-3036		7.4	6	< 1	18	8	130
H15010113-043	4-112w2-1824		7.1	420	10	4690	665	3020
H15010113-044	4-112w2-2430		6.1	24	< 1	126	26	144
H15010113-045	4-112w2-3036		7.0	17	< 1	84	24	99
H15010113-046	4-122-1824		7.2	32	37	2840	19	5970
H15010113-047	4-122-2430		6.5	10	< 1	47	22	265
H15010113-048	4-122-3036		6.8	12	< 1	56	18	114

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150128A	
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 09:25
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 09:51
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150126_1		Continuing Calibration Verification Standard								01/27/15 10:12
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150126_1		Continuing Calibration Verification Standard								01/27/15 10:12
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 10:13
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150126_1		Continuing Calibration Verification Standard								01/27/15 10:25
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150126_1		Continuing Calibration Verification Standard								01/27/15 10:39
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150126_1		Continuing Calibration Verification Standard								01/27/15 10:39
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 10:40
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150126_1		Continuing Calibration Verification Standard								01/27/15 10:51
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150126_1		Continuing Calibration Verification Standard								01/27/15 11:07
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150126_1		Continuing Calibration Verification Standard								01/27/15 11:07
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 11:08
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 11:29
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150127_1		Initial Calibration Verification Standard								01/28/15 07:05
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 08:49
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 06:52
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150128A	
Lab ID: ICV_1_150127_1		Initial Calibration Verification Standard							01/28/15 06:49	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 27805	
Lab ID: LCS-27805		Laboratory Control Sample				Run: SOIL PH METER_150128A			01/27/15 10:14	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15010113-010ADUP		Sample Duplicate				Run: SOIL PH METER_150128A			01/27/15 10:25	
pH, sat. paste		7.13	s.u.	0.10				0.3	30	
Lab ID: H15010113-020ADUP		Sample Duplicate				Run: SOIL PH METER_150128A			01/27/15 10:34	
pH, sat. paste		7.17	s.u.	0.10				0.3	30	
Method: ASAM10-3.2									Batch: 27806	
Lab ID: LCS-27806		Laboratory Control Sample				Run: SOIL PH METER_150128A			01/27/15 10:41	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H15010113-030ADUP		Sample Duplicate				Run: SOIL PH METER_150128A			01/27/15 10:51	
pH, sat. paste		7.55	s.u.	0.10				0.3	30	
Lab ID: H15010113-040ADUP		Sample Duplicate				Run: SOIL PH METER_150128A			01/27/15 11:00	
pH, sat. paste		7.70	s.u.	0.10				0.0	30	
Method: ASAM10-3.2									Batch: 27807	
Lab ID: LCS-27807		Laboratory Control Sample				Run: SOIL PH METER_150128A			01/27/15 11:09	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H15010113-048ADUP		Sample Duplicate				Run: SOIL PH METER_150128A			01/27/15 11:14	
pH, sat. paste		6.78	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150122B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/22/15 09:41
Arsenic			0.791	mg/L	0.0085	99	90	110			
Cadmium			0.388	mg/L	0.0010	97	90	110			
Copper			0.794	mg/L	0.010	99	90	110			
Lead			0.761	mg/L	0.010	95	90	110			
Zinc			0.786	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/22/15 09:56
Arsenic			0.00153	mg/L	0.0085		0	0			
Cadmium			0.00123	mg/L	0.0010		0	0			
Copper			-0.00542	mg/L	0.010		0	0			
Lead			-0.0336	mg/L	0.010		0	0			
Zinc			0.00309	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/22/15 10:00
Arsenic			0.977	mg/L	0.0085	98	80	120			
Cadmium			0.905	mg/L	0.0010	90	80	120			
Copper			0.509	mg/L	0.010	102	80	120			
Lead			0.902	mg/L	0.010	90	80	120			
Zinc			0.991	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/22/15 18:48
Arsenic			2.51	mg/L	0.0085	100	90	110			
Cadmium			2.51	mg/L	0.0010	101	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/22/15 18:52
Arsenic			0.00707	mg/L	0.0085						
Cadmium			0.000200	mg/L	0.0010						
Copper			-0.00242	mg/L	0.010						
Lead			-0.0137	mg/L	0.010						
Zinc			-9.00E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/22/15 19:33
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.51	mg/L	0.010	101	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/22/15 19:36
Arsenic			0.00310	mg/L	0.0085						
Cadmium			0.000190	mg/L	0.0010						
Copper			-0.00712	mg/L	0.010						
Lead			0.00187	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150122B	
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/22/15 19:36	
Zinc			0.00113	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/22/15 20:17	
Arsenic			2.49	mg/L	0.0085	100	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/22/15 20:20	
Arsenic			0.0168	mg/L	0.0085						
Cadmium			5.00E-05	mg/L	0.0010						
Copper			-0.00411	mg/L	0.010						
Lead			-0.00363	mg/L	0.010						
Zinc			0.000280	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/22/15 20:53	
Arsenic			2.46	mg/L	0.0085	99	90	110			
Cadmium			2.44	mg/L	0.0010	98	90	110			
Copper			2.51	mg/L	0.010	101	90	110			
Lead			2.46	mg/L	0.010	99	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/22/15 20:57	
Arsenic			0.00702	mg/L	0.0085						
Cadmium			0.000100	mg/L	0.0010						
Copper			-0.00422	mg/L	0.010						
Lead			0.00262	mg/L	0.010						
Zinc			0.000340	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150123A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/23/15 09:38
Arsenic			0.804	mg/L	0.0085	101	90	110			
Cadmium			0.385	mg/L	0.0010	96	90	110			
Copper			0.790	mg/L	0.010	99	90	110			
Lead			0.766	mg/L	0.010	96	90	110			
Zinc			0.787	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/23/15 09:53
Arsenic			0.0105	mg/L	0.0085		0	0			
Cadmium			0.000150	mg/L	0.0010		0	0			
Copper			-0.00314	mg/L	0.010		0	0			
Lead			-0.0190	mg/L	0.010		0	0			
Zinc			-0.00123	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/23/15 09:57
Arsenic			0.966	mg/L	0.0085	97	80	120			
Cadmium			0.879	mg/L	0.0010	88	80	120			
Copper			0.492	mg/L	0.010	98	80	120			
Lead			0.869	mg/L	0.010	87	80	120			
Zinc			0.957	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/23/15 12:00
Arsenic			2.42	mg/L	0.0085	97	90	110			
Cadmium			2.40	mg/L	0.0010	96	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.45	mg/L	0.010	98	90	110			
Zinc			2.38	mg/L	0.010	95	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/23/15 12:04
Arsenic			0.0209	mg/L	0.0085						
Cadmium			0.000110	mg/L	0.0010						
Copper			0.00126	mg/L	0.010						
Lead			0.00159	mg/L	0.010						
Zinc			-2.00E-05	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/23/15 12:44
Arsenic			2.35	mg/L	0.0085	94	90	110			
Cadmium			2.32	mg/L	0.0010	93	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.35	mg/L	0.010	94	90	110			
Zinc			2.32	mg/L	0.010	93	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/23/15 12:48
Arsenic			0.00823	mg/L	0.0085						
Cadmium			7.00E-05	mg/L	0.0010						
Copper			0.00316	mg/L	0.010						
Lead			-0.0114	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150123A	
Lab ID: CCB	5	Continuing Calibration Blank							01/23/15 12:48	
Zinc		0.00128	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/23/15 13:28	
Arsenic		2.39	mg/L	0.0085	96	90	110			
Cadmium		2.35	mg/L	0.0010	94	90	110			
Copper		2.49	mg/L	0.010	100	90	110			
Lead		2.39	mg/L	0.010	96	90	110			
Zinc		2.36	mg/L	0.010	94	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/23/15 13:32	
Arsenic		0.00440	mg/L	0.0085						
Cadmium		-6.00E-05	mg/L	0.0010						
Copper		0.00195	mg/L	0.010						
Lead		-0.00299	mg/L	0.010						
Zinc		0.000930	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/23/15 13:55	
Arsenic		2.48	mg/L	0.0085	99	90	110			
Cadmium		2.46	mg/L	0.0010	98	90	110			
Copper		2.50	mg/L	0.010	100	90	110			
Lead		2.47	mg/L	0.010	99	90	110			
Zinc		2.47	mg/L	0.010	99	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/23/15 13:58	
Arsenic		0.00209	mg/L	0.0085						
Cadmium		0.000920	mg/L	0.0010						
Copper		0.00528	mg/L	0.010						
Lead		0.0174	mg/L	0.010						
Zinc		-0.000300	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/23/15 14:39	
Arsenic		2.52	mg/L	0.0085	101	90	110			
Cadmium		2.51	mg/L	0.0010	100	90	110			
Copper		2.51	mg/L	0.010	100	90	110			
Lead		2.48	mg/L	0.010	99	90	110			
Zinc		2.53	mg/L	0.010	101	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/23/15 14:42	
Arsenic		-0.00798	mg/L	0.0085						
Cadmium		0.000880	mg/L	0.0010						
Copper		0.00570	mg/L	0.010						
Lead		0.0166	mg/L	0.010						
Zinc		0.00216	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150126B	
Lab ID:	**ICV**	4	Initial Calibration Verification Standard								01/26/15 09:53
Cadmium			0.384	mg/L	0.0010	96	90	110			
Copper			0.783	mg/L	0.010	98	90	110			
Lead			0.780	mg/L	0.010	97	90	110			
Zinc			0.790	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	4	Interference Check Sample A								01/26/15 10:08
Cadmium			6.00E-05	mg/L	0.0010		0	0			
Copper			-0.000700	mg/L	0.010		0	0			
Lead			0.00657	mg/L	0.010		0	0			
Zinc			0.00432	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	4	Interference Check Sample AB								01/26/15 10:12
Cadmium			0.897	mg/L	0.0010	90	80	120			
Copper			0.497	mg/L	0.010	99	80	120			
Lead			0.880	mg/L	0.010	88	80	120			
Zinc			0.973	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard								01/26/15 12:13
Cadmium			2.50	mg/L	0.0010	100	90	110			
Copper			2.55	mg/L	0.010	102	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.54	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank								01/26/15 12:17
Cadmium			-0.000500	mg/L	0.0010						
Copper			-0.00138	mg/L	0.010						
Lead			0.0131	mg/L	0.010						
Zinc			0.00199	mg/L	0.010						
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard								01/26/15 12:58
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.42	mg/L	0.010	97	90	110			
Zinc			2.49	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank								01/26/15 13:01
Cadmium			-0.000330	mg/L	0.0010						
Copper			-0.00285	mg/L	0.010						
Lead			0.00222	mg/L	0.010						
Zinc			0.00208	mg/L	0.010						
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard								01/26/15 13:42
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.42	mg/L	0.010	97	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7										Analytical Run: ICP2-HE_150126B
Lab ID: CCB	4	Continuing Calibration Blank								01/26/15 13:45
Cadmium		-0.000200	mg/L	0.0010						
Copper		-0.00497	mg/L	0.010						
Lead		0.00576	mg/L	0.010						
Zinc		0.00189	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27752
Lab ID:	**MB-27752**	5	Method Blank				Run: ICP2-HE_150122B				01/22/15 19:07
Arsenic			0.5	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			0.8	mg/kg	0.6						
Zinc			0.9	mg/kg	0.09						
Lab ID:	**LFB-27752**	5	Laboratory Fortified Blank				Run: ICP2-HE_150122B				01/22/15 19:11
Arsenic			47.8	mg/kg	1.0	95	80	120			
Cadmium			23.4	mg/kg	1.0	93	80	120			
Copper			49.7	mg/kg	1.0	99	80	120			
Lead			47.6	mg/kg	1.0	94	80	120			
Zinc			48.3	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27752**	5	Laboratory Control Sample				Run: ICP2-HE_150122B				01/22/15 19:14
Arsenic			275	mg/kg	1.8	82	72.3	106.4			
Cadmium			113	mg/kg	1.0	84	73	105.1			
Copper			240	mg/kg	1.1	87	77.5	109.6			
Lead			168	mg/kg	3.1	91	75.9	108.6			
Zinc			184	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H15010113-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150122B				01/22/15 20:42
Arsenic			294	mg/kg	2.2	89	75	125			
Cadmium			135	mg/kg	1.0	88	75	125			
Copper			361	mg/kg	1.4	92	75	125			
Lead			289	mg/kg	3.9	85	75	125			
Zinc			364	mg/kg	1.0	90	75	125			
Lab ID:	**H15010113-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150122B				01/22/15 20:46
Arsenic			62.0	mg/kg	1.8	84	75	125			
Cadmium			21.9	mg/kg	1.0	88	75	125			
Copper			116	mg/kg	1.1	76	75	125			
Lead			67.8	mg/kg	3.2	86	75	125			
Zinc			128	mg/kg	1.0	82	75	125			
Lab ID:	**H15010113-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150122B				01/22/15 20:50
Arsenic			61.4	mg/kg	1.8	83	75	125	1.0	20	
Cadmium			21.9	mg/kg	1.0	88	75	125	0.2	20	
Copper			117	mg/kg	1.1	77	75	125	0.4	20	
Lead			62.8	mg/kg	3.2	76	75	125	7.7	20	
Zinc			127	mg/kg	1.0	80	75	125	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27753
Lab ID:	**MB-27753**	5	Method Blank				Run: ICP2-HE_150123A				01/23/15 12:08
Arsenic			0.4	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27753**	5	Laboratory Fortified Blank				Run: ICP2-HE_150123A				01/23/15 12:12
Arsenic			46.1	mg/kg	1.0	91	80	120			
Cadmium			22.5	mg/kg	1.0	90	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			45.9	mg/kg	1.0	92	80	120			
Zinc			46.2	mg/kg	1.0	92	80	120			
Lab ID:	**LCS-27753**	5	Laboratory Control Sample				Run: ICP2-HE_150123A				01/23/15 12:15
Arsenic			255	mg/kg	1.8	76	72.3	106.4			
Cadmium			106	mg/kg	1.0	79	73	105.1			
Copper			235	mg/kg	1.1	86	77.5	109.6			
Lead			163	mg/kg	3.1	89	75.9	108.6			
Zinc			171	mg/kg	1.0	82	74.2	109.9			
Lab ID:	**H15010113-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150123A				01/23/15 14:09
Arsenic			233	mg/kg	1.8	89	75	125			
Cadmium			113	mg/kg	1.0	89	75	125			
Copper			256	mg/kg	1.1	93	75	125			
Lead			240	mg/kg	3.2	87	75	125			
Zinc			279	mg/kg	1.0	92	75	125			
Lab ID:	**H15010113-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150123A				01/23/15 14:13
Arsenic			51.1	mg/kg	1.8	92	75	125			
Cadmium			23.2	mg/kg	1.0	94	75	125			
Copper			68.3	mg/kg	1.1	99	75	125			
Lead			61.1	mg/kg	3.2	88	75	125			
Zinc			94.9	mg/kg	1.0	99	75	125			
Lab ID:	**H15010113-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150123A				01/23/15 14:17
Arsenic			51.5	mg/kg	1.8	93	75	125	0.7	20	
Cadmium			23.0	mg/kg	1.0	93	75	125	0.6	20	
Copper			69.0	mg/kg	1.1	100	75	125	1.0	20	
Lead			61.5	mg/kg	3.2	89	75	125	0.8	20	
Zinc			96.3	mg/kg	1.0	102	75	125	1.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27791
Lab ID:	**MB-27791**	4	Method Blank				Run: ICP2-HE_150126B				01/26/15 12:28
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27791**	4	Laboratory Fortified Blank				Run: ICP2-HE_150126B				01/26/15 12:32
Cadmium			23.9	mg/kg	1.0	95	80	120			
Copper			48.8	mg/kg	1.0	98	80	120			
Lead			48.7	mg/kg	1.0	97	80	120			
Zinc			49.6	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27791**	4	Laboratory Control Sample				Run: ICP2-HE_150126B				01/26/15 12:36
Cadmium			105	mg/kg	1.0	73	73	105.1			
Copper			227	mg/kg	1.1	78	77.5	109.6			
Lead			157	mg/kg	3.3	80	75.9	108.6			
Zinc			172	mg/kg	1.0	77	74.2	109.9			
Lab ID:	**H15010113-048APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150126B				01/26/15 13:34
Cadmium			114	mg/kg	1.0	85	75	125			
Copper			302	mg/kg	1.2	92	75	125			
Lead			243	mg/kg	3.4	84	75	125			
Zinc			355	mg/kg	1.0	90	75	125			
Lab ID:	**H15010113-048AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150126B				01/26/15 13:38
Cadmium			22.2	mg/kg	1.0	86	75	125			
Copper			105	mg/kg	1.1	94	75	125			
Lead			61.9	mg/kg	3.3	85	75	125			
Zinc			161	mg/kg	1.0	93	75	125			
Lab ID:	**H15010113-048AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150126B				01/26/15 14:15
Cadmium			23.0	mg/kg	1.0	88	75	125	3.8	20	
Copper			105	mg/kg	1.1	93	75	125	0.2	20	
Lead			72.4	mg/kg	3.3	104	75	125	16	20	
Zinc			165	mg/kg	1.0	98	75	125	2.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Analytical Run: SUB-B237649	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							02/02/15 10:38	
Arsenic			0.79	mg/L	0.10	99	90	110			
Cadmium			0.38	mg/L	0.010	95	90	110			
Copper			0.77	mg/L	0.010	96	90	110			
Lead			0.76	mg/L	0.050	96	90	110			
Zinc			0.77	mg/L	0.010	96	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							02/02/15 10:41	
Arsenic			-0.018	mg/L	0.10						
Cadmium			0.0036	mg/L	0.010						
Copper			-0.0038	mg/L	0.010						
Lead			0.016	mg/L	0.050						
Zinc			0.0051	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							02/02/15 10:45	
Arsenic			0.94	mg/L	0.10	94	80	120			
Cadmium			0.84	mg/L	0.010	84	80	120			
Copper			0.47	mg/L	0.010	94	80	120			
Lead			0.85	mg/L	0.050	85	80	120			
Zinc			0.91	mg/L	0.010	91	80	120			
Method:	**SW6010B**									Batch: B_86601	
Lab ID:	**MB-86601**	5	Method Blank				Run: SUB-B237649			02/03/15 02:08	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.03						
Copper			1	mg/kg	0.2						
Lead			ND	mg/kg	0.8						
Zinc			0.9	mg/kg	0.5						
Lab ID:	**LCS-86601**	5	Standard Reference Material				Run: SUB-B237649			02/03/15 02:11	
Arsenic			290	mg/kg	5.0	83	72	120			
Cadmium			110	mg/kg	5.0	80	73	120			
Copper			250	mg/kg	5.0	89	77	120			
Lead			160	mg/kg	5.0	86	75	120			
Zinc			180	mg/kg	5.0	86	74	120			
Lab ID:	**LFB-86601**	5	Laboratory Fortified Blank				Run: SUB-B237649			02/03/15 02:15	
Arsenic			44	mg/kg	5.0	89	80	120			
Cadmium			22	mg/kg	5.0	86	80	120			
Copper			44	mg/kg	5.0	86	80	120			
Lead			43	mg/kg	5.0	85	80	120			
Zinc			44	mg/kg	5.0	85	80	120			
Lab ID:	**H15010113-018A**	5	Serial Dilution				Run: SUB-B237649			02/03/15 02:53	
Arsenic			16.6	mg/kg	1.8		0	0		10	N
Cadmium			ND	mg/kg	1.0		0	0		10	
Copper			68.1	mg/kg	1.0		0	0	9.0	10	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: B_86601	
Lab ID:	**H15010113-018A**	5	Serial Dilution				Run: SUB-B237649			02/03/15 02:53	
Lead			17.5	mg/kg	4.2		0	0		10	N
Zinc			77.4	mg/kg	2.5		0	0	11	10	R
Lab ID:	**H15010113-018A**	5	Post Digestion/Distillation Spike				Run: SUB-B237649			02/03/15 02:56	
Arsenic			58.2	mg/kg	1.0	87	75	125			
Cadmium			21.1	mg/kg	1.0	81	75	125			
Copper			106	mg/kg	1.0	85	75	125			
Lead			56.1	mg/kg	1.0	82	75	125			
Zinc			112	mg/kg	1.0	83	75	125			
Lab ID:	**H15010113-018A**	5	Sample Matrix Spike				Run: SUB-B237649			02/03/15 03:00	
Arsenic			57.4	mg/kg	1.0	89	75	125			
Cadmium			20.0	mg/kg	1.0	79	75	125			
Copper			108	mg/kg	1.0	92	75	125			
Lead			54.5	mg/kg	1.0	81	75	125			
Zinc			117	mg/kg	1.0	96	75	125			
Lab ID:	**H15010113-018A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237649			02/03/15 03:11	
Arsenic			58.8	mg/kg	1.0	91	75	125	2.3	20	
Cadmium			20.2	mg/kg	1.0	80	75	125	0.9	20	
Copper			113	mg/kg	1.0	101	75	125	4.1	20	
Lead			54.9	mg/kg	1.0	82	75	125	0.8	20	
Zinc			119	mg/kg	1.0	100	75	125	1.8	20	
Method:	**SW6010B**									Batch: B_86602	
Lab ID:	**MB-86602**	3	Method Blank				Run: SUB-B237649			02/03/15 03:15	
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.8						
Zinc			ND	mg/kg	0.5						
Lab ID:	**LCS-86602**	3	Standard Reference Material				Run: SUB-B237649			02/03/15 03:19	
Copper			220	mg/kg	5.0	77	77	120			
Lead			160	mg/kg	5.0	88	75	120			
Zinc			160	mg/kg	5.0	74	74	120			
Lab ID:	**LFB-86602**	3	Laboratory Fortified Blank				Run: SUB-B237649			02/03/15 03:22	
Copper			46	mg/kg	5.0	92	80	120			
Lead			44	mg/kg	5.0	88	80	120			
Zinc			45	mg/kg	5.0	90	80	120			
Lab ID:	**H15010113-048A**	3	Serial Dilution				Run: SUB-B237649			02/03/15 03:42	
Copper			54.0	mg/kg	1.0		0	0	5.0	10	
Lead			19.0	mg/kg	4.2		0	0		10	N
Zinc			113	mg/kg	2.5		0	0	7.9	10	
Lab ID:	**H15010113-048A**	3	Post Digestion/Distillation Spike				Run: SUB-B237649			02/03/15 03:46	
Copper			96.0	mg/kg	1.0	87	75	125			

Qualifiers:

RL - Analyte reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: B_86602
Lab ID:	**H15010113-048A**	3	Post Digestion/Distillation Spike				Run: SUB-B237649				02/03/15 03:46
Lead			57.8	mg/kg	1.0	82	75	125			
Zinc			148	mg/kg	1.0	84	75	125			
Lab ID:	**H15010113-048A**	3	Sample Matrix Spike				Run: SUB-B237649				02/03/15 03:57
Copper			93.0	mg/kg	1.0	83	75	125			
Lead			56.7	mg/kg	1.0	82	75	125			
Zinc			147	mg/kg	1.0	85	75	125			
Lab ID:	**H15010113-048A**	3	Sample Matrix Spike Duplicate				Run: SUB-B237649				02/03/15 04:01
Copper			97.5	mg/kg	1.0	92	75	125	4.8	20	
Lead			57.2	mg/kg	1.0	83	75	125	0.9	20	
Zinc			151	mg/kg	1.0	92	75	125	2.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B237574	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							01/30/15 15:17	
Arsenic			0.0509	mg/L	0.0010	102	90	110			
Cadmium			0.0261	mg/L	0.0010	104	90	110			
Copper			0.0518	mg/L	0.0010	104	90	110			
Lead			0.0510	mg/L	0.0010	102	90	110			
Zinc			0.0543	mg/L	0.0010	109	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/30/15 15:33	
Arsenic			2.00E-05	mg/L	0.0010						
Cadmium			0.000310	mg/L	0.0010						
Copper			0.000610	mg/L	0.0010						
Lead			0.000270	mg/L	0.0010						
Zinc			0.00124	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/30/15 15:36	
Arsenic			0.00928	mg/L	0.0010	93	70	130			
Cadmium			0.0103	mg/L	0.0010	103	70	130			
Copper			0.0186	mg/L	0.0010	93	70	130			
Lead			0.000260	mg/L	0.0010		0	0			
Zinc			0.00995	mg/L	0.0010	99	70	130			
Lab ID:	**QCS**	2	Initial Calibration Verification Standard							01/30/15 10:53	
Arsenic			0.0518	mg/L	0.0010	104	90	110			
Lead			0.0498	mg/L	0.0010	100	90	110			
Method:	**SW6020**									Batch: B_86602	
Lab ID:	**MB-86602**	5	Method Blank				Run: SUB-B237574			01/31/15 05:04	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.2	mg/kg	0.1						
Lead			ND	mg/kg	0.08						
Zinc			1	mg/kg	0.6						
Lab ID:	**LCS-86602**	5	Standard Reference Material				Run: SUB-B237574			01/31/15 05:07	
Arsenic			260	mg/kg	1.0	76	72	120			
Cadmium			115	mg/kg	1.0	84	73	120			
Copper			239	mg/kg	1.0	86	77	120			
Lead			160	mg/kg	1.0	85	75	120			
Zinc			181	mg/kg	1.0	85	74	120			
Lab ID:	**LFB-86602**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/31/15 05:09	
Arsenic			50.6	mg/kg	1.0	101	80	120			
Cadmium			26.0	mg/kg	1.0	104	80	120			
Copper			51.8	mg/kg	1.0	103	80	120			
Lead			51.0	mg/kg	1.0	102	80	120			
Zinc			52.2	mg/kg	1.0	102	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86602	
Lab ID:	**H15010113-048A**	5	Serial Dilution				Run: SUB-B237574			01/31/15 06:02	
Arsenic			11.8	mg/kg	1.7		0	0		10	N
Cadmium			0.500	mg/kg	1.0		0	0		10	N
Copper			59.4	mg/kg	1.0		0	0	4.4	10	
Lead			18.2	mg/kg	1.0		0	0	1.4	10	
Zinc			124	mg/kg	2.9		0	0	3.9	10	
Lab ID:	**H15010113-048A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/31/15 06:05	
Arsenic			61.0	mg/kg	1.0	98	75	125			
Cadmium			50.6	mg/kg	1.0	100	75	125			
Copper			108	mg/kg	1.0	102	75	125			
Lead			67.8	mg/kg	1.0	100	75	125			
Zinc			167	mg/kg	1.0	97	75	125			
Lab ID:	**H15010113-048A**	5	Sample Matrix Spike				Run: SUB-B237574			01/31/15 06:08	
Arsenic			60.6	mg/kg	1.0	97	75	125			
Cadmium			26.4	mg/kg	1.0	104	75	125			
Copper			107	mg/kg	1.0	100	75	125			
Lead			68.2	mg/kg	1.0	101	75	125			
Zinc			171	mg/kg	1.0	104	75	125			
Lab ID:	**H15010113-048A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/31/15 06:10	
Arsenic			60.9	mg/kg	1.0	98	75	125	0.4	20	
Cadmium			25.7	mg/kg	1.0	101	75	125	2.9	20	
Copper			111	mg/kg	1.0	109	75	125	4.4	20	
Lead			68.2	mg/kg	1.0	101	75	125	0.0	20	
Zinc			176	mg/kg	1.0	114	75	125	2.9	20	
Method:	**SW6020**									Batch: B_86603	
Lab ID:	**MB-86603**	5	Method Blank				Run: SUB-B237574			01/31/15 06:16	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.2	mg/kg	0.1						
Lead			ND	mg/kg	0.08						
Zinc			1	mg/kg	0.6						
Lab ID:	**LCS-86603**	5	Standard Reference Material				Run: SUB-B237574			01/31/15 06:18	
Arsenic			307	mg/kg	1.0	90	72	120			
Cadmium			134	mg/kg	1.0	98	73	120			
Copper			277	mg/kg	1.0	99	77	120			
Lead			184	mg/kg	1.0	99	75	120			
Zinc			210	mg/kg	1.0	98	74	120			
Lab ID:	**LFB-86603**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/31/15 06:29	
Arsenic			50.8	mg/kg	1.0	102	80	120			
Cadmium			26.2	mg/kg	1.0	105	80	120			
Copper			53.1	mg/kg	1.0	106	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010113

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86603	
Lab ID:	**LFB-86603**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/31/15 06:29	
Lead			51.1	mg/kg	1.0	102	80	120			
Zinc			53.5	mg/kg	1.0	105	80	120			
Lab ID:	**H15010113-036A**	5	Serial Dilution				Run: SUB-B237574			01/31/15 07:09	
Arsenic			3.45	mg/kg	1.7		0	0		10	N
Cadmium			ND	mg/kg	1.0		0	0		10	
Copper			21.3	mg/kg	1.0		0	0	5.8	10	
Lead			11.4	mg/kg	1.0		0	0	1.1	10	
Zinc			61.6	mg/kg	2.9		0	0	18	10	R
Lab ID:	**H15010113-036A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/31/15 07:12	
Arsenic			52.8	mg/kg	1.0	99	75	125			
Cadmium			50.7	mg/kg	1.0	101	75	125			
Copper			71.2	mg/kg	1.0	102	75	125			
Lead			61.4	mg/kg	1.0	100	75	125			
Zinc			99.6	mg/kg	1.0	96	75	125			
Lab ID:	**H15010113-036A**	5	Sample Matrix Spike				Run: SUB-B237574			01/31/15 07:15	
Arsenic			53.5	mg/kg	1.0	100	75	125			
Cadmium			26.6	mg/kg	1.0	106	75	125			
Copper			72.3	mg/kg	1.0	104	75	125			
Lead			62.5	mg/kg	1.0	102	75	125			
Zinc			104	mg/kg	1.0	104	75	125			
Lab ID:	**H15010113-036A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/31/15 07:17	
Arsenic			55.9	mg/kg	1.0	105	75	125	4.4	20	
Cadmium			27.5	mg/kg	1.0	109	75	125	3.3	20	
Copper			75.0	mg/kg	1.0	110	75	125	3.7	20	
Lead			66.7	mg/kg	1.0	110	75	125	6.5	20	
Zinc			108	mg/kg	1.0	114	75	125	4.5	20	

Qualifiers:

RL - Analyte reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H15010113

Login completed by: Tracy L. Lorash
Date Received: 1/12/2015
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 1/15/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample ID on COC is 077-nw -ID on bags is 077n/w. Logged in with ID from COC.
Sample ID on COC is 4-112w2-2430 -ID on bag is 4-112w-2430 with the same collection date and time as 4-112w2-2430. Logged in with ID from COC.
Collection date on COC for samples 4-077nw-1215 and 1824 is 1/7/15 - date on bags is 1/7/14. Logged in with date from COC.
No sample labeled 4-122-2430 collected 1/7/15 at 1623 was received.
Received a sample labeled 4-155-2430 collected on 1/7/15 at 1623 that is not on the COC. Per Erin, the sample labeled 4-155 was mislabeled and should be 4-122. TI 1/13/15

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010113

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-075-2430	833	~~01/0715~~ 01/07/15	Soil	A	B		1
4-075-3036	832	01/0715	Soil	A	B		1
4-075-3642	831	01/0715	Soil	A	B		1
4-084-3642	851	01/0715	Soil	A	B		1
4-084-4248	850	01/0715	Soil	A	B		1
4-074-3036	912	01/0715	Soil	A	B		1
4-074-3642	911	01/0715	Soil	A	B		1
4-074-4248	910	01/0715	Soil	A	B		1
4-078-4854	951	01/0715	Soil	A	B		1
4-078-5460	950	01/0715	Soil	A	B		1
4-073-2430	1011	01/0715	Soil	A	B		1
4-073-3036	1010	01/0715	Soil	A	B		1
4-066-3642	1021	01/0715	Soil	A	B		1
4-066-4248	1020	01/0715	Soil	A	B		1
4-077-1824	1114	01/0715	Soil	A	B		1
4-077-1824d	1115	01/0715	Soil	A	B		1
4-077-2430	1113	01/0715	Soil	A	B		1
4-077-3036	1112	01/0715	Soil	A	B		1
4-068-3642	1136	01/0715	Soil	A	B		1
4-068-4248	1135	01/0715	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1/12/15 1240	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 20 TB on ice	hand del 1/12/15 12:40

COC010715TP.xls

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010113

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-068-4854	1156	01/0715	Soil	A	B		1
4-076-4854	1226	01/0715	Soil	A	B		1
4-076-5460	1225	01/0715	Soil	A	B		1
4-077n-0612	1336	01/0715	Soil	A	B		1
4-077n-1218	1335	01/0715	Soil	A	B		1
4-077n-1824	1334	01/0715	Soil	A	B		1
4-086-3036	1352	01/0715	Soil	A	B		1
4-086-3642	1351	01/0715	Soil	A	B		1
4-086-4248	1350	01/0715	Soil	A	B		1
4-077nw-0612	1417	01/0715	Soil	A	B		1
4-077nw-1218	1416	01/0715	Soil	A	B		1
4-077nw-1824	1415	01/0715	Soil	A	B		1
4-102w-1218	1435	01/0715	Soil	A	B		1
4-102w-1218d	1436	01/0715	Soil	A	B		1
4-102w-1824	1434	01/0715	Soil	A	B		1
4-102w-2430	1433	01/0715	Soil	A	B		1
4-102w2-1218	1515	01/0715	Soil	A	B		1
4-102w2-1824	1514	01/0715	Soil	A	B		1
4-102w2-2430	1513	01/0715	Soil	A	B		1
4-112w-1824	1529	01/0715	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1/12/15 1240

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

2.0 TB on ice hand del

Date/Time: 1/12/15 12:40

COC010715TP.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010113

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-112w-2430	1528	01/0715	Soil	A	B		1
4-112w-3036	1527	01/0715	Soil	A	B		1
4-112w2-1824	1540	01/0715	Soil	A	B		1
4-112w2-2430	1556	01/0715	Soil	A	B		1
4-112w2-3036	1555	01/0715	Soil	A	B		1
4-122-1824	1624	01/0715	Soil	A	B		1
4-122-2430	1623	01/0715	Soil	A	B		1
4-122-3036	1622	01/0715	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1/12/15 1240

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

Date/Time: 2.0 TB ice hmddy 1/12/15 12:40

COC010715TP.xls

ANALYTICAL SUMMARY REPORT

February 02, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010111

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 36 samples for MT DEQ-Federal Superfund on 1/12/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010111-001	4-039-2430	01/05/15 9:03	01/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010111-002	4-039-3036	01/05/15 9:02	01/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010111-003	4-039-3642	01/05/15 9:01	01/12/15	Soil	Same As Above
H15010111-004	4-040-3642	01/05/15 9:21	01/12/15	Soil	Same As Above
H15010111-005	4-040-4248	01/05/15 9:20	01/12/15	Soil	Same As Above
H15010111-006	4-030-3642	01/05/15 9:56	01/12/15	Soil	Same As Above
H15010111-007	4-030-4248	01/05/15 9:55	01/12/15	Soil	Same As Above
H15010111-008	4-041-1824	01/05/15 10:39	01/12/15	Soil	Same As Above
H15010111-009	4-041-2430	01/05/15 10:38	01/12/15	Soil	Same As Above
H15010111-010	4-041-3036	01/05/15 10:37	01/12/15	Soil	Same As Above
H15010111-011	4-042-1824	01/05/15 11:09	01/12/15	Soil	Same As Above
H15010111-012	4-042-2430	01/05/15 11:08	01/12/15	Soil	Same As Above
H15010111-013	4-042-3036	01/05/15 11:07	01/12/15	Soil	Same As Above
H15010111-014	4-046-2430	01/05/15 11:43	01/12/15	Soil	Same As Above
H15010111-015	4-046-3036	01/05/15 11:42	01/12/15	Soil	Same As Above
H15010111-016	4-046-3642	01/05/15 11:41	01/12/15	Soil	Same As Above
H15010111-017	4-047-3642	01/05/15 12:06	01/12/15	Soil	Same As Above
H15010111-018	4-047-4248	01/05/15 12:05	01/12/15	Soil	Same As Above
H15010111-019	4-042w-0612	01/05/15 12:44	01/12/15	Soil	Same As Above
H15010111-020	4-042w-1218	01/05/15 12:43	01/12/15	Soil	Same As Above
H15010111-021	4-042w-1824	01/05/15 12:42	01/12/15	Soil	Same As Above
H15010111-022	4-051-3642	01/05/15 13:36	01/12/15	Soil	Same As Above
H15010111-023	4-051-4248	01/05/15 13:35	01/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010111-024	4-050-1218	01/05/15 14:15	01/12/15	Soil	Same As Above
H15010111-025	4-050-1824	01/05/15 14:14	01/12/15	Soil	Same As Above
H15010111-026	4-050-2430	01/05/15 14:13	01/12/15	Soil	Same As Above
H15010111-027	4-049-3036	01/05/15 14:27	01/12/15	Soil	Same As Above
H15010111-028	4-049-3642	01/05/15 14:26	01/12/15	Soil	Same As Above
H15010111-029	4-049-4248	01/05/15 14:25	01/12/15	Soil	Same As Above
H15010111-030	4-056-3642	01/05/15 15:01	01/12/15	Soil	Same As Above
H15010111-031	4-056-4248	01/05/15 15:00	01/12/15	Soil	Same As Above
H15010111-032	4-053-4248	01/05/15 15:25	01/12/15	Soil	Same As Above
H15010111-033	4-053-4860	01/05/15 15:45	01/12/15	Soil	Same As Above
H15010111-034	4-069-2430	01/05/15 16:13	01/12/15	Soil	Same As Above
H15010111-035	4-069-3036	01/05/15 16:12	01/12/15	Soil	Same As Above
H15010111-036	4-069-3642	01/05/15 16:11	01/12/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010111

Report Date: 02/02/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010111

Report Date: 02/02/15
Date Received: 01/12/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010111-001	4-039-2430		7.1	270	15	1510	206	1710
H15010111-002	4-039-3036		7.4	319	26	1830	166	2980
H15010111-003	4-039-3642		7.5	241	11	1570	139	2390
H15010111-004	4-040-3642		7.3	230	9	1270	140	1560
H15010111-005	4-040-4248		7.4	143	6	913	101	1200
H15010111-006	4-030-3642		7.0	200	3	1070	138	1100
H15010111-007	4-030-4248		7.1	197	5	1050	137	1430
H15010111-008	4-041-1824		5.6	13	4	3440	17	820
H15010111-009	4-041-2430		6.6	5	13	282	12	1470
H15010111-010	4-041-3036		7.1	5	1	18	8	252
H15010111-011	4-042-1824		7.1	32	6	333	30	1610
H15010111-012	4-042-2430		7.0	4	< 1	15	10	174
H15010111-013	4-042-3036		7.4	3	< 1	23	9	142
H15010111-014	4-046-2430		7.1	5	3	3600	9	597
H15010111-015	4-046-3036		7.2	13	3	5130	16	563
H15010111-016	4-046-3642		7.4	18	1	2250	18	334
H15010111-017	4-047-3642		7.5	2060	11	3420	431	4560
H15010111-018	4-047-4248		7.2	2870	14	4700	483	6140
H15010111-019	4-042w-0612		7.7	950	8	6250	566	2480
H15010111-020	4-042w-1218		7.9	341	4	2890	230	1350
H15010111-021	4-042w-1824		7.7	40	3	160	34	708
H15010111-022	4-051-3642		6.7	222	6	1740	294	3890
H15010111-023	4-051-4248		6.9	567	8	2710	373	3830
H15010111-024	4-050-1218		6.7	1190	4	2450	1470	2190
H15010111-025	4-050-1824		6.9	28	9	6080	25	1000
H15010111-026	4-050-2430		7.2	12	4	784	17	927
H15010111-027	4-049-3036		7.2	16	4	4280	24	814
H15010111-028	4-049-3642		7.3	7	< 1	60	20	780
H15010111-029	4-049-4248		7.5	42	< 1	162	35	416
H15010111-030	4-056-3642		7.0	1930	38	12200	827	11100
H15010111-031	4-056-4248		7.0	724	16	5120	507	5150
H15010111-032	4-053-4248		7.2	1600	22	11400	554	5700
H15010111-033	4-053-4860		7.4	844	26	6130	440	3910
H15010111-034	4-069-2430		7.3	900	10	6280	540	2360
H15010111-035	4-069-3036		7.4	9	< 1	42	16	382
H15010111-036	4-069-3642		7.2	77	< 1	251	65	228

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150128A	
Lab ID: CCV_1_150126_1		Continuing Calibration Verification Standard								01/27/15 09:24
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150126_1		Continuing Calibration Verification Standard								01/27/15 09:24
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 09:25
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150126_1		Continuing Calibration Verification Standard								01/27/15 09:36
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150126_1		Continuing Calibration Verification Standard								01/27/15 09:50
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150126_1		Continuing Calibration Verification Standard								01/27/15 09:50
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 09:51
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150126_1		Continuing Calibration Verification Standard								01/27/15 10:01
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 10:13
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 10:40
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 11:08
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 11:29
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150127_1		Initial Calibration Verification Standard								01/28/15 07:05
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 08:49
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150126_1		Initial Calibration Verification Standard								01/27/15 06:52
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150127_1		Initial Calibration Verification Standard								01/28/15 06:49
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27803
Lab ID: LCS-27803		Laboratory Control Sample				Run: SOIL PH METER_150128A				01/27/15 09:25
pH, sat. paste		7.65	s.u.	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27803
Lab ID: LCS-27803		Laboratory Control Sample				Run: SOIL PH METER_150128A			01/27/15 09:25	
Lab ID: H15010111-010ADUP		Sample Duplicate				Run: SOIL PH METER_150128A			01/27/15 09:35	
pH, sat. paste		7.10	s.u.	0.10				0.1	30	
Lab ID: H15010111-020ADUP		Sample Duplicate				Run: SOIL PH METER_150128A			01/27/15 09:45	
pH, sat. paste		7.93	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27804
Lab ID: LCS-27804		Laboratory Control Sample				Run: SOIL PH METER_150128A			01/27/15 09:52	
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H15010111-030ADUP		Sample Duplicate				Run: SOIL PH METER_150128A			01/27/15 10:00	
pH, sat. paste		7.02	s.u.	0.10				0.4	30	
Lab ID: H15010111-036ADUP		Sample Duplicate				Run: SOIL PH METER_150128A			01/27/15 10:07	
pH, sat. paste		7.17	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150121B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/21/15 09:50
Arsenic			0.784	mg/L	0.0085	98	90	110			
Cadmium			0.386	mg/L	0.0010	97	90	110			
Copper			0.800	mg/L	0.010	100	90	110			
Lead			0.771	mg/L	0.010	96	90	110			
Zinc			0.787	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/21/15 10:05
Arsenic			-0.00219	mg/L	0.0085		0	0			
Cadmium			0.000500	mg/L	0.0010		0	0			
Copper			0.000450	mg/L	0.010		0	0			
Lead			-0.0158	mg/L	0.010		0	0			
Zinc			0.00316	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/21/15 10:09
Arsenic			0.958	mg/L	0.0085	96	80	120			
Cadmium			0.896	mg/L	0.0010	90	80	120			
Copper			0.507	mg/L	0.010	101	80	120			
Lead			0.916	mg/L	0.010	92	80	120			
Zinc			0.977	mg/L	0.010	98	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/21/15 18:26
Arsenic			2.45	mg/L	0.0085	98	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/21/15 18:30
Arsenic			-0.00753	mg/L	0.0085						
Cadmium			0.000260	mg/L	0.0010						
Copper			-0.00401	mg/L	0.010						
Lead			-0.0102	mg/L	0.010						
Zinc			0.00135	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/21/15 19:11
Arsenic			2.45	mg/L	0.0085	98	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.46	mg/L	0.010	99	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/21/15 19:14
Arsenic			-0.0100	mg/L	0.0085						
Cadmium			-0.000100	mg/L	0.0010						
Copper			0.000980	mg/L	0.010						
Lead			0.00502	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150121B	
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/21/15 19:14
Zinc			0.000760	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/21/15 19:55
Arsenic			2.41	mg/L	0.0085	96	90	110			
Cadmium			2.41	mg/L	0.0010	97	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.43	mg/L	0.010	97	90	110			
Zinc			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/21/15 19:58
Arsenic			-0.0134	mg/L	0.0085						
Cadmium			0.000290	mg/L	0.0010						
Copper			-0.000690	mg/L	0.010						
Lead			0.00319	mg/L	0.010						
Zinc			0.00140	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/21/15 20:39
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/21/15 20:42
Arsenic			-0.0126	mg/L	0.0085						
Cadmium			0.000660	mg/L	0.0010						
Copper			-0.000420	mg/L	0.010						
Lead			-0.00160	mg/L	0.010						
Zinc			0.00143	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/21/15 21:23
Arsenic			2.46	mg/L	0.0085	98	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.47	mg/L	0.010	99	90	110			
Lead			2.48	mg/L	0.010	99	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/21/15 21:26
Arsenic			-0.00604	mg/L	0.0085						
Cadmium			2.00E-05	mg/L	0.0010						
Copper			9.00E-05	mg/L	0.010						
Lead			0.00415	mg/L	0.010						
Zinc			0.000820	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150122B	
Lab ID:	**ICV**	4	Initial Calibration Verification Standard								01/22/15 09:41
Arsenic			0.791	mg/L	0.0085	99	90	110			
Copper			0.794	mg/L	0.010	99	90	110			
Lead			0.761	mg/L	0.010	95	90	110			
Zinc			0.786	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	4	Interference Check Sample A								01/22/15 09:56
Arsenic			0.00153	mg/L	0.0085		0	0			
Copper			-0.00542	mg/L	0.010		0	0			
Lead			-0.0336	mg/L	0.010		0	0			
Zinc			0.00309	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	4	Interference Check Sample AB								01/22/15 10:00
Arsenic			0.977	mg/L	0.0085	98	80	120			
Copper			0.509	mg/L	0.010	102	80	120			
Lead			0.902	mg/L	0.010	90	80	120			
Zinc			0.991	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard								01/22/15 18:05
Arsenic			2.50	mg/L	0.0085	100	90	110			
Copper			2.49	mg/L	0.010	99	90	110			
Lead			2.45	mg/L	0.010	98	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank								01/22/15 18:08
Arsenic			0.0108	mg/L	0.0085						
Copper			-0.00375	mg/L	0.010						
Lead			-0.00336	mg/L	0.010						
Zinc			0.000420	mg/L	0.010						
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard								01/22/15 18:48
Arsenic			2.51	mg/L	0.0085	100	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank								01/22/15 18:52
Arsenic			0.00707	mg/L	0.0085						
Copper			-0.00242	mg/L	0.010						
Lead			-0.0137	mg/L	0.010						
Zinc			-9.00E-05	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150123A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/23/15 09:38
Arsenic			0.804	mg/L	0.0085	101	90	110			
Cadmium			0.385	mg/L	0.0010	96	90	110			
Copper			0.790	mg/L	0.010	99	90	110			
Lead			0.766	mg/L	0.010	96	90	110			
Zinc			0.787	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/23/15 09:53
Arsenic			0.0105	mg/L	0.0085		0	0			
Cadmium			0.000150	mg/L	0.0010		0	0			
Copper			-0.00314	mg/L	0.010		0	0			
Lead			-0.0190	mg/L	0.010		0	0			
Zinc			-0.00123	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/23/15 09:57
Arsenic			0.966	mg/L	0.0085	97	80	120			
Cadmium			0.879	mg/L	0.0010	88	80	120			
Copper			0.492	mg/L	0.010	98	80	120			
Lead			0.869	mg/L	0.010	87	80	120			
Zinc			0.957	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/23/15 16:06
Arsenic			2.51	mg/L	0.0085	101	90	110			
Cadmium			2.50	mg/L	0.0010	100	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.49	mg/L	0.010	100	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/23/15 16:10
Arsenic			-0.000430	mg/L	0.0085						
Cadmium			0.000750	mg/L	0.0010						
Copper			0.00714	mg/L	0.010						
Lead			0.0123	mg/L	0.010						
Zinc			0.000340	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/23/15 16:50
Arsenic			2.50	mg/L	0.0085	100	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.49	mg/L	0.010	99	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/23/15 16:54
Arsenic			-0.00278	mg/L	0.0085						
Cadmium			0.00116	mg/L	0.0010						
Copper			0.00220	mg/L	0.010						
Lead			0.00978	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150123A	
Lab ID: CCB	5	Continuing Calibration Blank							01/23/15 16:54	
Zinc		0.000630	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27750	
Lab ID:	**MB-27750**	5	Method Blank				Run: ICP2-HE_150121B			01/21/15 18:34	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			0.8	mg/kg	0.6						
Zinc			0.9	mg/kg	0.09						
Lab ID:	**LFB-27750**	5	Laboratory Fortified Blank				Run: ICP2-HE_150121B			01/21/15 18:38	
Arsenic			45.9	mg/kg	1.0	92	80	120			
Cadmium			23.0	mg/kg	1.0	92	80	120			
Copper			48.0	mg/kg	1.0	96	80	120			
Lead			46.5	mg/kg	1.0	92	80	120			
Zinc			47.3	mg/kg	1.0	93	80	120			
Lab ID:	**LCS-27750**	5	Laboratory Control Sample				Run: ICP2-HE_150121B			01/21/15 18:41	
Arsenic			275	mg/kg	1.9	76	72.3	106.4			
Cadmium			116	mg/kg	1.0	80	73	105.1			
Copper			252	mg/kg	1.2	86	77.5	109.6			
Lead			168	mg/kg	3.4	85	75.9	108.6			
Zinc			188	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H15010111-025APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150121B			01/21/15 20:06	
Arsenic			241	mg/kg	1.8	89	75	125			
Cadmium			114	mg/kg	1.0	86	75	125			
Copper			6330	mg/kg	1.1		75	125			A
Lead			241	mg/kg	3.1	88	75	125			
Zinc			1220	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-025AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150121B			01/21/15 20:09	
Arsenic			64.3	mg/kg	1.7	85	75	125			
Cadmium			29.0	mg/kg	1.0	84	75	125			
Copper			6010	mg/kg	1.1		75	125			A
Lead			70.5	mg/kg	3.1	94	75	125			
Zinc			1020	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-025AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150121B			01/21/15 20:13	
Arsenic			65.6	mg/kg	1.7	89	75	125	2.0	20	
Cadmium			29.2	mg/kg	1.0	85	75	125	0.5	20	
Copper			5890	mg/kg	1.0		75	125	2.0	20	A
Lead			67.8	mg/kg	3.0	89	75	125	3.9	20	
Zinc			1020	mg/kg	1.0		75	125	0.1	20	A
Method:	**SW6010B**									Batch: 27751	
Lab ID:	**MB-27751**	5	Method Blank				Run: ICP2-HE_150121B			01/21/15 20:16	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27751
Lab ID:	**MB-27751**	5	Method Blank				Run: ICP2-HE_150121B			01/21/15 20:16	
Lead			0.8	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27751**	5	Laboratory Fortified Blank				Run: ICP2-HE_150121B			01/21/15 20:20	
Arsenic			46.5	mg/kg	1.0	93	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			49.2	mg/kg	1.0	98	80	120			
Lead			47.2	mg/kg	1.0	93	80	120			
Zinc			48.9	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27751**	5	Laboratory Control Sample				Run: ICP2-HE_150121B			01/21/15 20:24	
Arsenic			269	mg/kg	1.9	78	72.3	106.4			
Cadmium			114	mg/kg	1.0	83	73	105.1			
Copper			244	mg/kg	1.1	87	77.5	109.6			
Lead			170	mg/kg	3.3	90	75.9	108.6			
Zinc			187	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H15010111-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150121B			01/21/15 21:19	
Arsenic			312	mg/kg	1.9	89	75	125			
Cadmium			117	mg/kg	1.0	88	75	125			
Copper			491	mg/kg	1.2	90	75	125			
Lead			294	mg/kg	3.4	86	75	125			
Zinc			466	mg/kg	1.0	90	75	125			
Lab ID:	**H15010111-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150121B			01/21/15 21:30	
Arsenic			124	mg/kg	1.8	95	75	125			
Cadmium			22.3	mg/kg	1.0	89	75	125			
Copper			296	mg/kg	1.1		75	125			A
Lead			111	mg/kg	3.2	92	75	125			
Zinc			277	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150121B			01/21/15 21:34	
Arsenic			120	mg/kg	1.8	87	75	125	3.5	20	
Cadmium			21.8	mg/kg	1.0	87	75	125	2.1	20	
Copper			297	mg/kg	1.1		75	125	0.3	20	A
Lead			106	mg/kg	3.2	82	75	125	4.5	20	
Zinc			268	mg/kg	1.0		75	125	3.5	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27749
Lab ID:	**MB-27749**	4	Method Blank				Run: ICP2-HE_150122B				01/22/15 16:36
Arsenic			ND	mg/kg	0.4						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27749**	4	Laboratory Fortified Blank				Run: ICP2-HE_150122B				01/22/15 16:40
Arsenic			47.8	mg/kg	1.0	96	80	120			
Copper			49.3	mg/kg	1.0	98	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			48.0	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27749**	4	Laboratory Control Sample				Run: ICP2-HE_150122B				01/22/15 16:43
Arsenic			276	mg/kg	1.8	81	72.3	106.4			
Copper			245	mg/kg	1.1	88	77.5	109.6			
Lead			165	mg/kg	3.2	89	75.9	108.6			
Zinc			185	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H15010102-046APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150122B				01/22/15 17:35
Arsenic			244	mg/kg	1.9	93	75	125			
Copper			265	mg/kg	1.1	91	75	125			
Lead			250	mg/kg	3.3	95	75	125			
Zinc			644	mg/kg	1.0	91	75	125			
Lab ID:	**H15010102-046AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150122B				01/22/15 18:12
Arsenic			53.4	mg/kg	1.8	99	75	125			
Copper			72.9	mg/kg	1.1	91	75	125			
Lead			57.3	mg/kg	3.2	106	75	125			
Zinc			446	mg/kg	1.0		75	125			A
Lab ID:	**H15010102-046AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150122B				01/22/15 18:16
Arsenic			54.0	mg/kg	1.8	101	75	125	1.2	20	
Copper			71.9	mg/kg	1.1	89	75	125	1.4	20	
Lead			60.3	mg/kg	3.2	112	75	125	5.1	20	
Zinc			454	mg/kg	1.0		75	125	1.9	20	A
Lab ID:	**H15010111-007APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150122B				01/22/15 18:56
Arsenic			439	mg/kg	1.8	95	75	125			
Copper			1280	mg/kg	1.1		75	125			A
Lead			370	mg/kg	3.2	91	75	125			
Zinc			1690	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-007AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150122B				01/22/15 19:00
Arsenic			237	mg/kg	1.8	81	75	125			
Copper			999	mg/kg	1.1		75	125			A
Lead			180	mg/kg	3.2	86	75	125			
Zinc			1430	mg/kg	1.0		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6010B**										Batch: 27749
Lab ID: **H15010111-007AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150122B			01/22/15 19:03	
Arsenic		224	mg/kg	1.8	55	75	125	5.7	20	S
Copper		936	mg/kg	1.1		75	125	6.6	20	A
Lead		165	mg/kg	3.2	56	75	125	8.5	20	S
Zinc		1360	mg/kg	1.0		75	125	5.2	20	A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27764
Lab ID:	**MB-27764**	5	Method Blank				Run: ICP2-HE_150123A			01/23/15 16:14	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.03	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			0.8	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27764**	5	Laboratory Fortified Blank				Run: ICP2-HE_150123A			01/23/15 16:18	
Arsenic			47.2	mg/kg	1.0	94	80	120			
Cadmium			23.4	mg/kg	1.0	93	80	120			
Copper			48.4	mg/kg	1.0	96	80	120			
Lead			48.5	mg/kg	1.0	95	80	120			
Zinc			47.8	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27764**	5	Laboratory Control Sample				Run: ICP2-HE_150123A			01/23/15 16:21	
Arsenic			290	mg/kg	1.8	85	72.3	106.4			
Cadmium			123	mg/kg	1.0	90	73	105.1			
Copper			267	mg/kg	1.1	96	77.5	109.6			
Lead			187	mg/kg	3.2	100	75.9	108.6			
Zinc			196	mg/kg	1.0	93	74.2	109.9			
Lab ID:	**H15010111-017APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150123A			01/23/15 16:32	
Arsenic			2280	mg/kg	1.9		75	125			A
Cadmium			126	mg/kg	1.0	88	75	125			
Copper			3640	mg/kg	1.1		75	125			A
Lead			642	mg/kg	3.3	81	75	125			
Zinc			4750	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-017AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150123A			01/23/15 16:36	
Arsenic			2090	mg/kg	1.8		75	125			A
Cadmium			33.7	mg/kg	1.0	91	75	125			
Copper			3390	mg/kg	1.1		75	125			A
Lead			460	mg/kg	3.2		75	125			A
Zinc			4550	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-017AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150123A			01/23/15 16:39	
Arsenic			2150	mg/kg	1.8		75	125	2.8	20	A
Cadmium			34.3	mg/kg	1.0	94	75	125	1.7	20	
Copper			3450	mg/kg	1.1		75	125	1.9	20	A
Lead			479	mg/kg	3.2		75	125	4.0	20	A
Zinc			4680	mg/kg	1.0		75	125	2.8	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B237574	
Lab ID:	**QCS**	3	Initial Calibration Verification Standard							01/30/15 15:17	
Arsenic			0.0509	mg/L	0.0010	102	90	110			
Cadmium			0.0261	mg/L	0.0010	104	90	110			
Lead			0.0510	mg/L	0.0010	102	90	110			
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							01/30/15 10:53	
Arsenic			0.0518	mg/L	0.0010	104	90	110			
Cadmium			0.0266	mg/L	0.0010	106	90	110			
Copper			0.0528	mg/L	0.0010	106	90	110			
Lead			0.0498	mg/L	0.0010	100	90	110			
Zinc			0.0541	mg/L	0.0010	108	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/30/15 11:14	
Arsenic			-7.00E-05	mg/L	0.0010						
Cadmium			0.000330	mg/L	0.0010						
Copper			0.000530	mg/L	0.0010						
Lead			0.000320	mg/L	0.0010						
Zinc			0.00115	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/30/15 11:16	
Arsenic			0.00933	mg/L	0.0010	93	70	130			
Cadmium			0.0104	mg/L	0.0010	104	70	130			
Copper			0.0179	mg/L	0.0010	90	70	130			
Lead			0.000290	mg/L	0.0010		0	0			
Zinc			0.00965	mg/L	0.0010	97	70	130			
Method:	**SW6020**									Batch: B_86559	
Lab ID:	**MB-86559**	5	Method Blank				Run: SUB-B237574			01/30/15 22:13	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.5	mg/kg	0.1						
Lead			ND	mg/kg	0.08						
Zinc			1	mg/kg	0.6						
Lab ID:	**LCS-86559**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 22:15	
Arsenic			302	mg/kg	1.0	88	72	120			
Cadmium			137	mg/kg	1.0	100	73	120			
Copper			268	mg/kg	1.0	96	77	120			
Lead			190	mg/kg	1.0	102	75	120			
Zinc			208	mg/kg	1.0	97	74	120			
Lab ID:	**LFB-86559**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 22:18	
Arsenic			49.4	mg/kg	1.0	99	80	120			
Cadmium			26.2	mg/kg	1.0	105	80	120			
Copper			51.2	mg/kg	1.0	101	80	120			
Lead			50.9	mg/kg	1.0	102	80	120			
Zinc			50.8	mg/kg	1.0	99	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86559	
Lab ID:	**LFB-86559**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 22:18	
Lab ID:	**B15011731-046ADIL**	5	Serial Dilution				Run: SUB-B237574			01/30/15 22:52	
Arsenic			3.30	mg/kg	1.7		0	0		10	N
Cadmium			0.900	mg/kg	1.0		0	0		10	N
Copper			25.8	mg/kg	1.0		0	0	2.8	10	
Lead			8.35	mg/kg	1.0		0	0	0.6	10	
Zinc			438	mg/kg	2.9		0	0	5.4	10	
Lab ID:	**B15011731-046APDS1**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/30/15 22:55	
Arsenic			50.9	mg/kg	1.0	95	75	125			
Cadmium			51.5	mg/kg	1.0	101	75	125			
Copper			73.0	mg/kg	1.0	96	75	125			
Lead			57.4	mg/kg	1.0	98	75	125			
Zinc			466	mg/kg	1.0		75	125			A
Lab ID:	**B15011731-046AMS3**	5	Sample Matrix Spike				Run: SUB-B237574			01/30/15 22:58	
Arsenic			50.2	mg/kg	1.0	94	75	125			
Cadmium			26.1	mg/kg	1.0	101	75	125			
Copper			73.3	mg/kg	1.0	97	75	125			
Lead			57.9	mg/kg	1.0	99	75	125			
Zinc			452	mg/kg	1.0		75	125			A
Lab ID:	**B15011731-046AMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/30/15 23:00	
Arsenic			51.6	mg/kg	1.0	97	75	125	2.6	20	
Cadmium			27.4	mg/kg	1.0	106	75	125	5.0	20	
Copper			75.2	mg/kg	1.0	100	75	125	2.5	20	
Lead			59.1	mg/kg	1.0	101	75	125	2.0	20	
Zinc			464	mg/kg	1.0		75	125	2.8	20	A
Lab ID:	**H15010111-007A**	5	Serial Dilution				Run: SUB-B237574			01/30/15 23:32	
Arsenic			201	mg/kg	1.7		0	0	2.3	10	
Cadmium			5.10	mg/kg	1.0		0	0	2.0	10	
Copper			1060	mg/kg	1.0		0	0	5.4	10	
Lead			141	mg/kg	1.0		0	0	9.7	10	
Zinc			1500	mg/kg	2.9		0	0	6.0	10	
Lab ID:	**H15010111-007A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/30/15 23:35	
Arsenic			238	mg/kg	1.0	84	75	125			
Cadmium			54.3	mg/kg	1.0	99	75	125			
Copper			1040	mg/kg	1.0		75	125			A
Lead			168	mg/kg	1.0	79	75	125			
Zinc			1430	mg/kg	1.0		75	125			A
Lab ID:	**LCS-86559**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 13:42	
Arsenic			321	mg/kg	1.0	94	72	120			
Cadmium			142	mg/kg	1.0	104	73	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86559	
Lab ID:	**LCS-86559**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 13:42	
Copper			273	mg/kg	1.0	98	77	120			
Lead			194	mg/kg	1.0	104	75	120			
Zinc			211	mg/kg	1.0	99	74	120			
Lab ID:	**H15010111-007A**	5	Sample Matrix Spike				Run: SUB-B237574			01/30/15 23:37	
Arsenic			238	mg/kg	1.0	85	75	125			
Cadmium			29.2	mg/kg	1.0	97	75	125			
Copper			989	mg/kg	1.0		75	125			A
Lead			180	mg/kg	1.0	105	75	125			
Zinc			1420	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-007A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/30/15 23:40	
Arsenic			227	mg/kg	1.0	62	75	125	5.0	20	S
Cadmium			29.6	mg/kg	1.0	98	75	125	1.4	20	
Copper			938	mg/kg	1.0		75	125	5.3	20	A
Lead			163	mg/kg	1.0	69	75	125	10	20	S
Zinc			1380	mg/kg	1.0		75	125	3.1	20	A
Method:	**SW6020**									Batch: B_86561	
Lab ID:	**LCS-86561**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 13:55	
Arsenic			301	mg/kg	1.0	88	72	120			
Cadmium			135	mg/kg	1.0	98	73	120			
Copper			257	mg/kg	1.0	92	77	120			
Lead			181	mg/kg	1.0	97	75	120			
Zinc			198	mg/kg	1.0	93	74	120			
Lab ID:	**MB-86561**	5	Method Blank				Run: SUB-B237574			01/31/15 01:43	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.4	mg/kg	0.1						
Lead			ND	mg/kg	0.08						
Zinc			2	mg/kg	0.6						
Lab ID:	**LCS-86561**	5	Standard Reference Material				Run: SUB-B237574			01/31/15 01:45	
Arsenic			289	mg/kg	1.0	84	72	120			
Cadmium			127	mg/kg	1.0	92	73	120			
Copper			262	mg/kg	1.0	94	77	120			
Lead			171	mg/kg	1.0	92	75	120			
Zinc			198	mg/kg	1.0	93	74	120			
Lab ID:	**LFB-86561**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/31/15 01:48	
Arsenic			49.0	mg/kg	1.0	98	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Copper			50.6	mg/kg	1.0	100	80	120			
Lead			48.3	mg/kg	1.0	97	80	120			
Zinc			50.4	mg/kg	1.0	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86561	
Lab ID:	**LFB-86561**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/31/15 01:48	
Lab ID:	**H15010111-025A**	5	Serial Dilution				Run: SUB-B237574			01/31/15 02:25	
Arsenic			28.5	mg/kg	1.7		0	0	2.2	10	
Cadmium			11.1	mg/kg	1.0		0	0	2.3	10	
Copper			6820	mg/kg	1.0		0	0	5.1	10	
Lead			26.6	mg/kg	1.0		0	0	1.5	10	
Zinc			1190	mg/kg	2.9		0	0	7.5	10	
Lab ID:	**H15010111-025A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/31/15 02:28	
Arsenic			74.5	mg/kg	1.0	93	75	125			
Cadmium			59.3	mg/kg	1.0	97	75	125			
Copper			6350	mg/kg	1.0		75	125			A
Lead			72.2	mg/kg	1.0	92	75	125			
Zinc			1100	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-025A**	5	Sample Matrix Spike				Run: SUB-B237574			01/31/15 02:30	
Arsenic			76.2	mg/kg	1.0	97	75	125			
Cadmium			36.0	mg/kg	1.0	101	75	125			
Copper			6570	mg/kg	1.0		75	125			A
Lead			75.2	mg/kg	1.0	98	75	125			
Zinc			1140	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-025A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/31/15 02:33	
Arsenic			77.2	mg/kg	1.0	98	75	125	1.2	20	
Cadmium			36.6	mg/kg	1.0	103	75	125	1.4	20	
Copper			6480	mg/kg	1.0		75	125	1.4	20	A
Lead			76.5	mg/kg	1.0	101	75	125	1.6	20	
Zinc			1140	mg/kg	1.0		75	125	0.4	20	A
Method:	**SW6020**									Batch: B_86562	
Lab ID:	**MB-86562**	5	Method Blank				Run: SUB-B237574			01/31/15 02:46	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.4	mg/kg	0.1						
Lead			ND	mg/kg	0.08						
Zinc			1	mg/kg	0.6						
Lab ID:	**LCS-86562**	5	Standard Reference Material				Run: SUB-B237574			01/31/15 02:49	
Arsenic			298	mg/kg	1.0	87	72	120			
Cadmium			131	mg/kg	1.0	95	73	120			
Copper			270	mg/kg	1.0	97	77	120			
Lead			179	mg/kg	1.0	96	75	120			
Zinc			204	mg/kg	1.0	96	74	120			
Lab ID:	**LFB-86562**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/31/15 02:51	
Arsenic			49.5	mg/kg	1.0	99	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010111

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86562	
Lab ID:	**LFB-86562**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/31/15 02:51	
Cadmium			25.5	mg/kg	1.0	102	80	120			
Copper			51.5	mg/kg	1.0	102	80	120			
Lead			49.4	mg/kg	1.0	99	80	120			
Zinc			51.4	mg/kg	1.0	100	80	120			
Lab ID:	**B15011733-036ADIL**	5	Serial Dilution				Run: SUB-B237574			01/31/15 03:10	
Arsenic			80.2	mg/kg	1.7		0	0	1.9	10	
Cadmium			0.950	mg/kg	1.0		0	0		10	N
Copper			264	mg/kg	1.0		0	0	1.9	10	
Lead			61.0	mg/kg	1.0		0	0	4.4	10	
Zinc			241	mg/kg	2.9		0	0	5.6	10	
Lab ID:	**B15011733-036APDS1**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/31/15 03:20	
Arsenic			121	mg/kg	1.0	85	75	125			
Cadmium			46.9	mg/kg	1.0	92	75	125			
Copper			302	mg/kg	1.0		75	125			A
Lead			97.4	mg/kg	1.0	78	75	125			
Zinc			268	mg/kg	1.0		75	125			A
Lab ID:	**B15011733-036AMS3**	5	Sample Matrix Spike				Run: SUB-B237574			01/31/15 03:23	
Arsenic			133	mg/kg	1.0	109	75	125			
Cadmium			26.4	mg/kg	1.0	102	75	125			
Copper			325	mg/kg	1.0		75	125			A
Lead			107	mg/kg	1.0	97	75	125			
Zinc			294	mg/kg	1.0		75	125			A
Lab ID:	**B15011733-036AMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/31/15 03:26	
Arsenic			131	mg/kg	1.0	105	75	125	1.4	20	
Cadmium			25.6	mg/kg	1.0	99	75	125	3.1	20	
Copper			319	mg/kg	1.0		75	125	1.9	20	A
Lead			105	mg/kg	1.0	93	75	125	2.2	20	
Zinc			287	mg/kg	1.0		75	125	2.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H15010111

Login completed by: Tracy L. Lorash

Date Received: 1/12/2015

Reviewed by: BL2000\rwilliams

Received by: AHN

Reviewed Date: 1/15/2015

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	1.1°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010111

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-039-2430	903	01/05/15	Soil	A	B		1
4-039-3036	902	01/05/15	Soil	A	B		1
4-039-3642	901	01/05/15	Soil	A	B		1
4-040-3642	921	01/05/15	Soil	A	B		1
4-040-4248	920	01/05/15	Soil	A	B		1
4-030-3642	956	01/05/15	Soil	A	B		1
4-030-4248	955	01/05/15	Soil	A	B		1
4-041-1824	1039	01/05/15	Soil	A	B		1
4-041-2430	1038	01/05/15	Soil	A	B		1
4-041-3036	1037	01/05/15	Soil	A	B		1
4-042-1824	1109	01/05/15	Soil	A	B		1
4-042-2430	1108	01/05/15	Soil	A	B		1
4-042-3036	1107	01/05/15	Soil	A	B		1
4-046-2430	1143	01/05/15	Soil	A	B		1
4-046-3036	1142	01/05/15	Soil	A	B		1
4-046-3642	1141	01/05/15	Soil	A	B		1
4-047-3642	1206	01/05/15	Soil	A	B		1
4-047-4248	1205	01/05/15	Soil	A	B		1
4-042w-0612	1244	01/05/15	Soil	A	B		1
4-042w-1218	1243	01/05/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1/12/15 1240	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 1.1 on ice hand	1/12/15 12:40

COC010515TP.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010111

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-042w-1824	1242	01/05/15	Soil	A	B		1
4-051-3642	1336	01/05/15	Soil	A	B		1
4-051-4248	1335	01/05/15	Soil	A	B		1
4-050-1218	1415	01/05/15	Soil	A	B		1
4-050-1824	1414	01/05/15	Soil	A	B		1
4-050-2430	1413	01/05/15	Soil	A	B		1
4-049-3036	1427	01/05/15	Soil	A	B		1
4-049-3642	1426	01/05/15	Soil	A	B		1
4-049-4248	1425	01/05/15	Soil	A	B		1
4-056-3642	1501	01/05/15	Soil	A	B		1
4-056-4248	1500	01/05/15	Soil	A	B		1
4-053-4248	1525	01/05/15	Soil	A	B		1
4-053-4860	1545	01/05/15	Soil	A	B		1
4-069-2430	1613	01/05/15	Soil	A	B		1
4-069-3036	1612	01/05/15	Soil	A	B		1
4-069-3642	1611	01/05/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1/12/15 1240	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] hand	1.1 TP on ice 1/12/15 12:40

ANALYTICAL SUMMARY REPORT

February 02, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010103

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 24 samples for MT DEQ-Federal Superfund on 1/12/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010103-001	4-146w-0006	01/09/15 8:32	01/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010103-002	4-146w-0612	01/09/15 8:31	01/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010103-003	4-146w-1218	01/09/15 8:30	01/12/15	Soil	Same As Above
H15010103-004	4-156w-0006	01/09/15 11:18	01/12/15	Soil	Same As Above
H15010103-005	4-156w-0612	01/09/15 11:17	01/12/15	Soil	Same As Above
H15010103-006	4-158-2430	01/09/15 9:03	01/12/15	Soil	Same As Above
H15010103-007	4-158-3036	01/09/15 9:02	01/12/15	Soil	Same As Above
H15010103-008	4-158-3642	01/09/15 9:01	01/12/15	Soil	Same As Above
H15010103-009	4-159-2430	01/09/15 11:08	01/12/15	Soil	Same As Above
H15010103-010	4-159-3036	01/09/15 11:07	01/12/15	Soil	Same As Above
H15010103-011	4-159-3642	01/09/15 11:06	01/12/15	Soil	Same As Above
H15010103-012	4-165-0006	01/09/15 9:42	01/12/15	Soil	Same As Above
H15010103-013	4-165-0612	01/09/15 9:41	01/12/15	Soil	Same As Above
H15010103-014	4-165-1218	01/09/15 9:40	01/12/15	Soil	Same As Above
H15010103-015	4-166-1218	01/09/15 9:56	01/12/15	Soil	Same As Above
H15010103-016	4-166-1824	01/09/15 9:54	01/12/15	Soil	Same As Above
H15010103-017	4-166-1824d	01/09/15 9:55	01/12/15	Soil	Same As Above
H15010103-018	4-166-2430	01/09/15 9:53	01/12/15	Soil	Same As Above
H15010103-019	4-167-1218	01/09/15 10:15	01/12/15	Soil	Same As Above
H15010103-020	4-167-1824	01/09/15 10:14	01/12/15	Soil	Same As Above
H15010103-021	4-167-2430	01/09/15 10:13	01/12/15	Soil	Same As Above
H15010103-022	4-168-0612	01/09/15 10:44	01/12/15	Soil	Same As Above
H15010103-023	4-168-1218	01/09/15 10:43	01/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010103-024	4-168-1824	01/09/15 10:42 01/12/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010103

Report Date: 02/02/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010103

Report Date: 02/02/15
Date Received: 01/12/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010103-001	4-146w-0006		7.6	501	6	2290	397	1940
H15010103-002	4-146w-0612		7.9	73	2	618	78	521
H15010103-003	4-146w-1218		7.8	10	< 1	28	10	55
H15010103-004	4-156w-0006		7.9	134	3	513	107	494
H15010103-005	4-156w-0612		7.8	21	< 1	72	17	87
H15010103-006	4-158-2430		7.4	6	2	125	13	1680
H15010103-007	4-158-3036		7.3	6	6	96	14	1200
H15010103-008	4-158-3642		7.2	5	3	80	10	825
H15010103-009	4-159-2430		7.6	191	78	12000	204	14400
H15010103-010	4-159-3036		7.6	10	< 1	119	20	1270
H15010103-011	4-159-3642		7.5	11	< 1	52	19	99
H15010103-012	4-165-0006		7.4	298	13	3490	275	1740
H15010103-013	4-165-0612		7.5	34	4	160	36	1570
H15010103-014	4-165-1218		7.3	12	< 1	68	21	140
H15010103-015	4-166-1218		7.8	35	18	3320	21	3420
H15010103-016	4-166-1824		7.6	16	1	129	20	599
H15010103-017	4-166-1824d		7.9	14	3	353	12	982
H15010103-018	4-166-2430		7.5	7	< 1	46	12	223
H15010103-019	4-167-1218		7.0	134	5	3600	146	1510
H15010103-020	4-167-1824		7.2	4	< 1	100	8	150
H15010103-021	4-167-2430		7.5	6	< 1	74	10	114
H15010103-022	4-168-0612		7.9	985	10	6550	590	3260
H15010103-023	4-168-1218		8.1	27	1	116	17	367
H15010103-024	4-168-1824		8.0	9	< 1	40	15	70

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010103

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150123A		
Lab ID: ICV_1_150122_1		Initial Calibration Verification Standard							01/23/15 07:33	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150122_1		Initial Calibration Verification Standard							01/23/15 08:01	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150122_1		Continuing Calibration Verification Standard							01/23/15 08:26	
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150122_1		Continuing Calibration Verification Standard							01/23/15 08:27	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150122_1		Initial Calibration Verification Standard							01/23/15 08:27	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150122_1		Continuing Calibration Verification Standard							01/23/15 08:37	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150122_1		Continuing Calibration Verification Standard							01/23/15 08:50	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150122_1		Continuing Calibration Verification Standard							01/23/15 08:51	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150122_1		Initial Calibration Verification Standard							01/23/15 08:52	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27784
Lab ID: LCS-27784		Laboratory Control Sample				Run: SOIL PH METER_150123A			01/23/15 08:28	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H15010103-010ADUP		Sample Duplicate				Run: SOIL PH METER_150123A			01/23/15 08:44	
pH, sat. paste		7.59	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27785
Lab ID: LCS-27785		Laboratory Control Sample				Run: SOIL PH METER_150123A			01/23/15 08:52	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H15010103-024ADUP		Sample Duplicate				Run: SOIL PH METER_150123A			01/23/15 09:00	
pH, sat. paste		7.95	s.u.	0.10				0.4	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010103

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150120A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/20/15 16:02	
Arsenic			0.794	mg/L	0.0085	99	90	110			
Cadmium			0.389	mg/L	0.0010	97	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.808	mg/L	0.010	101	90	110			
Zinc			0.797	mg/L	0.010	100	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/20/15 16:17	
Arsenic			0.0127	mg/L	0.0085		0	0			
Cadmium			0.000730	mg/L	0.0010		0	0			
Copper			-0.00328	mg/L	0.010		0	0			
Lead			0.00836	mg/L	0.010		0	0			
Zinc			0.00491	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/20/15 16:21	
Arsenic			0.974	mg/L	0.0085	97	80	120			
Cadmium			0.901	mg/L	0.0010	90	80	120			
Copper			0.497	mg/L	0.010	99	80	120			
Lead			0.931	mg/L	0.010	93	80	120			
Zinc			0.988	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/20/15 18:25	
Arsenic			2.62	mg/L	0.0085	105	90	110			
Cadmium			2.63	mg/L	0.0010	105	90	110			
Copper			2.62	mg/L	0.010	105	90	110			
Lead			2.59	mg/L	0.010	104	90	110			
Zinc			2.58	mg/L	0.010	103	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/20/15 18:28	
Arsenic			0.00146	mg/L	0.0085						
Cadmium			-0.000100	mg/L	0.0010						
Copper			-0.00257	mg/L	0.010						
Lead			0.00633	mg/L	0.010						
Zinc			0.00217	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/20/15 19:10	
Arsenic			2.62	mg/L	0.0085	105	90	110			
Cadmium			2.65	mg/L	0.0010	106	90	110			
Copper			2.59	mg/L	0.010	104	90	110			
Lead			2.69	mg/L	0.010	108	90	110			
Zinc			2.65	mg/L	0.010	106	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/20/15 19:13	
Arsenic			0.00790	mg/L	0.0085						
Cadmium			0.000210	mg/L	0.0010						
Copper			0.00188	mg/L	0.010						
Lead			0.0220	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010103

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150120A	
Lab ID: CCB	5	Continuing Calibration Blank							01/20/15 19:13	
Zinc		0.00152	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/20/15 19:54	
Arsenic		2.67	mg/L	0.0085	107	90	110			
Cadmium		2.68	mg/L	0.0010	107	90	110			
Copper		2.58	mg/L	0.010	103	90	110			
Lead		2.71	mg/L	0.010	108	90	110			
Zinc		2.65	mg/L	0.010	106	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/20/15 19:57	
Arsenic		0.00305	mg/L	0.0085						
Cadmium		0.000700	mg/L	0.0010						
Copper		0.000150	mg/L	0.010						
Lead		0.0146	mg/L	0.010						
Zinc		0.00180	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/20/15 20:20	
Arsenic		2.52	mg/L	0.0085	101	90	110			
Cadmium		2.51	mg/L	0.0010	101	90	110			
Copper		2.53	mg/L	0.010	101	90	110			
Lead		2.49	mg/L	0.010	100	90	110			
Zinc		2.54	mg/L	0.010	101	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/20/15 20:23	
Arsenic		0.00928	mg/L	0.0085						
Cadmium		0.00115	mg/L	0.0010						
Copper		-4.00E-05	mg/L	0.010						
Lead		-0.0322	mg/L	0.010						
Zinc		0.00206	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/20/15 21:04	
Arsenic		2.50	mg/L	0.0085	100	90	110			
Cadmium		2.48	mg/L	0.0010	99	90	110			
Copper		2.52	mg/L	0.010	101	90	110			
Lead		2.45	mg/L	0.010	98	90	110			
Zinc		2.51	mg/L	0.010	100	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/20/15 21:07	
Arsenic		0.00148	mg/L	0.0085						
Cadmium		0.000860	mg/L	0.0010						
Copper		0.00162	mg/L	0.010						
Lead		0.00169	mg/L	0.010						
Zinc		0.00112	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/20/15 21:48	
Arsenic		2.54	mg/L	0.0085	102	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010103

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150120A	
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/20/15 21:48	
Cadmium		2.52	mg/L	0.0010	101	90	110			
Copper		2.58	mg/L	0.010	103	90	110			
Lead		2.50	mg/L	0.010	100	90	110			
Zinc		2.54	mg/L	0.010	102	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/20/15 21:51	
Arsenic		0.00227	mg/L	0.0085						
Cadmium		0.000840	mg/L	0.0010						
Copper		-0.00186	mg/L	0.010						
Lead		-0.00747	mg/L	0.010						
Zinc		-1.00E-05	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/20/15 22:32	
Arsenic		2.54	mg/L	0.0085	102	90	110			
Cadmium		2.52	mg/L	0.0010	101	90	110			
Copper		2.54	mg/L	0.010	102	90	110			
Lead		2.49	mg/L	0.010	99	90	110			
Zinc		2.55	mg/L	0.010	102	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/20/15 22:35	
Arsenic		0.00166	mg/L	0.0085						
Cadmium		0.00134	mg/L	0.0010						
Copper		-0.000930	mg/L	0.010						
Lead		-0.000630	mg/L	0.010						
Zinc		0.00144	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010103

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27716	
Lab ID:	**MB-27716**	5	Method Blank				Run: ICP2-HE_150120A			01/20/15 18:36	
Arsenic			0.5	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			0.9	mg/kg	0.6						
Zinc			5	mg/kg	0.09						
Lab ID:	**LFB-27716**	5	Laboratory Fortified Blank				Run: ICP2-HE_150120A			01/20/15 18:40	
Arsenic			50.9	mg/kg	1.0	101	80	120			
Cadmium			25.6	mg/kg	1.0	102	80	120			
Copper			50.6	mg/kg	1.0	101	80	120			
Lead			52.0	mg/kg	1.0	102	80	120			
Zinc			55.5	mg/kg	1.0	101	80	120			
Lab ID:	**LCS-27716**	5	Laboratory Control Sample				Run: ICP2-HE_150120A			01/20/15 18:44	
Arsenic			297	mg/kg	1.8	86	72.3	106.4			
Cadmium			126	mg/kg	1.0	92	73	105.1			
Copper			254	mg/kg	1.1	91	77.5	109.6			
Lead			189	mg/kg	3.2	101	75.9	108.6			
Zinc			200	mg/kg	1.0	92	74.2	109.9			
Lab ID:	**H15010103-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150120A			01/20/15 20:38	
Arsenic			230	mg/kg	1.8	88	75	125			
Cadmium			110	mg/kg	1.0	87	75	125			
Copper			273	mg/kg	1.1	90	75	125			
Lead			233	mg/kg	3.2	88	75	125			
Zinc			448	mg/kg	1.0	89	75	125			
Lab ID:	**H15010103-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150120A			01/20/15 20:42	
Arsenic			54.2	mg/kg	1.8	94	75	125			
Cadmium			22.6	mg/kg	1.0	92	75	125			
Copper			95.8	mg/kg	1.1	101	75	125			
Lead			59.0	mg/kg	3.1	97	75	125			
Zinc			273	mg/kg	1.0		75	125			A
Lab ID:	**H15010103-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150120A			01/20/15 20:45	
Arsenic			51.9	mg/kg	1.8	89	75	125	4.3	20	
Cadmium			22.1	mg/kg	1.0	90	75	125	2.2	20	
Copper			92.1	mg/kg	1.1	93	75	125	4.0	20	
Lead			61.3	mg/kg	3.1	102	75	125	3.8	20	
Zinc			266	mg/kg	1.0		75	125	2.7	20	A
Method:	**SW6010B**									Batch: 27717	
Lab ID:	**MB-27717**	5	Method Blank				Run: ICP2-HE_150120A			01/20/15 20:49	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010103

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27717
Lab ID:	**MB-27717**	5	Method Blank				Run: ICP2-HE_150120A				01/20/15 20:49
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27717**	5	Laboratory Fortified Blank				Run: ICP2-HE_150120A				01/20/15 20:53
Arsenic			47.8	mg/kg	1.0	96	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			47.8	mg/kg	1.0	96	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			48.5	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27717**	5	Laboratory Control Sample				Run: ICP2-HE_150120A				01/20/15 20:57
Arsenic			262	mg/kg	1.7	76	72.3	106.4			
Cadmium			111	mg/kg	1.0	81	73	105.1			
Copper			242	mg/kg	1.1	87	77.5	109.6			
Lead			160	mg/kg	3.1	86	75.9	108.6			
Zinc			178	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H15010103-024APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150120A				01/20/15 22:17
Arsenic			233	mg/kg	1.8	87	75	125			
Cadmium			109	mg/kg	1.0	85	75	125			
Copper			272	mg/kg	1.1	91	75	125			
Lead			232	mg/kg	3.2	86	75	125			
Zinc			297	mg/kg	1.0	89	75	125			
Lab ID:	**H15010103-024AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150120A				01/20/15 22:21
Arsenic			52.7	mg/kg	1.8	85	75	125			
Cadmium			21.4	mg/kg	1.0	87	75	125			
Copper			87.0	mg/kg	1.1	95	75	125			
Lead			59.8	mg/kg	3.2	95	75	125			
Zinc			118	mg/kg	1.0	98	75	125			
Lab ID:	**H15010103-024AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150120A				01/20/15 22:24
Arsenic			53.7	mg/kg	1.8	87	75	125	2.0	20	
Cadmium			21.7	mg/kg	1.0	88	75	125	1.3	20	
Copper			87.5	mg/kg	1.1	96	75	125	0.5	20	
Lead			58.7	mg/kg	3.2	93	75	125	1.8	20	
Zinc			119	mg/kg	1.0	100	75	125	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010103

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B237574	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							01/30/15 15:17	
Arsenic			0.0509	mg/L	0.0010	102	90	110			
Cadmium			0.0261	mg/L	0.0010	104	90	110			
Copper			0.0518	mg/L	0.0010	104	90	110			
Lead			0.0510	mg/L	0.0010	102	90	110			
Zinc			0.0543	mg/L	0.0010	109	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/30/15 15:33	
Arsenic			2.00E-05	mg/L	0.0010						
Cadmium			0.000310	mg/L	0.0010						
Copper			0.000610	mg/L	0.0010						
Lead			0.000270	mg/L	0.0010						
Zinc			0.00124	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/30/15 15:36	
Arsenic			0.00928	mg/L	0.0010	93	70	130			
Cadmium			0.0103	mg/L	0.0010	103	70	130			
Copper			0.0186	mg/L	0.0010	93	70	130			
Lead			0.000260	mg/L	0.0010		0	0			
Zinc			0.00995	mg/L	0.0010	99	70	130			
Lab ID:	**QCS**	3	Initial Calibration Verification Standard							01/30/15 10:53	
Arsenic			0.0518	mg/L	0.0010	104	90	110			
Cadmium			0.0266	mg/L	0.0010	106	90	110			
Lead			0.0498	mg/L	0.0010	100	90	110			
Method:	**SW6020**									Batch: B_86557	
Lab ID:	**MB-86557**	5	Method Blank				Run: SUB-B237574			01/30/15 19:12	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.2	mg/kg	0.1						
Lead			0.09	mg/kg	0.08						
Zinc			5	mg/kg	0.6						
Lab ID:	**LCS-86557**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 19:15	
Arsenic			310	mg/kg	1.0	90	72	120			
Cadmium			140	mg/kg	1.0	102	73	120			
Copper			280	mg/kg	1.0	100	77	120			
Lead			187	mg/kg	1.0	100	75	120			
Zinc			215	mg/kg	1.0	101	74	120			
Lab ID:	**LFB-86557**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 19:17	
Arsenic			51.1	mg/kg	1.0	102	80	120			
Cadmium			27.2	mg/kg	1.0	109	80	120			
Copper			53.6	mg/kg	1.0	107	80	120			
Lead			52.4	mg/kg	1.0	105	80	120			
Zinc			58.6	mg/kg	1.0	106	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010103

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86557	
Lab ID:	**LFB-86557**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 19:17	
Lab ID:	**H15010103-018A**	5	Serial Dilution				Run: SUB-B237574			01/30/15 20:13	
Arsenic			7.20	mg/kg	1.7		0	0		10	N
Cadmium			0.500	mg/kg	1.0		0	0		10	N
Copper			53.4	mg/kg	1.0		0	0	1.6	10	
Lead			11.9	mg/kg	1.0		0	0	4.1	10	
Zinc			256	mg/kg	2.9		0	0	0.4	10	
Lab ID:	**H15010103-018A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/30/15 20:16	
Arsenic			55.9	mg/kg	1.0	97	75	125			
Cadmium			50.8	mg/kg	1.0	100	75	125			
Copper			102	mg/kg	1.0	95	75	125			
Lead			61.4	mg/kg	1.0	98	75	125			
Zinc			294	mg/kg	1.0		75	125			A
Lab ID:	**H15010103-018A**	5	Sample Matrix Spike				Run: SUB-B237574			01/30/15 20:18	
Arsenic			57.3	mg/kg	1.0	100	75	125			
Cadmium			27.0	mg/kg	1.0	105	75	125			
Copper			107	mg/kg	1.0	106	75	125			
Lead			65.0	mg/kg	1.0	105	75	125			
Zinc			302	mg/kg	1.0		75	125			A
Lab ID:	**H15010103-018A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/30/15 20:21	
Arsenic			55.8	mg/kg	1.0	97	75	125	2.7	20	
Cadmium			26.4	mg/kg	1.0	103	75	125	2.2	20	
Copper			104	mg/kg	1.0	100	75	125	2.7	20	
Lead			62.2	mg/kg	1.0	100	75	125	4.4	20	
Zinc			296	mg/kg	1.0		75	125	2.1	20	A
Method:	**SW6020**									Batch: B_86560	
Lab ID:	**MB-86560**	5	Method Blank				Run: SUB-B237574			01/31/15 00:39	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.4	mg/kg	0.1						
Lead			ND	mg/kg	0.08						
Zinc			1	mg/kg	0.6						
Lab ID:	**LFB-86560**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/31/15 00:44	
Arsenic			49.3	mg/kg	1.0	99	80	120			
Cadmium			25.7	mg/kg	1.0	103	80	120			
Copper			50.6	mg/kg	1.0	100	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Zinc			51.6	mg/kg	1.0	101	80	120			
Lab ID:	**H15010103-024A**	5	Serial Dilution				Run: SUB-B237574			01/31/15 01:21	
Arsenic			9.55	mg/kg	1.7		0	0		10	N

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010103

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86560	
Lab ID:	**H15010103-024A**	5	Serial Dilution				Run: SUB-B237574			01/31/15 01:21	
Cadmium			0.350	mg/kg	1.0		0	0		10	N
Copper			43.6	mg/kg	1.0		0	0	0.5	10	
Lead			14.5	mg/kg	1.0		0	0	3.0	10	
Zinc			82.0	mg/kg	2.9		0	0	4.8	10	
Lab ID:	**H15010103-024A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/31/15 01:24	
Arsenic			58.1	mg/kg	1.0	98	75	125			
Cadmium			52.0	mg/kg	1.0	103	75	125			
Copper			90.2	mg/kg	1.0	93	75	125			
Lead			63.3	mg/kg	1.0	97	75	125			
Zinc			121	mg/kg	1.0	86	75	125			
Lab ID:	**H15010103-024A**	5	Sample Matrix Spike				Run: SUB-B237574			01/31/15 01:27	
Arsenic			56.0	mg/kg	1.0	94	75	125			
Cadmium			24.9	mg/kg	1.0	98	75	125			
Copper			93.9	mg/kg	1.0	100	75	125			
Lead			61.6	mg/kg	1.0	93	75	125			
Zinc			125	mg/kg	1.0	95	75	125			
Lab ID:	**H15010103-024A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/31/15 01:37	
Arsenic			56.0	mg/kg	1.0	93	75	125	0.1	20	
Cadmium			24.8	mg/kg	1.0	98	75	125	0.2	20	
Copper			93.3	mg/kg	1.0	99	75	125	0.6	20	
Lead			61.2	mg/kg	1.0	92	75	125	0.7	20	
Zinc			125	mg/kg	1.0	94	75	125	0.5	20	
Lab ID:	**LCS-86560**	5	Standard Reference Material				Run: SUB-B237574			01/31/15 00:42	
Arsenic			312	mg/kg	1.0	91	72	120			
Cadmium			141	mg/kg	1.0	103	73	120			
Copper			277	mg/kg	1.0	99	77	120			
Lead			188	mg/kg	1.0	100	75	120			
Zinc			214	mg/kg	1.0	101	74	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H15010103

Login completed by: Tracy L. Lorash

Reviewed by: BL2000\rwilliams

Reviewed Date: 1/15/2015

Date Received: 1/12/2015

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.7°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010103

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-146w-0006	832	01/09/15	Soil	A	B		1
4-146w-0612	831	01/09/15	Soil	A	B		1
4-146w-1218	830	01/09/15	Soil	A	B		1
4-156w-0006	1118	01/09/15	Soil	A	B		1
4-156w-0612	1117	01/09/15	Soil	A	B		1
4-158-2430	903	01/09/15	Soil	A	B		1
4-158-3036	902	01/09/15	Soil	A	B		1
4-158-3642	901	01/09/15	Soil	A	B		1
4-159-2430	1108	01/09/15	Soil	A	B		1
4-159-3036	1107	01/09/15	Soil	A	B		1
4-159-3642	1106	01/09/15	Soil	A	B		1
4-165-0006	942	01/09/15	Soil	A	B		1
4-165-0612	941	01/09/15	Soil	A	B		1
4-165-1218	940	01/09/15	Soil	A	B		1
4-166-1218	956	01/09/15	Soil	A	B		1
4-166-1824	954	01/09/15	Soil	A	B		1
4-166-1824d	955	01/09/15	Soil	A	B		1
4-166-2430	953	01/09/15	Soil	A	B		1
4-167-1218	1015	01/09/15	Soil	A	B		1
4-167-1824	1014	01/09/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: HZH 1/12/15 1240	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 2.7 TB on ice hand del	1/12/15 1240

COC010915TP.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010103

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-167-2430	1013	01/09/15	Soil	A	B		1
4-168-0612	1044	01/09/15	Soil	A	B		1
4-168-1218	1043	01/09/15	Soil	A	B		1
4-168-1824	1042	01/09/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1/12/15 1240	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 2.7 on ice TB hmddel	1/12/15 12:40

ANALYTICAL SUMMARY REPORT

February 02, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010102

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 46 samples for MT DEQ-Federal Superfund on 1/12/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010102-001	4-113-3036	01/08/15 11:57	01/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010102-002	4-113-3642	01/08/15 11:56	01/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010102-003	4-113-4248	01/08/15 11:55	01/12/15	Soil	Same As Above
H15010102-004	4-119-3642	01/08/15 11:36	01/12/15	Soil	Same As Above
H15010102-005	4-119-4248	01/08/15 11:35	01/12/15	Soil	Same As Above
H15010102-006	4-120-3642	01/08/15 11:11	01/12/15	Soil	Same As Above
H15010102-007	4-120-4248	01/08/15 11:10	01/12/15	Soil	Same As Above
H15010102-008	4-121-3036	01/08/15 12:12	01/12/15	Soil	Same As Above
H15010102-009	4-121-3642	01/08/15 12:11	01/12/15	Soil	Same As Above
H15010102-010	4-121-4248	01/08/15 12:10	01/12/15	Soil	Same As Above
H15010102-011	4-122n-1218	01/08/15 8:55	01/12/15	Soil	Same As Above
H15010102-012	4-122n-1824	01/08/15 8:54	01/12/15	Soil	Same As Above
H15010102-013	4-122n-2430	01/08/15 8:53	01/12/15	Soil	Same As Above
H15010102-014	4-122nw-3036	01/08/15 13:57	01/12/15	Soil	Same As Above
H15010102-015	4-122nw-3642	01/08/15 13:56	01/12/15	Soil	Same As Above
H15010102-016	4-122nw-4248	01/08/15 13:55	01/12/15	Soil	Same As Above
H15010102-017	4-122nw2-0006	01/08/15 14:37	01/12/15	Soil	Same As Above
H15010102-018	4-122nw2-0612	01/08/15 14:36	01/12/15	Soil	Same As Above
H15010102-019	4-122w-1218	01/08/15 13:05	01/12/15	Soil	Same As Above
H15010102-020	4-122w-1824	01/08/15 13:04	01/12/15	Soil	Same As Above
H15010102-021	4-122w-2430	01/08/15 13:03	01/12/15	Soil	Same As Above
H15010102-022	4-122w2-0006	01/08/15 13:30	01/12/15	Soil	Same As Above
H15010102-023	4-122w2-0612	01/08/15 13:29	01/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010102-024	4-123-0006	01/08/15 8:38	01/12/15	Soil	Same As Above
H15010102-025	4-123-0612	01/08/15 8:37	01/12/15	Soil	Same As Above
H15010102-026	4-123n-1218	01/08/15 9:46	01/12/15	Soil	Same As Above
H15010102-027	4-123n-1824	01/08/15 9:45	01/12/15	Soil	Same As Above
H15010102-028	4-123n-2430	01/08/15 10:11	01/12/15	Soil	Same As Above
H15010102-029	4-129-1824	01/08/15 10:34	01/12/15	Soil	Same As Above
H15010102-030	4-129-2430	01/08/15 10:33	01/12/15	Soil	Same As Above
H15010102-031	4-129-3036	01/08/15 10:32	01/12/15	Soil	Same As Above
H15010102-032	4-130-1218	01/08/15 9:20	01/12/15	Soil	Same As Above
H15010102-033	4-130-1824	01/08/15 9:19	01/12/15	Soil	Same As Above
H15010102-034	4-130-2430	01/08/15 9:18	01/12/15	Soil	Same As Above
H15010102-035	4-139-1218	01/08/15 9:35	01/12/15	Soil	Same As Above
H15010102-036	4-139-1824	01/08/15 9:34	01/12/15	Soil	Same As Above
H15010102-037	4-139-2430	01/08/15 9:33	01/12/15	Soil	Same As Above
H15010102-038	4-146-1824	01/08/15 15:14	01/12/15	Soil	Same As Above
H15010102-039	4-146-2430	01/08/15 15:13	01/12/15	Soil	Same As Above
H15010102-040	4-146-3036	01/08/15 15:12	01/12/15	Soil	Same As Above
H15010102-041	4-156-3036	01/08/15 16:07	01/12/15	Soil	Same As Above
H15010102-042	4-156-3642	01/08/15 16:06	01/12/15	Soil	Same As Above
H15010102-043	4-156-4248	01/08/15 16:05	01/12/15	Soil	Same As Above
H15010102-044	4-157-3036	01/08/15 15:42	01/12/15	Soil	Same As Above
H15010102-045	4-157-3642	01/08/15 15:41	01/12/15	Soil	Same As Above
H15010102-046	4-157-4248	01/08/15 15:40	01/12/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010102

Report Date: 02/02/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010102

Report Date: 02/02/15
Date Received: 01/12/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Client Sample ID		Results	Results	Results	Results	Results	Results
H15010102-001	4-113-3036		6.6	8	2	4530	31	488
H15010102-002	4-113-3642		7.6	8	4	1720	17	481
H15010102-003	4-113-4248		7.4	19	5	1570	24	610
H15010102-004	4-119-3642		7.2	1230	7	5000	795	2000
H15010102-005	4-119-4248		7.5	947	7	6120	2930	2710
H15010102-006	4-120-3642		7.0	136	2	2940	148	533
H15010102-007	4-120-4248		7.6	87	2	4630	90	506
H15010102-008	4-121-3036		6.9	756	7	6870	1530	2590
H15010102-009	4-121-3642		6.1	8	< 1	32	15	59
H15010102-010	4-121-4248		6.6	4	< 1	23	11	46
H15010102-011	4-122n-1218		7.5	16	4	249	16	1940
H15010102-012	4-122n-1824		7.4	12	< 1	132	21	682
H15010102-013	4-122n-2430		7.2	7	< 1	74	21	145
H15010102-014	4-122nw-3036		7.7	245	20	2540	341	7200
H15010102-015	4-122nw-3642		7.7	16	< 1	72	20	450
H15010102-016	4-122nw-4248		7.1	9	< 1	43	15	326
H15010102-017	4-122nw2-0006		7.7	381	7	1970	331	1760
H15010102-018	4-122nw2-0612		7.7	9	< 1	54	17	77
H15010102-019	4-122w-1218		7.8	161	2	924	144	730
H15010102-020	4-122w-1824		7.7	14	< 1	53	19	84
H15010102-021	4-122w-2430		8.0	5	< 1	35	16	64
H15010102-022	4-122w2-0006		7.8	57	< 1	438	80	340
H15010102-023	4-122w2-0612		7.7	12	< 1	49	17	90
H15010102-024	4-123-0006		6.8	642	3	640	466	1370
H15010102-025	4-123-0612		7.6	21	5	184	20	732
H15010102-026	4-123n-1218		7.3	804	4	3730	508	1660
H15010102-027	4-123n-1824		7.5	15	< 1	120	22	384
H15010102-028	4-123n-2430		7.9	43	< 1	1170	37	176
H15010102-029	4-129-1824		7.4	54	20	16000	271	4290
H15010102-030	4-129-2430		7.0	5	< 1	60	13	193
H15010102-031	4-129-3036		6.8	3	< 1	20	9	48
H15010102-032	4-130-1218		7.6	1090	10	8950	670	2970
H15010102-033	4-130-1824		7.6	21	< 1	139	21	111
H15010102-034	4-130-2430		7.7	5	< 1	39	16	71
H15010102-035	4-139-1218		7.4	1060	13	18700	1170	3970
H15010102-036	4-139-1824		7.4	56	1	246	33	1890
H15010102-037	4-139-2430		7.5	10	< 1	68	23	188
H15010102-038	4-146-1824		7.2	225	16	3300	129	3240
H15010102-039	4-146-2430		7.3	103	7	596	51	1620
H15010102-040	4-146-3036		7.5	33	2	220	11	527

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010102

Report Date: 02/02/15
Date Received: 01/12/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010102-041	4-156-3036		7.2	603	9	7730	1940	2710
H15010102-042	4-156-3642		6.6	21	< 1	63	23	214
H15010102-043	4-156-4248		7.2	8	< 1	33	12	307
H15010102-044	4-157-3036		7.4	14	29	1630	44	5100
H15010102-045	4-157-3642		7.4	7	< 1	34	15	462
H15010102-046	4-157-4248		7.6	3	< 1	27	8	406

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150123A		
Lab ID: CCV_1_150122_1		Continuing Calibration Verification Standard							01/23/15 07:32	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150122_1		Continuing Calibration Verification Standard							01/23/15 07:33	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150122_1		Initial Calibration Verification Standard							01/23/15 07:33	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150122_1		Continuing Calibration Verification Standard							01/23/15 07:46	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150122_1		Continuing Calibration Verification Standard							01/23/15 08:00	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150122_1		Continuing Calibration Verification Standard							01/23/15 08:00	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150122_1		Initial Calibration Verification Standard							01/23/15 08:01	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150122_1		Continuing Calibration Verification Standard							01/23/15 08:12	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150122_1		Continuing Calibration Verification Standard							01/23/15 08:26	
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150122_1		Continuing Calibration Verification Standard							01/23/15 08:27	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150122_1		Initial Calibration Verification Standard							01/23/15 08:27	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150122_1		Initial Calibration Verification Standard							01/23/15 08:52	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 27782	
Lab ID: LCS-27782		Laboratory Control Sample				Run: SOIL PH METER_150123A			01/23/15 07:34	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H15010102-010ADUP		Sample Duplicate				Run: SOIL PH METER_150123A			01/23/15 07:45	
pH, sat. paste		6.62	s.u.	0.10				0.3	30	
Lab ID: H15010102-020ADUP		Sample Duplicate				Run: SOIL PH METER_150123A			01/23/15 07:54	
pH, sat. paste		7.74	s.u.	0.10				0.1	30	
Method: ASAM10-3.2									Batch: 27783	
Lab ID: LCS-27783		Laboratory Control Sample				Run: SOIL PH METER_150123A			01/23/15 08:02	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27783
Lab ID: H15010102-030ADUP	Sample Duplicate					Run: SOIL PH METER_150123A			01/23/15 08:11	
pH, sat. paste		6.93	s.u.	0.10				0.3	30	
Lab ID: H15010102-040ADUP	Sample Duplicate					Run: SOIL PH METER_150123A			01/23/15 08:20	
pH, sat. paste		7.46	s.u.	0.10				0.4	30	
Method: ASAM10-3.2										Batch: 27784
Lab ID: LCS-27784	Laboratory Control Sample					Run: SOIL PH METER_150123A			01/23/15 08:28	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H15010102-046ADUP	Sample Duplicate					Run: SOIL PH METER_150123A			01/23/15 08:34	
pH, sat. paste		7.58	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150122B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/22/15 09:41
Arsenic			0.791	mg/L	0.0085	99	90	110			
Cadmium			0.388	mg/L	0.0010	97	90	110			
Copper			0.794	mg/L	0.010	99	90	110			
Lead			0.761	mg/L	0.010	95	90	110			
Zinc			0.786	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/22/15 09:56
Arsenic			0.00153	mg/L	0.0085		0	0			
Cadmium			0.00123	mg/L	0.0010		0	0			
Copper			-0.00542	mg/L	0.010		0	0			
Lead			-0.0336	mg/L	0.010		0	0			
Zinc			0.00309	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/22/15 10:00
Arsenic			0.977	mg/L	0.0085	98	80	120			
Cadmium			0.905	mg/L	0.0010	90	80	120			
Copper			0.509	mg/L	0.010	102	80	120			
Lead			0.902	mg/L	0.010	90	80	120			
Zinc			0.991	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/22/15 12:02
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/22/15 12:05
Arsenic			0.00670	mg/L	0.0085						
Cadmium			-0.000490	mg/L	0.0010						
Copper			-0.00117	mg/L	0.010						
Lead			-0.0182	mg/L	0.010						
Zinc			0.000840	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/22/15 12:48
Arsenic			2.41	mg/L	0.0085	96	90	110			
Cadmium			2.40	mg/L	0.0010	96	90	110			
Copper			2.44	mg/L	0.010	98	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/22/15 12:51
Arsenic			0.00747	mg/L	0.0085						
Cadmium			-8.00E-05	mg/L	0.0010						
Copper			-0.00311	mg/L	0.010						
Lead			-0.00845	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150122B	
Lab ID: CCB	5	Continuing Calibration Blank							01/22/15 12:51	
Zinc		0.000390	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/22/15 13:31	
Arsenic		2.48	mg/L	0.0085	99	90	110			
Cadmium		2.47	mg/L	0.0010	99	90	110			
Copper		2.47	mg/L	0.010	99	90	110			
Lead		2.54	mg/L	0.010	101	90	110			
Zinc		2.52	mg/L	0.010	101	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/22/15 13:35	
Arsenic		-0.00184	mg/L	0.0085						
Cadmium		0.000260	mg/L	0.0010						
Copper		-0.00105	mg/L	0.010						
Lead		-0.000970	mg/L	0.010						
Zinc		0.000420	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/22/15 13:58	
Arsenic		2.50	mg/L	0.0085	100	90	110			
Cadmium		2.46	mg/L	0.0010	99	90	110			
Copper		2.49	mg/L	0.010	99	90	110			
Lead		2.46	mg/L	0.010	99	90	110			
Zinc		2.47	mg/L	0.010	99	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/22/15 14:01	
Arsenic		-0.00344	mg/L	0.0085						
Cadmium		7.00E-05	mg/L	0.0010						
Copper		0.00518	mg/L	0.010						
Lead		-0.0353	mg/L	0.010						
Zinc		0.000820	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/22/15 14:42	
Arsenic		2.51	mg/L	0.0085	100	90	110			
Cadmium		2.50	mg/L	0.0010	100	90	110			
Copper		2.51	mg/L	0.010	100	90	110			
Lead		2.47	mg/L	0.010	99	90	110			
Zinc		2.49	mg/L	0.010	100	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/22/15 14:46	
Arsenic		-0.00144	mg/L	0.0085						
Cadmium		-0.000370	mg/L	0.0010						
Copper		0.00617	mg/L	0.010						
Lead		-0.0238	mg/L	0.010						
Zinc		0.000960	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/22/15 15:26	
Arsenic		2.51	mg/L	0.0085	100	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150122B	
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/22/15 15:26	
Cadmium			2.51	mg/L	0.0010	100	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/22/15 15:30	
Arsenic			-0.00321	mg/L	0.0085						
Cadmium			-0.000410	mg/L	0.0010						
Copper			0.00164	mg/L	0.010						
Lead			-0.0219	mg/L	0.010						
Zinc			0.00117	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/22/15 16:10	
Arsenic			2.56	mg/L	0.0085	102	90	110			
Cadmium			2.57	mg/L	0.0010	103	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/22/15 16:14	
Arsenic			0.00251	mg/L	0.0085						
Cadmium			-0.000460	mg/L	0.0010						
Copper			0.00372	mg/L	0.010						
Lead			-0.0146	mg/L	0.010						
Zinc			0.000460	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/22/15 16:54	
Arsenic			2.56	mg/L	0.0085	103	90	110			
Cadmium			2.57	mg/L	0.0010	103	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.49	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/22/15 16:58	
Arsenic			-0.000430	mg/L	0.0085						
Cadmium			-0.000120	mg/L	0.0010						
Copper			0.00385	mg/L	0.010						
Lead			-0.0204	mg/L	0.010						
Zinc			0.00182	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/22/15 17:38	
Arsenic			2.52	mg/L	0.0085	101	90	110			
Cadmium			2.54	mg/L	0.0010	102	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Report Date: 02/02/15
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010102

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27747
Lab ID:	**MB-27747**	5	Method Blank				Run: ICP2-HE_150122B				01/22/15 12:29
Arsenic			0.5	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			1	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			3	mg/kg	0.09						
Lab ID:	**LFB-27747**	5	Laboratory Fortified Blank				Run: ICP2-HE_150122B				01/22/15 12:33
Arsenic			47.2	mg/kg	1.0	94	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			48.6	mg/kg	1.0	95	80	120			
Lead			46.6	mg/kg	1.0	93	80	120			
Zinc			48.9	mg/kg	1.0	91	80	120			
Lab ID:	**LCS-27747**	5	Laboratory Control Sample				Run: ICP2-HE_150122B				01/22/15 12:37
Arsenic			260	mg/kg	1.8	77	72.3	106.4			
Cadmium			109	mg/kg	1.0	81	73	105.1			
Copper			237	mg/kg	1.1	86	77.5	109.6			
Lead			162	mg/kg	3.1	88	75.9	108.6			
Zinc			181	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H15010102-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150122B				01/22/15 14:31
Arsenic			248	mg/kg	1.9	93	75	125			
Cadmium			112	mg/kg	1.0	87	75	125			
Copper			288	mg/kg	1.1	91	75	125			
Lead			234	mg/kg	3.3	86	75	125			
Zinc			306	mg/kg	1.0	89	75	125			
Lab ID:	**H15010102-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150122B				01/22/15 14:35
Arsenic			50.5	mg/kg	1.8	85	75	125			
Cadmium			21.0	mg/kg	1.0	84	75	125			
Copper			102	mg/kg	1.1	95	75	125			
Lead			57.1	mg/kg	3.2	89	75	125			
Zinc			121	mg/kg	1.0	89	75	125			
Lab ID:	**H15010102-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150122B				01/22/15 14:38
Arsenic			53.6	mg/kg	1.8	91	75	125	6.0	20	
Cadmium			21.0	mg/kg	1.0	84	75	125	0.2	20	
Copper			98.2	mg/kg	1.1	88	75	125	3.8	20	
Lead			55.7	mg/kg	3.2	86	75	125	2.4	20	
Zinc			122	mg/kg	1.0	90	75	125	0.5	20	
Method:	**SW6010B**										Batch: 27748
Lab ID:	**MB-27748**	5	Method Blank				Run: ICP2-HE_150122B				01/22/15 14:50
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.5	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27748
Lab ID:	**MB-27748**	5	Method Blank				Run: ICP2-HE_150122B			01/22/15 14:50	
Lead			ND	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27748**	5	Laboratory Fortified Blank				Run: ICP2-HE_150122B			01/22/15 14:53	
Arsenic			48.2	mg/kg	1.0	96	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			49.2	mg/kg	1.0	97	80	120			
Lead			46.8	mg/kg	1.0	94	80	120			
Zinc			48.3	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27748**	5	Laboratory Control Sample				Run: ICP2-HE_150122B			01/22/15 14:57	
Arsenic			265	mg/kg	1.8	77	72.3	106.4			
Cadmium			113	mg/kg	1.0	82	73	105.1			
Copper			240	mg/kg	1.1	85	77.5	109.6			
Lead			166	mg/kg	3.2	88	75.9	108.6			
Zinc			181	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H15010102-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150122B			01/22/15 16:25	
Arsenic			279	mg/kg	1.8	87	75	125			
Cadmium			109	mg/kg	1.0	85	75	125			
Copper			458	mg/kg	1.1	83	75	125			
Lead			241	mg/kg	3.2	83	75	125			
Zinc			2020	mg/kg	1.0		75	125			A
Lab ID:	**H15010102-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150122B			01/22/15 16:29	
Arsenic			97.0	mg/kg	1.8	82	75	125			
Cadmium			21.5	mg/kg	1.0	83	75	125			
Copper			289	mg/kg	1.1		75	125			A
Lead			68.3	mg/kg	3.2	76	75	125			
Zinc			1830	mg/kg	1.0		75	125			A
Lab ID:	**H15010102-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150122B			01/22/15 16:32	
Arsenic			100	mg/kg	1.8	89	75	125	3.2	20	
Cadmium			22.1	mg/kg	1.0	85	75	125	2.8	20	
Copper			277	mg/kg	1.1		75	125	4.2	20	A
Lead			71.1	mg/kg	3.2	81	75	125	3.9	20	
Zinc			1890	mg/kg	1.0		75	125	3.2	20	A
Method:	**SW6010B**										Batch: 27749
Lab ID:	**MB-27749**	5	Method Blank				Run: ICP2-HE_150122B			01/22/15 16:36	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27749
Lab ID:	**LFB-27749**	5	Laboratory Fortified Blank				Run: ICP2-HE_150122B				01/22/15 16:40
Arsenic			47.8	mg/kg	1.0	96	80	120			
Cadmium			23.9	mg/kg	1.0	96	80	120			
Copper			49.3	mg/kg	1.0	98	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			48.0	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27749**	5	Laboratory Control Sample				Run: ICP2-HE_150122B				01/22/15 16:43
Arsenic			276	mg/kg	1.8	81	72.3	106.4			
Cadmium			117	mg/kg	1.0	86	73	105.1			
Copper			245	mg/kg	1.1	88	77.5	109.6			
Lead			165	mg/kg	3.2	89	75.9	108.6			
Zinc			185	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H15010102-046APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150122B				01/22/15 17:35
Arsenic			244	mg/kg	1.9	93	75	125			
Cadmium			120	mg/kg	1.0	92	75	125			
Copper			265	mg/kg	1.1	91	75	125			
Lead			250	mg/kg	3.3	95	75	125			
Zinc			644	mg/kg	1.0	91	75	125			
Lab ID:	**H15010102-046AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150122B				01/22/15 18:12
Arsenic			53.4	mg/kg	1.8	99	75	125			
Cadmium			23.6	mg/kg	1.0	92	75	125			
Copper			72.9	mg/kg	1.1	91	75	125			
Lead			57.3	mg/kg	3.2	106	75	125			
Zinc			446	mg/kg	1.0		75	125			A
Lab ID:	**H15010102-046AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150122B				01/22/15 18:16
Arsenic			54.0	mg/kg	1.8	101	75	125	1.2	20	
Cadmium			24.2	mg/kg	1.0	94	75	125	2.4	20	
Copper			71.9	mg/kg	1.1	89	75	125	1.4	20	
Lead			60.3	mg/kg	3.2	112	75	125	5.1	20	
Zinc			454	mg/kg	1.0		75	125	1.9	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B237574	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							01/30/15 15:17	
Arsenic			0.0509	mg/L	0.0010	102	90	110			
Cadmium			0.0261	mg/L	0.0010	104	90	110			
Copper			0.0518	mg/L	0.0010	104	90	110			
Lead			0.0510	mg/L	0.0010	102	90	110			
Zinc			0.0543	mg/L	0.0010	109	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/30/15 15:33	
Arsenic			2.00E-05	mg/L	0.0010						
Cadmium			0.000310	mg/L	0.0010						
Copper			0.000610	mg/L	0.0010						
Lead			0.000270	mg/L	0.0010						
Zinc			0.00124	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/30/15 15:36	
Arsenic			0.00928	mg/L	0.0010	93	70	130			
Cadmium			0.0103	mg/L	0.0010	103	70	130			
Copper			0.0186	mg/L	0.0010	93	70	130			
Lead			0.000260	mg/L	0.0010		0	0			
Zinc			0.00995	mg/L	0.0010	99	70	130			
Lab ID:	**QCS**	2	Initial Calibration Verification Standard							01/30/15 10:53	
Arsenic			0.0518	mg/L	0.0010	104	90	110			
Lead			0.0498	mg/L	0.0010	100	90	110			
Method:	**SW6020**									Batch: B_86556	
Lab ID:	**LCS-86556**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 13:34	
Arsenic			319	mg/kg	1.0	93	72	120			
Cadmium			136	mg/kg	1.0	99	73	120			
Copper			261	mg/kg	1.0	93	77	120			
Lead			184	mg/kg	1.0	99	75	120			
Zinc			203	mg/kg	1.0	95	74	120			
Lab ID:	**MB-86556**	5	Method Blank				Run: SUB-B237574			01/30/15 18:03	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.7	mg/kg	0.1						
Lead			0.1	mg/kg	0.08						
Zinc			4	mg/kg	0.6						
Lab ID:	**LCS-86556**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 18:06	
Arsenic			298	mg/kg	1.0	87	72	120			
Cadmium			137	mg/kg	1.0	100	73	120			
Copper			280	mg/kg	1.0	100	77	120			
Lead			184	mg/kg	1.0	98	75	120			
Zinc			211	mg/kg	1.0	99	74	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86556	
Lab ID:	**LFB-86556**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 18:09	
Arsenic			50.6	mg/kg	1.0	101	80	120			
Cadmium			26.5	mg/kg	1.0	106	80	120			
Copper			53.6	mg/kg	1.0	106	80	120			
Lead			51.0	mg/kg	1.0	102	80	120			
Zinc			53.6	mg/kg	1.0	99	80	120			
Lab ID:	**H15010102-018A**	5	Serial Dilution				Run: SUB-B237574			01/30/15 18:59	
Arsenic			8.80	mg/kg	1.7		0	0		10	N
Cadmium			0.350	mg/kg	1.0		0	0		10	N
Copper			55.7	mg/kg	1.0		0	0	1.4	10	
Lead			16.0	mg/kg	1.0		0	0	7.9	10	
Zinc			88.7	mg/kg	2.9		0	0	4.3	10	
Lab ID:	**H15010102-018A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/30/15 19:02	
Arsenic			57.3	mg/kg	1.0	96	75	125			
Cadmium			50.9	mg/kg	1.0	101	75	125			
Copper			103	mg/kg	1.0	94	75	125			
Lead			63.6	mg/kg	1.0	93	75	125			
Zinc			131	mg/kg	1.0	92	75	125			
Lab ID:	**H15010102-018A**	5	Sample Matrix Spike				Run: SUB-B237574			01/30/15 19:04	
Arsenic			59.6	mg/kg	1.0	101	75	125			
Cadmium			27.3	mg/kg	1.0	107	75	125			
Copper			117	mg/kg	1.0	121	75	125			
Lead			68.8	mg/kg	1.0	103	75	125			
Zinc			143	mg/kg	1.0	117	75	125			
Lab ID:	**H15010102-018A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/30/15 19:07	
Arsenic			58.3	mg/kg	1.0	98	75	125	2.2	20	
Cadmium			26.1	mg/kg	1.0	102	75	125	4.4	20	
Copper			107	mg/kg	1.0	101	75	125	8.9	20	
Lead			68.2	mg/kg	1.0	102	75	125	0.9	20	
Zinc			138	mg/kg	1.0	105	75	125	4.0	20	
Method:	**SW6020**									Batch: B_86558	
Lab ID:	**LCS-86558**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 13:39	
Arsenic			307	mg/kg	1.0	90	72	120			
Cadmium			132	mg/kg	1.0	97	73	120			
Copper			257	mg/kg	1.0	92	77	120			
Lead			180	mg/kg	1.0	97	75	120			
Zinc			197	mg/kg	1.0	93	74	120			
Lab ID:	**MB-86558**	5	Method Blank				Run: SUB-B237574			01/30/15 21:04	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.5	mg/kg	0.1						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86558	
Lab ID:	**MB-86558**	5	Method Blank				Run: SUB-B237574			01/30/15 21:04	
Lead			ND	mg/kg	0.08						
Zinc			0.8	mg/kg	0.6						
Lab ID:	**LCS-86558**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 21:06	
Arsenic			283	mg/kg	1.0	83	72	120			
Cadmium			129	mg/kg	1.0	94	73	120			
Copper			260	mg/kg	1.0	93	77	120			
Lead			177	mg/kg	1.0	95	75	120			
Zinc			195	mg/kg	1.0	92	74	120			
Lab ID:	**LFB-86558**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 21:09	
Arsenic			49.5	mg/kg	1.0	99	80	120			
Cadmium			25.9	mg/kg	1.0	104	80	120			
Copper			50.4	mg/kg	1.0	100	80	120			
Lead			50.3	mg/kg	1.0	101	80	120			
Zinc			50.6	mg/kg	1.0	99	80	120			
Lab ID:	**H15010102-036A**	5	Serial Dilution				Run: SUB-B237574			01/30/15 21:51	
Arsenic			59.6	mg/kg	1.7		0	0	8.3	10	
Cadmium			2.10	mg/kg	1.0		0	0		10	N
Copper			257	mg/kg	1.0		0	0	9.1	10	
Lead			35.0	mg/kg	1.0		0	0	6.2	10	
Zinc			2100	mg/kg	2.9		0	0	14	10	R
Lab ID:	**H15010102-036A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/30/15 21:54	
Arsenic			108	mg/kg	1.0	106	75	125			
Cadmium			54.4	mg/kg	1.0	105	75	125			
Copper			306	mg/kg	1.0		75	125			A
Lead			83.5	mg/kg	1.0	101	75	125			
Zinc			2050	mg/kg	1.0		75	125			A
Lab ID:	**H15010102-036A**	5	Sample Matrix Spike				Run: SUB-B237574			01/30/15 21:57	
Arsenic			111	mg/kg	1.0	112	75	125			
Cadmium			29.1	mg/kg	1.0	109	75	125			
Copper			312	mg/kg	1.0		75	125			A
Lead			86.8	mg/kg	1.0	108	75	125			
Zinc			2040	mg/kg	1.0		75	125			A
Lab ID:	**H15010102-036A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/30/15 21:59	
Arsenic			104	mg/kg	1.0	97	75	125	6.7	20	
Cadmium			27.8	mg/kg	1.0	104	75	125	4.6	20	
Copper			295	mg/kg	1.0		75	125	5.6	20	A
Lead			81.7	mg/kg	1.0	98	75	125	6.0	20	
Zinc			1910	mg/kg	1.0		75	125	6.5	20	A
Method:	**SW6020**									Batch: B_86559	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86559	
Lab ID:	**MB-86559**	5	Method Blank				Run: SUB-B237574			01/30/15 22:13	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.5	mg/kg	0.1						
Lead			ND	mg/kg	0.08						
Zinc			1	mg/kg	0.6						
Lab ID:	**LCS-86559**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 22:15	
Arsenic			302	mg/kg	1.0	88	72	120			
Cadmium			137	mg/kg	1.0	100	73	120			
Copper			268	mg/kg	1.0	96	77	120			
Lead			190	mg/kg	1.0	102	75	120			
Zinc			208	mg/kg	1.0	97	74	120			
Lab ID:	**LFB-86559**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 22:18	
Arsenic			49.4	mg/kg	1.0	99	80	120			
Cadmium			26.2	mg/kg	1.0	105	80	120			
Copper			51.2	mg/kg	1.0	101	80	120			
Lead			50.9	mg/kg	1.0	102	80	120			
Zinc			50.8	mg/kg	1.0	99	80	120			
Lab ID:	**B15011731-046ADIL**	5	Serial Dilution				Run: SUB-B237574			01/30/15 22:52	
Arsenic			3.30	mg/kg	1.7		0	0		10	N
Cadmium			0.900	mg/kg	1.0		0	0		10	N
Copper			25.8	mg/kg	1.0		0	0	2.8	10	
Lead			8.35	mg/kg	1.0		0	0	0.6	10	
Zinc			438	mg/kg	2.9		0	0	5.4	10	
Lab ID:	**B15011731-046APDS1**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/30/15 22:55	
Arsenic			50.9	mg/kg	1.0	95	75	125			
Cadmium			51.5	mg/kg	1.0	101	75	125			
Copper			73.0	mg/kg	1.0	96	75	125			
Lead			57.4	mg/kg	1.0	98	75	125			
Zinc			466	mg/kg	1.0		75	125			A
Lab ID:	**B15011731-046AMS3**	5	Sample Matrix Spike				Run: SUB-B237574			01/30/15 22:58	
Arsenic			50.2	mg/kg	1.0	94	75	125			
Cadmium			26.1	mg/kg	1.0	101	75	125			
Copper			73.3	mg/kg	1.0	97	75	125			
Lead			57.9	mg/kg	1.0	99	75	125			
Zinc			452	mg/kg	1.0		75	125			A
Lab ID:	**B15011731-046AMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/30/15 23:00	
Arsenic			51.6	mg/kg	1.0	97	75	125	2.6	20	
Cadmium			27.4	mg/kg	1.0	106	75	125	5.0	20	
Copper			75.2	mg/kg	1.0	100	75	125	2.5	20	
Lead			59.1	mg/kg	1.0	101	75	125	2.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/02/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010102

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86559	
Lab ID:	**B15011731-046AMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/30/15 23:00	
Zinc			464	mg/kg	1.0		75	125	2.8	20	A
Lab ID:	**H15010111-007A**	5	Serial Dilution				Run: SUB-B237574			01/30/15 23:32	
Arsenic			201	mg/kg	1.7		0	0	2.3	10	
Cadmium			5.10	mg/kg	1.0		0	0	2.0	10	
Copper			1060	mg/kg	1.0		0	0	5.4	10	
Lead			141	mg/kg	1.0		0	0	9.7	10	
Zinc			1500	mg/kg	2.9		0	0	6.0	10	
Lab ID:	**H15010111-007A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/30/15 23:35	
Arsenic			238	mg/kg	1.0	84	75	125			
Cadmium			54.3	mg/kg	1.0	99	75	125			
Copper			1040	mg/kg	1.0		75	125			A
Lead			168	mg/kg	1.0	79	75	125			
Zinc			1430	mg/kg	1.0		75	125			A
Lab ID:	**H15010111-007A**	2	Sample Matrix Spike				Run: SUB-B237574			01/30/15 23:37	
Arsenic			238	mg/kg	1.0	85	75	125			
Lead			180	mg/kg	1.0	105	75	125			
Lab ID:	**H15010111-007A**	2	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/30/15 23:40	
Arsenic			227	mg/kg	1.0	62	75	125	5.0	20	S
Lead			163	mg/kg	1.0	69	75	125	10	20	S

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H15010102

Login completed by: Tracy L. Lorash
Date Received: 1/12/2015
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 1/15/2015
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	4.0°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample ID on COC is 122nw and 122nw2 -ID on bags is 122n/w and 122n/w2. Logged in with ID from COC. TI 1/13/15

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H15010102

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-113-3036	1157	01/08/15	Soil	A	B		1
4-113-3642	1156	01/08/15	Soil	A	B		1
4-113-4248	1155	01/08/15	Soil	A	B		1
4-119-3642	1136	01/08/15	Soil	A	B		1
4-119-4248	1135	01/08/15	Soil	A	B		1
4-120-3642	1111	01/08/15	Soil	A	B		1
4-120-4248	1110	01/08/15	Soil	A	B		1
4-121-3036	1212	01/08/15	Soil	A	B		1
4-121-3642	1211	01/08/15	Soil	A	B		1
4-121-4248	1210	01/08/15	Soil	A	B		1
4-122n-1218	855	01/08/15	Soil	A	B		1
4-122n-1824	854	01/08/15	Soil	A	B		1
4-122n-2430	853	01/08/15	Soil	A	B		1
4-122nw-3036	1357	01/08/15	Soil	A	B		1
4-122nw-3642	1356	01/08/15	Soil	A	B		1
4-122nw-4248	1355	01/08/15	Soil	A	B		1
4-122nw2-0006	1437	01/08/15	Soil	A	B		1
4-122nw2-0612	1436	01/08/15	Soil	A	B		1
4-122w-1218	1305	01/08/15	Soil	A	B		1
4-122w-1824	1304	01/08/15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1/12/15 1240	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 4.0 TB on ice handled	1/12/15 12:40

COC Blank.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010102

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-122w-2430	1303	01/08/15	Soil	A	B		1
4-122w2-0006	1330	01/08/15	Soil	A	B		1
4-122w2-0612	1329	01/08/15	Soil	A	B		1
4-123-0006	838	01/08/15	Soil	A	B		1
4-123-0612	837	01/08/15	Soil	A	B		1
4-123n-1218	946	01/08/15	Soil	A	B		1
4-123n-1824	945	01/08/15	Soil	A	B		1
4-123n-2430	1011	01/08/15	Soil	A	B		1
4-129-1824	1034	01/08/15	Soil	A	B		1
4-129-2430	1033	01/08/15	Soil	A	B		1
4-129-3036	1032	01/08/15	Soil	A	B		1
4-130-1218	920	01/08/15	Soil	A	B		1
4-130-1824	919	01/08/15	Soil	A	B		1
4-130-2430	918	01/08/15	Soil	A	B		1
4-139-1218	935	01/08/15	Soil	A	B		1
4-139-1824	934	01/08/15	Soil	A	B		1
4-139-2430	933	01/08/15	Soil	A	B		1
4-146-1824	1514	01/08/15	Soil	A	B		1
4-146-2430	1513	01/08/15	Soil	A	B		1
4-146-3036	1512	01/08/15	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1/12/15 1240

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 4C TB on ice hand del

Date/Time: 1/12/15 12:40

C Blank.xls

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H15010102

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-156-3036	1607	01/08/15	Soil	A	B		1
4-156-3642	1606	01/08/15	Soil	A	B		1
4-156-4248	1605	01/08/15	Soil	A	B		1
4-157-3036	1542	01/08/15	Soil	A	B		1
4-157-3642	1541	01/08/15	Soil	A	B		1
4-157-4248	1540	01/08/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1/12/15 1240	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 4.0 TB on ice hand del	1/12/15 1240

COC Blank.xls

ANALYTICAL SUMMARY REPORT

February 06, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H15010100

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 26 samples for MT DEQ-Federal Superfund on 1/12/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H15010100-001	4-064-3036	01/06/15 8:07	01/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H15010100-002	4-064-3642	01/06/15 8:06	01/12/15	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H15010100-003	4-064-4248	01/06/15 8:05	01/12/15	Soil	Same As Above
H15010100-004	4-065-1824	01/06/15 8:34	01/12/15	Soil	Same As Above
H15010100-005	4-065-2430	01/06/15 8:33	01/12/15	Soil	Same As Above
H15010100-006	4-065-3036	01/06/15 8:32	01/12/15	Soil	Same As Above
H15010100-007	4-047w-3642	01/06/15 9:56	01/12/15	Soil	Same As Above
H15010100-008	4-047w-4248	01/06/15 9:55	01/12/15	Soil	Same As Above
H15010100-009	4-056w-1218	01/06/15 10:25	01/12/15	Soil	Same As Above
H15010100-010	4-056w-1824	01/06/15 10:24	01/12/15	Soil	Same As Above
H15010100-011	4-056w-2430	01/06/15 10:23	01/12/15	Soil	Same As Above
H15010100-012	4-065w-1218	01/06/15 11:05	01/12/15	Soil	Same As Above
H15010100-013	4-065w-1824	01/06/15 11:04	01/12/15	Soil	Same As Above
H15010100-014	4-065w-2430	01/06/15 11:03	01/12/15	Soil	Same As Above
H15010100-015	4-112-0612	01/06/15 12:07	01/12/15	Soil	Same As Above
H15010100-016	4-112-1218	01/06/15 12:05	01/12/15	Soil	Same As Above
H15010100-017	4-112-1218d	01/06/15 12:06	01/12/15	Soil	Same As Above
H15010100-018	4-112-1824	01/06/15 12:04	01/12/15	Soil	Same As Above
H15010100-019	4-102-1824	01/06/15 12:44	01/12/15	Soil	Same As Above
H15010100-020	4-102-2430	01/06/15 12:43	01/12/15	Soil	Same As Above
H15010100-021	4-102-3036	01/06/15 12:42	01/12/15	Soil	Same As Above
H15010100-022	4-094-0006	01/06/15 13:28	01/12/15	Soil	Same As Above
H15010100-023	4-094-0612	01/06/15 13:27	01/12/15	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H15010100-024	4-085-1218	01/06/15 14:06	01/12/15	Soil	Same As Above
H15010100-025	4-085-1824	01/06/15 14:05	01/12/15	Soil	Same As Above
H15010100-026	4-085-2430	01/06/15 14:04	01/12/15	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

CLIENT: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H15010100

Report Date: 02/06/15

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H15010100

Report Date: 02/06/15
Date Received: 01/12/15

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H15010100-001	4-064-3036		7.3	6	8	353	15	2210
H15010100-002	4-064-3642		8.2	2	< 1	19	6	333
H15010100-003	4-064-4248		8.0	4	< 1	10	7	38
H15010100-004	4-065-1824		7.7	642	14	8000	567	4090
H15010100-005	4-065-2430		6.8	14	< 1	113	18	85
H15010100-006	4-065-3036		7.3	6	< 1	38	13	60
H15010100-007	4-047w-3642		7.1	1740	58	11900	1610	17900
H15010100-008	4-047w-4248		7.7	253	7	1780	206	2070
H15010100-009	4-056w-1218		7.4	500	12	3590	462	3530
H15010100-010	4-056w-1824		7.7	58	2	395	42	458
H15010100-011	4-056w-2430		7.8	6	< 1	25	10	52
H15010100-012	4-065w-1218		7.8	1270	19	11300	813	3180
H15010100-013	4-065w-1824		7.4	50	< 1	240	38	222
H15010100-014	4-065w-2430		7.5	12	< 1	37	9	69
H15010100-015	4-112-0612		7.4	567	5	4240	471	1790
H15010100-016	4-112-1218		7.6	25	< 1	70	18	196
H15010100-017	4-112-1218d		7.8	40	1	248	33	279
H15010100-018	4-112-1824		7.6	20	< 1	37	14	76
H15010100-019	4-102-1824		7.8	353	10	7710	771	2580
H15010100-020	4-102-2430		7.8	28	< 1	77	16	76
H15010100-021	4-102-3036		7.8	11	< 1	25	9	35
H15010100-022	4-094-0006		7.6	321	4	1060	304	1000
H15010100-023	4-094-0612		7.6	23	< 1	51	15	69
H15010100-024	4-085-1218		6.6	363	3	1580	344	705
H15010100-025	4-085-1824		6.7	638	4	7550	1360	2390
H15010100-026	4-085-2430		6.9	31	3	1810	63	565

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150122A	
Lab ID: ICV_1_150121_1		Initial Calibration Verification Standard								01/22/15 06:50
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150121_1		Initial Calibration Verification Standard								01/22/15 07:19
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150121_1		Initial Calibration Verification Standard								01/22/15 07:45
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150121_1		Continuing Calibration Verification Standard								01/22/15 08:14
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150121_1		Continuing Calibration Verification Standard								01/22/15 08:14
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150121_1		Initial Calibration Verification Standard								01/22/15 08:15
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150121_1		Continuing Calibration Verification Standard								01/22/15 08:26
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150121_1		Continuing Calibration Verification Standard								01/22/15 08:35
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 27778
Lab ID: LCS-27778		Laboratory Control Sample				Run: SOIL PH METER_150122A				01/22/15 08:16
pH, sat. paste		7.66	s.u.	0.10	102	95	105			
Lab ID: H15010100-010ADUP		Sample Duplicate				Run: SOIL PH METER_150122A				01/22/15 08:25
pH, sat. paste		7.67	s.u.	0.10				0.0	30	
Lab ID: H15010100-020ADUP		Sample Duplicate				Run: SOIL PH METER_150122A				01/22/15 08:34
pH, sat. paste		7.78	s.u.	0.10				0.1	30	
Lab ID: H15010100-026ADUP		Sample Duplicate				Run: SOIL PH METER_150122A				01/22/15 08:40
pH, sat. paste		6.93	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150119C	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/19/15 12:26
Arsenic			0.784	mg/L	0.0085	98	90	110			
Cadmium			0.396	mg/L	0.0010	99	90	110			
Copper			0.798	mg/L	0.010	100	90	110			
Lead			0.780	mg/L	0.010	98	90	110			
Zinc			0.804	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/19/15 12:41
Arsenic			0.00573	mg/L	0.0085		0	0			
Cadmium			0.00445	mg/L	0.0010		0	0			
Copper			-0.00127	mg/L	0.010		0	0			
Lead			-0.00270	mg/L	0.010		0	0			
Zinc			0.00214	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/19/15 12:45
Arsenic			0.979	mg/L	0.0085	98	80	120			
Cadmium			0.906	mg/L	0.0010	91	80	120			
Copper			0.509	mg/L	0.010	102	80	120			
Lead			0.878	mg/L	0.010	88	80	120			
Zinc			0.987	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/19/15 14:02
Arsenic			2.58	mg/L	0.0085	103	90	110			
Cadmium			2.61	mg/L	0.0010	104	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.55	mg/L	0.010	102	90	110			
Zinc			2.61	mg/L	0.010	105	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/19/15 14:06
Arsenic			-0.00198	mg/L	0.0085						
Cadmium			-1.00E-05	mg/L	0.0010						
Copper			0.00462	mg/L	0.010						
Lead			-0.0248	mg/L	0.010						
Zinc			0.00143	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/19/15 14:47
Arsenic			2.56	mg/L	0.0085	102	90	110			
Cadmium			2.56	mg/L	0.0010	102	90	110			
Copper			2.55	mg/L	0.010	102	90	110			
Lead			2.52	mg/L	0.010	101	90	110			
Zinc			2.58	mg/L	0.010	103	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/19/15 14:51
Arsenic			-0.00273	mg/L	0.0085						
Cadmium			-8.00E-05	mg/L	0.0010						
Copper			0.00268	mg/L	0.010						
Lead			0.00849	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150119C	
Lab ID: CCB	5	Continuing Calibration Blank							01/19/15 14:51	
Zinc		0.000520	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/19/15 15:31	
Arsenic		2.58	mg/L	0.0085	103	90	110			
Cadmium		2.54	mg/L	0.0010	102	90	110			
Copper		2.54	mg/L	0.010	101	90	110			
Lead		2.52	mg/L	0.010	101	90	110			
Zinc		2.57	mg/L	0.010	103	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/19/15 15:35	
Arsenic		0.00847	mg/L	0.0085						
Cadmium		-0.000270	mg/L	0.0010						
Copper		0.000570	mg/L	0.010						
Lead		0.00178	mg/L	0.010						
Zinc		0.000780	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/19/15 16:15	
Arsenic		2.51	mg/L	0.0085	100	90	110			
Cadmium		2.46	mg/L	0.0010	98	90	110			
Copper		2.53	mg/L	0.010	101	90	110			
Lead		2.46	mg/L	0.010	98	90	110			
Zinc		2.48	mg/L	0.010	99	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/19/15 16:19	
Arsenic		-0.00850	mg/L	0.0085						
Cadmium		-0.000410	mg/L	0.0010						
Copper		0.00159	mg/L	0.010						
Lead		-0.0186	mg/L	0.010						
Zinc		0.000910	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/19/15 16:42	
Arsenic		2.50	mg/L	0.0085	100	90	110			
Cadmium		2.51	mg/L	0.0010	101	90	110			
Copper		2.50	mg/L	0.010	100	90	110			
Lead		2.50	mg/L	0.010	100	90	110			
Zinc		2.52	mg/L	0.010	101	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/19/15 16:45	
Arsenic		0.00470	mg/L	0.0085						
Cadmium		0.000370	mg/L	0.0010						
Copper		0.00322	mg/L	0.010						
Lead		0.00567	mg/L	0.010						
Zinc		0.00145	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/19/15 17:18	
Arsenic		2.58	mg/L	0.0085	103	90	110			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150119C	
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/19/15 17:18	
Cadmium		2.59	mg/L	0.0010	104	90	110			
Copper		2.57	mg/L	0.010	103	90	110			
Lead		2.57	mg/L	0.010	103	90	110			
Zinc		2.59	mg/L	0.010	104	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/19/15 17:22	
Arsenic		0.0158	mg/L	0.0085						
Cadmium		0.000100	mg/L	0.0010						
Copper		0.00213	mg/L	0.010						
Lead		0.00884	mg/L	0.010						
Zinc		-0.000210	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150120A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/20/15 16:02
Arsenic			0.794	mg/L	0.0085	99	90	110			
Cadmium			0.389	mg/L	0.0010	97	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.808	mg/L	0.010	101	90	110			
Zinc			0.797	mg/L	0.010	100	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/20/15 16:17
Arsenic			0.0127	mg/L	0.0085		0	0			
Cadmium			0.000730	mg/L	0.0010		0	0			
Copper			-0.00328	mg/L	0.010		0	0			
Lead			0.00836	mg/L	0.010		0	0			
Zinc			0.00491	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/20/15 16:21
Arsenic			0.974	mg/L	0.0085	97	80	120			
Cadmium			0.901	mg/L	0.0010	90	80	120			
Copper			0.497	mg/L	0.010	99	80	120			
Lead			0.931	mg/L	0.010	93	80	120			
Zinc			0.988	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/20/15 21:04
Arsenic			2.50	mg/L	0.0085	100	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.45	mg/L	0.010	98	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/20/15 21:07
Arsenic			0.00148	mg/L	0.0085						
Cadmium			0.000860	mg/L	0.0010						
Copper			0.00162	mg/L	0.010						
Lead			0.00169	mg/L	0.010						
Zinc			0.00112	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/20/15 21:48
Arsenic			2.54	mg/L	0.0085	102	90	110			
Cadmium			2.52	mg/L	0.0010	101	90	110			
Copper			2.58	mg/L	0.010	103	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.54	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/20/15 21:51
Arsenic			0.00227	mg/L	0.0085						
Cadmium			0.000840	mg/L	0.0010						
Copper			-0.00186	mg/L	0.010						
Lead			-0.00747	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150120A	
Lab ID: CCB	5	Continuing Calibration Blank							01/20/15 21:51	
Zinc		-1.00E-05	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27699	
Lab ID:	**MB-27699**	5	Method Blank				Run: ICP2-HE_150119C			01/19/15 14:18	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27699**	5	Laboratory Fortified Blank				Run: ICP2-HE_150119C			01/19/15 14:21	
Arsenic			49.0	mg/kg	1.0	98	80	120			
Cadmium			24.3	mg/kg	1.0	97	80	120			
Copper			51.1	mg/kg	1.0	102	80	120			
Lead			47.7	mg/kg	1.0	95	80	120			
Zinc			50.1	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-27699**	5	Laboratory Control Sample				Run: ICP2-HE_150119C			01/19/15 14:25	
Arsenic			275	mg/kg	1.8	81	72.3	106.4			
Cadmium			118	mg/kg	1.0	87	73	105.1			
Copper			241	mg/kg	1.1	87	77.5	109.6			
Lead			172	mg/kg	3.2	93	75.9	108.6			
Zinc			188	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H15010100-017APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150119C			01/19/15 15:24	
Arsenic			269	mg/kg	1.8	90	75	125			
Cadmium			112	mg/kg	1.0	87	75	125			
Copper			481	mg/kg	1.1	91	75	125			
Lead			254	mg/kg	3.2	87	75	125			
Zinc			505	mg/kg	1.0	89	75	125			
Lab ID:	**H15010100-017AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150119C			01/19/15 15:27	
Arsenic			84.6	mg/kg	1.8	90	75	125			
Cadmium			23.0	mg/kg	1.0	88	75	125			
Copper			296	mg/kg	1.1		75	125			A
Lead			78.2	mg/kg	3.2	91	75	125			
Zinc			318	mg/kg	1.0		75	125			A
Lab ID:	**H15010100-017AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150119C			01/19/15 15:38	
Arsenic			81.4	mg/kg	1.8	83	75	125	4.0	20	
Cadmium			22.7	mg/kg	1.0	87	75	125	1.2	20	
Copper			290	mg/kg	1.1		75	125	2.2	20	A
Lead			73.4	mg/kg	3.2	81	75	125	6.3	20	
Zinc			309	mg/kg	1.0		75	125	2.7	20	A
Method:	**SW6010B**									Batch: 27700	
Lab ID:	**MB-27700**	5	Method Blank				Run: ICP2-HE_150119C			01/19/15 15:42	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27700
Lab ID:	**MB-27700**	5	Method Blank				Run: ICP2-HE_150119C			01/19/15 15:42	
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27700**	5	Laboratory Fortified Blank				Run: ICP2-HE_150119C			01/19/15 15:46	
Arsenic			48.5	mg/kg	1.0	97	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			49.2	mg/kg	1.0	98	80	120			
Lead			48.5	mg/kg	1.0	97	80	120			
Zinc			49.5	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27700**	5	Laboratory Control Sample				Run: ICP2-HE_150119C			01/19/15 15:50	
Arsenic			276	mg/kg	1.8	80	72.3	106.4			
Cadmium			117	mg/kg	1.0	85	73	105.1			
Copper			255	mg/kg	1.1	91	77.5	109.6			
Lead			170	mg/kg	3.2	91	75.9	108.6			
Zinc			186	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H15010100-026APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150119C			01/19/15 17:00	
Arsenic			256	mg/kg	1.8	88	75	125			
Cadmium			114	mg/kg	1.0	88	75	125			
Copper			2050	mg/kg	1.1		75	125			A
Lead			282	mg/kg	3.2	87	75	125			
Zinc			791	mg/kg	1.0	90	75	125			
Lab ID:	**H15010100-026AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150119C			01/19/15 17:04	
Arsenic			79.4	mg/kg	1.8	96	75	125			
Cadmium			25.5	mg/kg	1.0	91	75	125			
Copper			1880	mg/kg	1.1		75	125			A
Lead			109	mg/kg	3.1	93	75	125			
Zinc			623	mg/kg	1.0		75	125			A
Lab ID:	**H15010100-026AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150119C			01/19/15 17:07	
Arsenic			76.0	mg/kg	1.8	89	75	125	4.4	20	
Cadmium			25.2	mg/kg	1.0	90	75	125	1.2	20	
Copper			1790	mg/kg	1.1		75	125	4.6	20	A
Lead			107	mg/kg	3.1	88	75	125	2.5	20	
Zinc			612	mg/kg	1.0		75	125	1.9	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27700	
Lab ID:	**H15010100-025APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150120A			01/20/15 21:33	
Arsenic			860	mg/kg	1.8	89	75	125			
Cadmium			113	mg/kg	1.0	87	75	125			
Copper			7960	mg/kg	1.1		75	125			A
Lead			1570	mg/kg	3.2		75	125			A
Zinc			2620	mg/kg	1.0		75	125			A
Lab ID:	**H15010100-025AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150120A			01/20/15 21:37	
Arsenic			732	mg/kg	1.9		75	125			A
Cadmium			27.8	mg/kg	1.0	90	75	125			
Copper			7950	mg/kg	1.1		75	125			A
Lead			1520	mg/kg	3.3		75	125			A
Zinc			2650	mg/kg	1.0		75	125			A
Lab ID:	**H15010100-025AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150120A			01/20/15 21:40	
Arsenic			748	mg/kg	1.9		75	125	2.2	20	A
Cadmium			28.1	mg/kg	1.0	93	75	125	1.3	20	
Copper			8140	mg/kg	1.1		75	125	2.3	20	A
Lead			1530	mg/kg	3.3		75	125	1.1	20	A
Zinc			2710	mg/kg	1.0		75	125	2.3	20	A
Method:	**SW6010B**									Batch: 27717	
Lab ID:	**MB-27717**	5	Method Blank				Run: ICP2-HE_150120A			01/20/15 20:49	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27717**	5	Laboratory Fortified Blank				Run: ICP2-HE_150120A			01/20/15 20:53	
Arsenic			47.8	mg/kg	1.0	96	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			47.8	mg/kg	1.0	96	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			48.5	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27717**	5	Laboratory Control Sample				Run: ICP2-HE_150120A			01/20/15 20:57	
Arsenic			262	mg/kg	1.7	76	72.3	106.4			
Cadmium			111	mg/kg	1.0	81	73	105.1			
Copper			242	mg/kg	1.1	87	77.5	109.6			
Lead			160	mg/kg	3.1	86	75.9	108.6			
Zinc			178	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H15010103-024APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150120A			01/20/15 22:17	
Arsenic			233	mg/kg	1.8	87	75	125			
Cadmium			109	mg/kg	1.0	85	75	125			
Copper			272	mg/kg	1.1	91	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27717
Lab ID:	**H15010103-024APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150120A			01/20/15 22:17	
Lead			232	mg/kg	3.2	86	75	125			
Zinc			297	mg/kg	1.0	89	75	125			
Lab ID:	**H15010103-024AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150120A			01/20/15 22:21	
Arsenic			52.7	mg/kg	1.8	85	75	125			
Cadmium			21.4	mg/kg	1.0	87	75	125			
Copper			87.0	mg/kg	1.1	95	75	125			
Lead			59.8	mg/kg	3.2	95	75	125			
Zinc			118	mg/kg	1.0	98	75	125			
Lab ID:	**H15010103-024AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150120A			01/20/15 22:24	
Arsenic			53.7	mg/kg	1.8	87	75	125	2.0	20	
Cadmium			21.7	mg/kg	1.0	88	75	125	1.3	20	
Copper			87.5	mg/kg	1.1	96	75	125	0.5	20	
Lead			58.7	mg/kg	3.2	93	75	125	1.8	20	
Zinc			119	mg/kg	1.0	100	75	125	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: SUB-B237574	
Lab ID:	**QCS**	5	Initial Calibration Verification Standard							01/30/15 15:17	
Arsenic			0.0509	mg/L	0.0010	102	90	110			
Cadmium			0.0261	mg/L	0.0010	104	90	110			
Copper			0.0518	mg/L	0.0010	104	90	110			
Lead			0.0510	mg/L	0.0010	102	90	110			
Zinc			0.0543	mg/L	0.0010	109	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/30/15 15:33	
Arsenic			2.00E-05	mg/L	0.0010						
Cadmium			0.000310	mg/L	0.0010						
Copper			0.000610	mg/L	0.0010						
Lead			0.000270	mg/L	0.0010						
Zinc			0.00124	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/30/15 15:36	
Arsenic			0.00928	mg/L	0.0010	93	70	130			
Cadmium			0.0103	mg/L	0.0010	103	70	130			
Copper			0.0186	mg/L	0.0010	93	70	130			
Lead			0.000260	mg/L	0.0010		0	0			
Zinc			0.00995	mg/L	0.0010	99	70	130			
Lab ID:	**QCS**	3	Initial Calibration Verification Standard							01/30/15 10:53	
Arsenic			0.0518	mg/L	0.0010	104	90	110			
Cadmium			0.0266	mg/L	0.0010	106	90	110			
Lead			0.0498	mg/L	0.0010	100	90	110			
Method:	**SW6020**									Batch: B_86553	
Lab ID:	**LCS-86553**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 13:29	
Arsenic			320	mg/kg	1.0	93	72	120			
Cadmium			140	mg/kg	1.0	103	73	120			
Copper			273	mg/kg	1.0	97	77	120			
Lead			186	mg/kg	1.0	100	75	120			
Zinc			210	mg/kg	1.0	99	74	120			
Lab ID:	**MB-86553**	5	Method Blank				Run: SUB-B237574			01/30/15 16:24	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.3	mg/kg	0.1						
Lead			ND	mg/kg	0.08						
Zinc			1	mg/kg	0.6						
Lab ID:	**LFB-86553**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 16:29	
Arsenic			48.8	mg/kg	1.0	98	80	120			
Cadmium			25.6	mg/kg	1.0	102	80	120			
Copper			50.8	mg/kg	1.0	101	80	120			
Lead			49.3	mg/kg	1.0	99	80	120			
Zinc			50.6	mg/kg	1.0	99	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86553	
Lab ID:	**LFB-86553**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 16:29	
Lab ID:	**H15010100-026A**	5	Serial Dilution				Run: SUB-B237574			01/30/15 16:55	
Arsenic			30.6	mg/kg	1.7		0	0	1.7	10	
Cadmium			3.45	mg/kg	1.0		0	0	0.9	10	
Copper			1980	mg/kg	1.0		0	0	3.2	10	
Lead			63.6	mg/kg	1.0		0	0	3.2	10	
Zinc			642	mg/kg	2.9		0	0	4.2	10	
Lab ID:	**H15010100-026A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/30/15 16:58	
Arsenic			78.4	mg/kg	1.0	95	75	125			
Cadmium			54.3	mg/kg	1.0	102	75	125			
Copper			1940	mg/kg	1.0		75	125			A
Lead			106	mg/kg	1.0	89	75	125			
Zinc			661	mg/kg	1.0		75	125			A
Lab ID:	**H15010100-026A**	5	Sample Matrix Spike				Run: SUB-B237574			01/30/15 17:00	
Arsenic			81.4	mg/kg	1.0	101	75	125			
Cadmium			28.9	mg/kg	1.0	102	75	125			
Copper			1930	mg/kg	1.0		75	125			A
Lead			110	mg/kg	1.0	98	75	125			
Zinc			666	mg/kg	1.0		75	125			A
Lab ID:	**H15010100-026A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/30/15 17:03	
Arsenic			78.0	mg/kg	1.0	94	75	125	4.4	20	
Cadmium			29.4	mg/kg	1.0	104	75	125	1.6	20	
Copper			1940	mg/kg	1.0		75	125	0.3	20	A
Lead			111	mg/kg	1.0	98	75	125	0.1	20	
Zinc			667	mg/kg	1.0		75	125	0.2	20	A
Method:	**SW6020**									Batch: B_86554	
Lab ID:	**LCS-86554**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 13:32	
Arsenic			315	mg/kg	1.0	92	72	120			
Cadmium			137	mg/kg	1.0	100	73	120			
Copper			271	mg/kg	1.0	97	77	120			
Lead			185	mg/kg	1.0	99	75	120			
Zinc			203	mg/kg	1.0	95	74	120			
Lab ID:	**MB-86554**	5	Method Blank				Run: SUB-B237574			01/30/15 17:16	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.4	mg/kg	0.1						
Lead			0.09	mg/kg	0.08						
Zinc			1	mg/kg	0.6						
Lab ID:	**LFB-86554**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 17:21	
Arsenic			50.5	mg/kg	1.0	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86554	
Lab ID:	**LFB-86554**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/30/15 17:21	
Cadmium			26.2	mg/kg	1.0	105	80	120			
Copper			52.8	mg/kg	1.0	105	80	120			
Lead			50.2	mg/kg	1.0	100	80	120			
Zinc			53.3	mg/kg	1.0	104	80	120			
Lab ID:	**B15011730-017ADIL**	5	Serial Dilution				Run: SUB-B237574			01/30/15 17:50	
Arsenic			42.5	mg/kg	1.7		0	0	3.8	10	
Cadmium			1.15	mg/kg	1.0		0	0		10	N
Copper			273	mg/kg	1.0		0	0	4.0	10	
Lead			37.0	mg/kg	1.0		0	0	0.7	10	
Zinc			317	mg/kg	2.9		0	0	7.0	10	
Lab ID:	**B15011730-017APDS1**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/30/15 17:53	
Arsenic			88.8	mg/kg	1.0	96	75	125			
Cadmium			50.7	mg/kg	1.0	99	75	125			
Copper			315	mg/kg	1.0		75	125			A
Lead			82.1	mg/kg	1.0	91	75	125			
Zinc			348	mg/kg	1.0		75	125			A
Lab ID:	**B15011730-017AMS3**	5	Sample Matrix Spike				Run: SUB-B237574			01/30/15 17:56	
Arsenic			88.1	mg/kg	1.0	94	75	125			
Cadmium			27.7	mg/kg	1.0	105	75	125			
Copper			310	mg/kg	1.0		75	125			A
Lead			84.0	mg/kg	1.0	95	75	125			
Zinc			348	mg/kg	1.0		75	125			A
Lab ID:	**B15011730-017AMSD**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/30/15 17:58	
Arsenic			92.4	mg/kg	1.0	103	75	125	4.8	20	
Cadmium			27.8	mg/kg	1.0	106	75	125	0.5	20	
Copper			326	mg/kg	1.0		75	125	5.2	20	A
Lead			88.2	mg/kg	1.0	103	75	125	4.8	20	
Zinc			363	mg/kg	1.0		75	125	4.2	20	A
Method:	**SW6020**									Batch: B_86560	
Lab ID:	**LCS-86560**	5	Standard Reference Material				Run: SUB-B237574			01/30/15 13:53	
Arsenic			319	mg/kg	1.0	93	72	120			
Cadmium			140	mg/kg	1.0	103	73	120			
Copper			266	mg/kg	1.0	95	77	120			
Lead			188	mg/kg	1.0	101	75	120			
Zinc			208	mg/kg	1.0	98	74	120			
Lab ID:	**MB-86560**	5	Method Blank				Run: SUB-B237574			01/31/15 00:39	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.1						
Copper			0.4	mg/kg	0.1						
Lead			ND	mg/kg	0.08						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 02/06/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H15010100

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: B_86560	
Lab ID:	**MB-86560**	5	Method Blank				Run: SUB-B237574			01/31/15 00:39	
Zinc			1	mg/kg	0.6						
Lab ID:	**LFB-86560**	5	Laboratory Fortified Blank				Run: SUB-B237574			01/31/15 00:44	
Arsenic			49.3	mg/kg	1.0	99	80	120			
Cadmium			25.7	mg/kg	1.0	103	80	120			
Copper			50.6	mg/kg	1.0	100	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Zinc			51.6	mg/kg	1.0	101	80	120			
Lab ID:	**H15010103-024A**	5	Serial Dilution				Run: SUB-B237574			01/31/15 01:21	
Arsenic			9.55	mg/kg	1.7		0	0		10	N
Cadmium			0.350	mg/kg	1.0		0	0		10	N
Copper			43.6	mg/kg	1.0		0	0	0.5	10	
Lead			14.5	mg/kg	1.0		0	0	3.0	10	
Zinc			82.0	mg/kg	2.9		0	0	4.8	10	
Lab ID:	**H15010103-024A**	5	Post Digestion/Distillation Spike				Run: SUB-B237574			01/31/15 01:24	
Arsenic			58.1	mg/kg	1.0	98	75	125			
Cadmium			52.0	mg/kg	1.0	103	75	125			
Copper			90.2	mg/kg	1.0	93	75	125			
Lead			63.3	mg/kg	1.0	97	75	125			
Zinc			121	mg/kg	1.0	86	75	125			
Lab ID:	**H15010103-024A**	5	Sample Matrix Spike				Run: SUB-B237574			01/31/15 01:27	
Arsenic			56.0	mg/kg	1.0	94	75	125			
Cadmium			24.9	mg/kg	1.0	98	75	125			
Copper			93.9	mg/kg	1.0	100	75	125			
Lead			61.6	mg/kg	1.0	93	75	125			
Zinc			125	mg/kg	1.0	95	75	125			
Lab ID:	**H15010103-024A**	5	Sample Matrix Spike Duplicate				Run: SUB-B237574			01/31/15 01:37	
Arsenic			56.0	mg/kg	1.0	93	75	125	0.1	20	
Cadmium			24.8	mg/kg	1.0	98	75	125	0.2	20	
Copper			93.3	mg/kg	1.0	99	75	125	0.6	20	
Lead			61.2	mg/kg	1.0	92	75	125	0.7	20	
Zinc			125	mg/kg	1.0	94	75	125	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H15010100

Login completed by: Austin H. Nearpass

Reviewed by: BL2000\rwilliams

Reviewed Date: 1/14/2015

Date Received: 1/12/2015

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	1.2°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-064-3036	807	01/06/15	Soil	A	B		1
4-064-3642	806	01/06/15	Soil	A	B		1
4-064-4248	805	01/06/15	Soil	A	B		1
4-065-1824	834	01/06/15	Soil	A	B		1
4-065-2430	833	01/06/15	Soil	A	B		1
4-065-3036	832	01/06/15	Soil	A	B		1
4-047w-3642	956	01/06/15	Soil	A	B		1
4-047w-4248	955	01/06/15	Soil	A	B		1
4-056w-1218	1025	01/06/15	Soil	A	B		1
4-056w-1824	1024	01/06/15	Soil	A	B		1
4-056w-2430	1023	01/06/15	Soil	A	B		1
4-065w-1218	1105	01/06/15	Soil	A	B		1
4-065w-1824	1104	01/06/15	Soil	A	B		1
4-065w-2430	1103	01/06/15	Soil	A	B		1
4-112-0612	1207	01/06/15	Soil	A	B		1
4-112-1218	1205	01/06/15	Soil	A	B		1
4-112-1218d	1206	01/06/15	Soil	A	B		1
4-112-1824	1204	01/06/15	Soil	A	B		1
4-102-1824	1244	01/06/15	Soil	A	B		1
4-102-2430	1243	01/06/15	Soil	A	B		1

H15010100

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 1/12/15 1240

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

1.2 TB on ice hand del

Date/Time: 1/12/15 12:40

COC Blank.xls

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-102-3036	1242	01/06/15	Soil	A	B		1
4-094-0006	1328	01/06/15	Soil	A	B		1
4-094-0612	1327	01/06/15	Soil	A	B		1
4-085-1218	1406	01/06/15	Soil	A	B		1
4-085-1824	1405	01/06/15	Soil	A	B		1
4-085-2430	1404	01/06/15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

H15010100

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1/12/15 1240	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 1.2 TB on ice hand del	1/12/15 12:40

ANALYTICAL SUMMARY REPORT

January 23, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120495

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 57 samples for MT DEQ-Federal Superfund on 12/31/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120495-001	3-337-4854	12/22/14 16:51	12/31/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120495-002	3-337-5460	12/22/14 16:50	12/31/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120495-003	3-349-3642	12/22/14 16:21	12/31/14	Soil	Same As Above
H14120495-004	3-349-4248	12/22/14 16:20	12/31/14	Soil	Same As Above
H14120495-005	3-359-1824	12/22/14 16:09	12/31/14	Soil	Same As Above
H14120495-006	3-359-2430	12/22/14 16:08	12/31/14	Soil	Same As Above
H14120495-007	3-359-3036	12/22/14 16:07	12/31/14	Soil	Same As Above
H14120495-008	3-361-3036	12/22/14 15:17	12/31/14	Soil	Same As Above
H14120495-009	3-361-3642	12/22/14 15:16	12/31/14	Soil	Same As Above
H14120495-010	3-361-4248	12/22/14 15:15	12/31/14	Soil	Same As Above
H14120495-011	3-362-3642	12/22/14 15:36	12/31/14	Soil	Same As Above
H14120495-012	3-362-4248	12/22/14 15:35	12/31/14	Soil	Same As Above
H14120495-013	3-362-4854	12/22/14 16:03	12/31/14	Soil	Same As Above
H14120495-014	3-366-4854	12/22/14 12:45	12/31/14	Soil	Same As Above
H14120495-015	3-366-5460	12/22/14 12:44	12/31/14	Soil	Same As Above
H14120495-016	3-368-1218	12/22/14 13:30	12/31/14	Soil	Same As Above
H14120495-017	3-368-1824	12/22/14 13:29	12/31/14	Soil	Same As Above
H14120495-018	3-368-2430	12/22/14 13:28	12/31/14	Soil	Same As Above
H14120495-019	3-375-3642	12/22/14 12:11	12/31/14	Soil	Same As Above
H14120495-020	3-375-4248	12/22/14 12:10	12/31/14	Soil	Same As Above
H14120495-021	3-380-2430	12/22/14 11:48	12/31/14	Soil	Same As Above
H14120495-022	3-380-3036	12/22/14 11:47	12/31/14	Soil	Same As Above
H14120495-023	3-380-3642	12/22/14 11:46	12/31/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120495-024	3-380w-0612	12/22/14 14:46	12/31/14	Soil	Same As Above
H14120495-025	3-380w-1218	12/22/14 14:45	12/31/14	Soil	Same As Above
H14120495-026	3-380w-1824	12/22/14 14:44	12/31/14	Soil	Same As Above
H14120495-027	3-382-2430	12/22/14 11:08	12/31/14	Soil	Same As Above
H14120495-028	3-382-3036	12/22/14 11:07	12/31/14	Soil	Same As Above
H14120495-029	3-382-3642	12/22/14 11:06	12/31/14	Soil	Same As Above
H14120495-030	3-388-3036	12/22/14 11:22	12/31/14	Soil	Same As Above
H14120495-031	3-388-3642	12/22/14 11:21	12/31/14	Soil	Same As Above
H14120495-032	3-388-4248	12/22/14 11:20	12/31/14	Soil	Same As Above
H14120495-033	3-389-1824	12/22/14 10:44	12/31/14	Soil	Same As Above
H14120495-034	3-389-2430	12/22/14 10:43	12/31/14	Soil	Same As Above
H14120495-035	3-389-3036	12/22/14 10:42	12/31/14	Soil	Same As Above
H14120495-036	3-389w-0612	12/22/14 13:57	12/31/14	Soil	Same As Above
H14120495-037	3-389w-1218	12/22/14 13:55	12/31/14	Soil	Same As Above
H14120495-038	3-389w-1218d	12/22/14 13:56	12/31/14	Soil	Same As Above
H14120495-039	3-389w-1824	12/22/14 13:54	12/31/14	Soil	Same As Above
H14120495-040	3-393-2430	12/22/14 9:43	12/31/14	Soil	Same As Above
H14120495-041	3-393-3036	12/22/14 9:42	12/31/14	Soil	Same As Above
H14120495-042	3-393-3642	12/22/14 9:41	12/31/14	Soil	Same As Above
H14120495-043	3-394-1218	12/22/14 10:05	12/31/14	Soil	Same As Above
H14120495-044	3-394-1824	12/22/14 10:04	12/31/14	Soil	Same As Above
H14120495-045	3-394-2430	12/22/14 10:03	12/31/14	Soil	Same As Above
H14120495-046	3-395-1824	12/22/14 10:24	12/31/14	Soil	Same As Above
H14120495-047	3-395-2430	12/22/14 10:23	12/31/14	Soil	Same As Above
H14120495-048	3-395-3036	12/22/14 10:22	12/31/14	Soil	Same As Above
H14120495-049	3-395w-0612	12/22/14 14:16	12/31/14	Soil	Same As Above
H14120495-050	3-395w-1218	12/22/14 14:15	12/31/14	Soil	Same As Above
H14120495-051	3-395w-1824	12/22/14 14:14	12/31/14	Soil	Same As Above
H14120495-052	3-406-0006	12/22/14 9:27	12/31/14	Soil	Same As Above
H14120495-053	3-406-0612	12/22/14 9:26	12/31/14	Soil	Same As Above
H14120495-054	3-409-0006	12/22/14 9:03	12/31/14	Soil	Same As Above
H14120495-055	3-409-0612	12/22/14 9:02	12/31/14	Soil	Same As Above
H14120495-056	3-414-0006	12/22/14 8:22	12/31/14	Soil	Same As Above
H14120495-057	3-414-0612	12/22/14 8:21	12/31/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

ANALYTICAL SUMMARY REPORT

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120495

Report Date: 01/23/15
Date Received: 12/31/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120495-001	3-337-4854	0	0	7.5	185	3	1610	209	1030
H14120495-002	3-337-5460	0	0	7.6	338	4	6400	572	1120
H14120495-003	3-349-3642	0	0	7.7	489	10	3900	375	2930
H14120495-004	3-349-4248	0	0	7.5	264	5	2480	232	1110
H14120495-005	3-359-1824	0	0	7.2	8	5	1220	13	2300
H14120495-006	3-359-2430	0	0	7.0	5	< 1	142	12	361
H14120495-007	3-359-3036	0	0	6.8	6	< 1	97	12	201
H14120495-008	3-361-3036	0	0	6.4	403	6	4650	382	2260
H14120495-009	3-361-3642	0	0	6.9	12	2	1310	12	515
H14120495-010	3-361-4248	0	0	7.0	5	2	973	9	303
H14120495-011	3-362-3642	0	0	7.4	9	20	2310	14	1940
H14120495-012	3-362-4248	0	0	7.4	4	< 1	28	9	1100
H14120495-013	3-362-4854	0	0	6.9	13	< 1	84	21	454
H14120495-014	3-366-4854	0	0	7.4	20	< 1	2550	26	177
H14120495-015	3-366-5460	0	0	7.1	496	5	5350	459	1100
H14120495-016	3-368-1218	0	0	7.6	616	6	6270	323	1900
H14120495-017	3-368-1824	0	0	7.5	448	3	3530	188	765
H14120495-018	3-368-2430	0	0	7.6	10	< 1	86	15	110
H14120495-019	3-375-3642	0	0	6.3	4	3	2010	9	525
H14120495-020	3-375-4248	0	0	7.3	4	< 1	1810	7	277
H14120495-021	3-380-2430	0	0	7.4	193	2	1590	96	497
H14120495-022	3-380-3036	0	0	7.6	19	< 1	95	14	78
H14120495-023	3-380-3642	0	0	7.8	6	< 1	108	11	60
H14120495-024	3-380w-0612	0	0	7.6	2500	12	14800	1060	3800
H14120495-025	3-380w-1218	0	0	7.6	96	1	577	43	339
H14120495-026	3-380w-1824	0	0	7.7	14	< 1	59	12	82
H14120495-027	3-382-2430	0	0	7.4	406	29	9730	511	5090
H14120495-028	3-382-3036	0	0	7.2	14	< 1	197	26	350
H14120495-029	3-382-3642	0	0	7.4	8	< 1	77	21	535
H14120495-030	3-388-3036	0	0	7.6	1840	19	15700	1720	4280
H14120495-031	3-388-3642	0	0	6.9	8	< 1	40	20	78
H14120495-032	3-388-4248	0	0	7.0	3	< 1	24	16	59
H14120495-033	3-389-1824	0	0	7.6	167	5	1710	109	1740
H14120495-034	3-389-2430	0	0	7.7	6	< 1	47	14	57
H14120495-035	3-389-3036	0	0	7.5	18	< 1	138	22	97
H14120495-036	3-389w-0612	0	0	7.8	32	< 1	105	13	91
H14120495-037	3-389w-1218	0	0	7.8	34	< 1	98	16	86
H14120495-038	3-389w-1218d	0	0	7.7	28	< 1	41	11	73
H14120495-039	3-389w-1824	0	0	7.7	17	< 1	122	19	94
H14120495-040	3-393-2430	0	0	7.6	15	15	484	15	3230

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120495

Report Date: 01/23/15
Date Received: 12/31/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120495-041	3-393-3036	0	0	7.1	13	< 1	84	19	132
H14120495-042	3-393-3642	0	0	6.8	5	< 1	63	12	138
H14120495-043	3-394-1218	0	0	7.6	13	6	1020	12	3230
H14120495-044	3-394-1824	0	0	7.6	7	< 1	63	12	642
H14120495-045	3-394-2430	0	0	7.5	6	< 1	21	9	69
H14120495-046	3-395-1824	0	0	7.4	192	23	3490	127	7380
H14120495-047	3-395-2430	0	0	7.5	44	1	380	42	420
H14120495-048	3-395-3036	0	0	7.5	11	< 1	117	16	95
H14120495-049	3-395w-0612	0	0	7.7	2300	16	16700	620	3850
H14120495-050	3-395w-1218	0	0	7.7	1130	8	9450	572	1890
H14120495-051	3-395w-1824	0	0	8.0	78	2	637	48	414
H14120495-052	3-406-0006	0	0	7.8	612	6	4040	389	1850
H14120495-053	3-406-0612	0	0	7.8	15	< 1	86	16	89
H14120495-054	3-409-0006	0	0	7.2	515	6	5030	399	1620
H14120495-055	3-409-0612	0	0	7.7	23	< 1	295	19	171
H14120495-056	3-414-0006	0	0	7.8	94	2	681	89	560
H14120495-057	3-414-0612	0	0	7.8	92	2	687	84	554

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150122A		
Lab ID: CCV_1_150121_1		Continuing Calibration Verification Standard							01/22/15 06:49	
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150121_1		Continuing Calibration Verification Standard							01/22/15 06:50	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150121_1		Initial Calibration Verification Standard							01/22/15 06:50	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150121_1		Continuing Calibration Verification Standard							01/22/15 07:01	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150121_1		Continuing Calibration Verification Standard							01/22/15 07:18	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150121_1		Continuing Calibration Verification Standard							01/22/15 07:18	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150121_1		Initial Calibration Verification Standard							01/22/15 07:19	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150121_1		Continuing Calibration Verification Standard							01/22/15 07:29	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150121_1		Continuing Calibration Verification Standard							01/22/15 07:44	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150121_1		Continuing Calibration Verification Standard							01/22/15 07:44	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150121_1		Initial Calibration Verification Standard							01/22/15 07:45	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150121_1		Continuing Calibration Verification Standard							01/22/15 07:55	
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150121_1		Initial Calibration Verification Standard							01/22/15 08:15	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27755
Lab ID: LCS-27755		Laboratory Control Sample				Run: SOIL PH METER_150122A			01/22/15 06:51	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H14120495-010ADUP		Sample Duplicate				Run: SOIL PH METER_150122A			01/22/15 07:01	
pH, sat. paste		6.99	s.u.	0.10				0.1	30	
Lab ID: H14120495-020ADUP		Sample Duplicate				Run: SOIL PH METER_150122A			01/22/15 07:11	
pH, sat. paste		7.30	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27756

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27756
Lab ID: LCS-27756		Laboratory Control Sample				Run: SOIL PH METER_150122A				01/22/15 07:20
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H14120495-030ADUP		Sample Duplicate				Run: SOIL PH METER_150122A				01/22/15 07:29
pH, sat. paste		7.59	s.u.	0.10				0.1	30	
Lab ID: H14120495-040ADUP		Sample Duplicate				Run: SOIL PH METER_150122A				01/22/15 07:37
pH, sat. paste		7.65	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27757
Lab ID: H14120495-050ADUP		Sample Duplicate				Run: SOIL PH METER_150122A				01/22/15 07:54
pH, sat. paste		7.74	s.u.	0.10				0.1	30	
Lab ID: H14120495-057ADUP		Sample Duplicate				Run: SOIL PH METER_150122A				01/22/15 08:02
pH, sat. paste		7.73	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150114A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/14/15 10:07
Arsenic			0.784	mg/L	0.0085	98	90	110			
Cadmium			0.383	mg/L	0.0010	96	90	110			
Copper			0.781	mg/L	0.010	98	90	110			
Lead			0.743	mg/L	0.010	93	90	110			
Zinc			0.788	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/14/15 10:22
Arsenic			0.00468	mg/L	0.0085		0	0			
Cadmium			-0.000890	mg/L	0.0010		0	0			
Copper			0.000960	mg/L	0.010		0	0			
Lead			-0.00397	mg/L	0.010		0	0			
Zinc			0.00217	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/14/15 10:26
Arsenic			0.943	mg/L	0.0085	94	80	120			
Cadmium			0.873	mg/L	0.0010	87	80	120			
Copper			0.490	mg/L	0.010	98	80	120			
Lead			0.874	mg/L	0.010	87	80	120			
Zinc			0.959	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/14/15 10:57
Arsenic			2.55	mg/L	0.0085	102	90	110			
Cadmium			2.52	mg/L	0.0010	101	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.51	mg/L	0.010	100	90	110			
Zinc			2.55	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/14/15 11:00
Arsenic			-0.00964	mg/L	0.0085						
Cadmium			-0.00100	mg/L	0.0010						
Copper			0.000160	mg/L	0.010						
Lead			-0.0147	mg/L	0.010						
Zinc			0.00153	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/15/15 04:26
Arsenic			2.43	mg/L	0.0085	97	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.41	mg/L	0.010	96	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/15/15 04:29
Arsenic			0.00362	mg/L	0.0085						
Cadmium			0.000390	mg/L	0.0010						
Copper			0.00790	mg/L	0.010						
Lead			-0.0164	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150114A	
Lab ID: CCB	5	Continuing Calibration Blank							01/15/15 04:29	
Zinc		-0.000760	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150115A	
Lab ID: ICV	5	Initial Calibration Verification Standard							01/15/15 10:26	
Arsenic		0.829	mg/L	0.0085	104	90	110			
Cadmium		0.407	mg/L	0.0010	102	90	110			
Copper		0.814	mg/L	0.010	102	90	110			
Lead		0.811	mg/L	0.010	101	90	110			
Zinc		0.834	mg/L	0.010	104	90	110			
Lab ID: ICSA	5	Interference Check Sample A							01/15/15 10:41	
Arsenic		-0.00315	mg/L	0.0085		0	0			
Cadmium		0.00545	mg/L	0.0010		0	0			
Copper		-0.00237	mg/L	0.010		0	0			
Lead		0.00445	mg/L	0.010		0	0			
Zinc		0.00222	mg/L	0.010		0	0			
Lab ID: ICSAB	5	Interference Check Sample AB							01/15/15 10:45	
Arsenic		0.962	mg/L	0.0085	96	80	120			
Cadmium		0.882	mg/L	0.0010	88	80	120			
Copper		0.509	mg/L	0.010	102	80	120			
Lead		0.880	mg/L	0.010	88	80	120			
Zinc		0.969	mg/L	0.010	97	80	120			
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/15/15 11:15	
Arsenic		2.53	mg/L	0.0085	101	90	110			
Cadmium		2.53	mg/L	0.0010	101	90	110			
Copper		2.60	mg/L	0.010	104	90	110			
Lead		2.53	mg/L	0.010	101	90	110			
Zinc		2.56	mg/L	0.010	102	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/15/15 11:19	
Arsenic		-0.00630	mg/L	0.0085						
Cadmium		0.000630	mg/L	0.0010						
Copper		-0.00776	mg/L	0.010						
Lead		-0.0156	mg/L	0.010						
Zinc		-0.000240	mg/L	0.010						
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/16/15 01:08	
Arsenic		2.48	mg/L	0.0085	99	90	110			
Cadmium		2.52	mg/L	0.0010	101	90	110			
Copper		2.54	mg/L	0.010	101	90	110			
Lead		2.51	mg/L	0.010	100	90	110			
Zinc		2.52	mg/L	0.010	101	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/16/15 01:11	
Arsenic		0.00637	mg/L	0.0085						
Cadmium		0.000410	mg/L	0.0010						
Copper		0.00677	mg/L	0.010						
Lead		0.0158	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150115A	
Lab ID: CCB	5	Continuing Calibration Blank							01/16/15 01:11	
Zinc		0.00144	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150121C		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							01/23/15 04:01	
Arsenic			0.0500	mg/L	0.0050	100	90	110			
Cadmium			0.0490	mg/L	0.0010	98	90	110			
Lead			0.0500	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							01/23/15 04:11	
Arsenic			4.21E-05	mg/L	0.0050						
Cadmium			1.00E-07	mg/L	0.0010						
Lead			ND	mg/L	0.010						
Method:	**E200.8**								Analytical Run: ICPMS204-B_150122A		
Lab ID:	**CCV**		Continuing Calibration Verification Standard							01/22/15 02:30	
Arsenic			0.0495	mg/L	0.0050	99	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							01/22/15 02:39	
Arsenic			6.83E-05	mg/L	0.0050						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27656
Lab ID:	**MB-27656**	5	Method Blank				Run: ICP2-HE_150114A				01/15/15 02:16
Arsenic			ND	mg/kg	0.4						
Cadmium			0.03	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27656**	5	Laboratory Fortified Blank				Run: ICP2-HE_150114A				01/15/15 02:20
Arsenic			45.4	mg/kg	1.0	91	80	120			
Cadmium			22.2	mg/kg	1.0	89	80	120			
Copper			47.7	mg/kg	1.0	95	80	120			
Lead			44.7	mg/kg	1.0	89	80	120			
Zinc			51.2	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27656**	5	Laboratory Control Sample				Run: ICP2-HE_150114A				01/15/15 02:24
Arsenic			274	mg/kg	1.8	80	72.3	106.4			
Cadmium			113	mg/kg	1.0	82	73	105.1			
Copper			244	mg/kg	1.1	87	77.5	109.6			
Lead			166	mg/kg	3.2	89	75.9	108.6			
Zinc			188	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120495-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150114A				01/15/15 04:15
Arsenic			221	mg/kg	1.8	84	75	125			
Cadmium			102	mg/kg	1.0	81	75	125			
Copper			301	mg/kg	1.1	86	75	125			
Lead			219	mg/kg	3.2	81	75	125			
Zinc			318	mg/kg	1.0	83	75	125			
Lab ID:	**H14120495-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150114A				01/15/15 04:18
Arsenic			53.4	mg/kg	1.8	86	75	125			
Cadmium			20.8	mg/kg	1.0	85	75	125			
Copper			128	mg/kg	1.1	87	75	125			
Lead			66.3	mg/kg	3.1	100	75	125			
Zinc			151	mg/kg	1.0	84	75	125			
Lab ID:	**H14120495-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150114A				01/15/15 04:22
Arsenic			51.9	mg/kg	1.7	84	75	125	2.9	20	
Cadmium			20.2	mg/kg	1.0	84	75	125	2.9	20	
Copper			130	mg/kg	1.1	91	75	125	0.9	20	
Lead			68.0	mg/kg	3.1	106	75	125	2.6	20	
Zinc			152	mg/kg	1.0	86	75	125	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27659
Lab ID:	**MB-27659**	5	Method Blank				Run: ICP2-HE_150115A			01/15/15 18:32	
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.9	mg/kg	0.09						
Lab ID:	**LFB-27659**	5	Laboratory Fortified Blank				Run: ICP2-HE_150115A			01/15/15 18:36	
Arsenic			46.9	mg/kg	1.0	93	80	120			
Cadmium			23.1	mg/kg	1.0	93	80	120			
Copper			49.6	mg/kg	1.0	96	80	120			
Lead			46.8	mg/kg	1.0	94	80	120			
Zinc			48.3	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27659**	5	Laboratory Control Sample				Run: ICP2-HE_150115A			01/15/15 18:40	
Arsenic			273	mg/kg	1.7	79	72.3	106.4			
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			256	mg/kg	1.1	91	77.5	109.6			
Lead			168	mg/kg	3.1	90	75.9	108.6			
Zinc			186	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120399-041AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150115A			01/15/15 20:00	
Arsenic			138	mg/kg	1.7	91	75	125			
Cadmium			25.6	mg/kg	1.0	90	75	125			
Copper			1700	mg/kg	1.0		75	125			A
Lead			241	mg/kg	3.0		75	125			A
Zinc			809	mg/kg	1.0		75	125			A
Lab ID:	**H14120399-041AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150115A			01/15/15 20:04	
Arsenic			136	mg/kg	1.8	82	75	125	1.9	20	
Cadmium			25.0	mg/kg	1.0	84	75	125	2.2	20	
Copper			1680	mg/kg	1.1		75	125	1.1	20	A
Lead			235	mg/kg	3.2	77	75	125	2.3	20	
Zinc			788	mg/kg	1.0		75	125	2.6	20	A
Lab ID:	**H14120495-004APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150115A			01/15/15 20:15	
Arsenic			504	mg/kg	1.9	92	75	125			
Cadmium			122	mg/kg	1.0	89	75	125			
Copper			2770	mg/kg	1.1		75	125			A
Lead			466	mg/kg	3.3	90	75	125			
Zinc			1370	mg/kg	1.0		75	125			A
Lab ID:	**H14120495-004AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150115A			01/15/15 20:19	
Arsenic			304	mg/kg	1.8		75	125			A
Cadmium			28.0	mg/kg	1.0	90	75	125			
Copper			2380	mg/kg	1.1		75	125			A
Lead			288	mg/kg	3.2		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27659
Lab ID:	**H14120495-004AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150115A			01/15/15 20:19	
Zinc			1090	mg/kg	1.0		75	125			A
Lab ID:	**H14120495-004AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150115A			01/15/15 20:30	
Arsenic			327	mg/kg	1.8		75	125	7.2	20	A
Cadmium			29.0	mg/kg	1.0	93	75	125	3.2	20	
Copper			2820	mg/kg	1.1		75	125	17	20	A
Lead			290	mg/kg	3.2		75	125	0.5	20	A
Zinc			1240	mg/kg	1.0		75	125	13	20	A
Lab ID:	**H14120495-057APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150115A			01/15/15 20:48	
Arsenic			316	mg/kg	1.8	88	75	125			
Cadmium			112	mg/kg	1.0	87	75	125			
Copper			918	mg/kg	1.1	92	75	125			
Lead			302	mg/kg	3.2	87	75	125			
Zinc			779	mg/kg	1.0	89	75	125			
Lab ID:	**H14120495-057AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150115A			01/15/15 20:52	
Arsenic			131	mg/kg	1.8	79	75	125			
Cadmium			24.5	mg/kg	1.0	93	75	125			
Copper			750	mg/kg	1.1		75	125			A
Lead			125	mg/kg	3.1	85	75	125			
Zinc			647	mg/kg	1.0		75	125			A
Lab ID:	**H14120495-057AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150115A			01/15/15 20:56	
Arsenic			131	mg/kg	1.8	79	75	125	0.0	20	
Cadmium			23.1	mg/kg	1.0	87	75	125	5.8	20	
Copper			742	mg/kg	1.1		75	125	1.0	20	A
Lead			122	mg/kg	3.1	77	75	125	2.9	20	
Zinc			585	mg/kg	1.0		75	125	10.0	20	A
Method:	**SW6010B**										Batch: 27660
Lab ID:	**MB-27660**	5	Method Blank				Run: ICP2-HE_150115A			01/15/15 20:59	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27660**	5	Laboratory Fortified Blank				Run: ICP2-HE_150115A			01/15/15 21:03	
Arsenic			47.1	mg/kg	1.0	94	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			56.8	mg/kg	1.0	111	80	120			
Lead			45.6	mg/kg	1.0	91	80	120			
Zinc			50.7	mg/kg	1.0	99	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27660
Lab ID:	**LCS-27660**	5	Laboratory Control Sample				Run: ICP2-HE_150115A				01/15/15 21:40
Arsenic			261	mg/kg	1.8	76	72.3	106.4			
Cadmium			110	mg/kg	1.0	80	73	105.1			
Copper			247	mg/kg	1.1	88	77.5	109.6			
Lead			158	mg/kg	3.1	84	75.9	108.6			
Zinc			180	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H14120495-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150115A				01/15/15 23:13
Arsenic			77.1	mg/kg	1.8	91	75	125			
Cadmium			22.1	mg/kg	1.0	89	75	125			
Copper			150	mg/kg	1.1	92	75	125			
Lead			57.7	mg/kg	3.1	92	75	125			
Zinc			137	mg/kg	1.0	93	75	125			
Lab ID:	**H14120495-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150115A				01/15/15 23:17
Arsenic			77.2	mg/kg	1.8	92	75	125	0.1	20	
Cadmium			21.4	mg/kg	1.0	86	75	125	3.4	20	
Copper			145	mg/kg	1.1	82	75	125	3.3	20	
Lead			51.5	mg/kg	3.1	79	75	125	11	20	
Zinc			133	mg/kg	1.0	85	75	125	3.0	20	
Method:	**SW6010B**										Batch: 27661
Lab ID:	**MB-27661**	5	Method Blank				Run: ICP2-HE_150115A				01/15/15 23:20
Arsenic			0.8	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			6	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27661**	5	Laboratory Fortified Blank				Run: ICP2-HE_150115A				01/15/15 23:24
Arsenic			47.9	mg/kg	1.0	94	80	120			
Cadmium			23.5	mg/kg	1.0	94	80	120			
Copper			52.5	mg/kg	1.0	94	80	120			
Lead			46.3	mg/kg	1.0	93	80	120			
Zinc			49.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27661**	5	Laboratory Control Sample				Run: ICP2-HE_150115A				01/15/15 23:28
Arsenic			284	mg/kg	1.7	83	72.3	106.4			
Cadmium			118	mg/kg	1.0	86	73	105.1			
Copper			253	mg/kg	1.0	88	77.5	109.6			
Lead			178	mg/kg	3.0	95	75.9	108.6			
Zinc			193	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H14120495-054AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150115A				01/16/15 01:00
Arsenic			552	mg/kg	1.8		75	125			A
Cadmium			28.3	mg/kg	1.0	88	75	125			
Copper			5140	mg/kg	1.1		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6010B**										Batch: 27661
Lab ID: **H14120495-054AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150115A			01/16/15 01:00	
Lead		439	mg/kg	3.2		75	125			A
Zinc		1640	mg/kg	1.0		75	125			A
Lab ID: **H14120495-054AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150115A			01/16/15 01:04	
Arsenic		544	mg/kg	1.8		75	125	1.4	20	A
Cadmium		28.1	mg/kg	1.0	88	75	125	0.6	20	
Copper		5050	mg/kg	1.1		75	125	1.8	20	A
Lead		427	mg/kg	3.2		75	125	2.8	20	A
Zinc		1630	mg/kg	1.0		75	125	0.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150121C		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							01/22/15 18:52	
Arsenic			0.0583	mg/L	0.0010	97	90	110			
Cadmium			0.0304	mg/L	0.0010	101	90	110			
Lead			0.0572	mg/L	0.0010	95	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							01/22/15 18:57	
Arsenic			0.000102	mg/L	0.0010						
Cadmium			0.000394	mg/L	0.0010						
Lead			0.000205	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							01/22/15 19:01	
Arsenic			0.00997	mg/L	0.0010	100	70	130			
Cadmium			0.00919	mg/L	0.0010	92	70	130			
Lead			0.000195	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 27656	
Lab ID:	**MB-27656**	3	Method Blank				Run: ICPMS204-B_150121C			01/22/15 21:18	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27656**	3	Laboratory Control Sample				Run: ICPMS204-B_150121C			01/22/15 21:22	
Arsenic			307	mg/kg	1.0	89	72.3	106.4			
Cadmium			123	mg/kg	1.0	90	73	105.1			
Lead			189	mg/kg	1.0	101	75.9	108.6			
Lab ID:	**LFB-27656**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150121C			01/22/15 21:27	
Arsenic			48.4	mg/kg	1.0	97	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Lead			47.4	mg/kg	1.0	95	80	120			
Lab ID:	**H14120495-018APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150121C			01/22/15 23:00	
Arsenic			2330	mg/kg	1.0	96	75	125			
Cadmium			1100	mg/kg	1.0	91	75	125			
Lead			2320	mg/kg	1.0	95	75	125			
Lab ID:	**H14120495-018AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150121C			01/22/15 23:04	
Arsenic			54.9	mg/kg	1.0	92	75	125			
Cadmium			22.3	mg/kg	1.0	90	75	125			
Lead			59.8	mg/kg	1.0	92	75	125			
Lab ID:	**H14120495-018AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150121C			01/22/15 23:09	
Arsenic			54.5	mg/kg	1.0	93	75	125	0.7	20	
Cadmium			21.8	mg/kg	1.0	89	75	125	2.2	20	
Lead			59.1	mg/kg	1.0	92	75	125	1.2	20	
Method:	**SW6020**									Batch: 27660	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27660
Lab ID:	**MB-27660**	3	Method Blank				Run: ICPMS204-B_150121C				01/22/15 23:19
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27660**	3	Laboratory Control Sample				Run: ICPMS204-B_150121C				01/22/15 23:24
Arsenic			285	mg/kg	1.0	83	72.3	106.4			
Cadmium			114	mg/kg	1.0	83	73	105.1			
Lead			173	mg/kg	1.0	93	75.9	108.6			
Lab ID:	**LFB-27660**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150121C				01/22/15 23:29
Arsenic			48.3	mg/kg	1.0	97	80	120			
Cadmium			24.2	mg/kg	1.0	97	80	120			
Lead			48.5	mg/kg	1.0	97	80	120			
Lab ID:	**H14120495-036AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150121C				01/23/15 01:25
Arsenic			75.3	mg/kg	1.0	92	75	125			
Cadmium			21.9	mg/kg	1.0	88	75	125			
Lead			57.6	mg/kg	1.0	91	75	125			
Lab ID:	**H14120495-036AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150121C				01/23/15 01:30
Arsenic			72.1	mg/kg	1.0	85	75	125	4.4	20	
Cadmium			21.4	mg/kg	1.0	86	75	125	2.3	20	
Lead			55.5	mg/kg	1.0	86	75	125	3.6	20	
Method:	**SW6020**										Batch: 27661
Lab ID:	**MB-27661**	2	Method Blank				Run: ICPMS204-B_150121C				01/23/15 01:40
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27661**	2	Laboratory Control Sample				Run: ICPMS204-B_150121C				01/23/15 01:45
Arsenic			307	mg/kg	1.0	90	72.3	106.4			
Lead			189	mg/kg	1.0	101	75.9	108.6			
Lab ID:	**LFB-27661**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150121C				01/23/15 01:50
Arsenic			46.8	mg/kg	1.0	94	80	120			
Lead			47.4	mg/kg	1.0	95	80	120			
Lab ID:	**H14120495-054AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150121C				01/23/15 03:32
Arsenic			594	mg/kg	1.0		75	125			A
Lead			460	mg/kg	1.0		75	125			A
Lab ID:	**H14120495-054AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150121C				01/23/15 03:37
Arsenic			575	mg/kg	1.0		75	125	3.3	20	A
Lead			454	mg/kg	1.0		75	125	1.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120495

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020								Analytical Run: ICPMS204-B_150122A		
Lab ID: ICV STD		Initial Calibration Verification Standard								01/21/15 18:13
Arsenic		0.0577	mg/L	0.0010	96	90	110			
Lab ID: ICSA		Interference Check Sample A								01/21/15 18:18
Arsenic		5.40E-05	mg/L	0.0010						
Lab ID: ICSAB		Interference Check Sample AB								01/21/15 18:23
Arsenic		0.00996	mg/L	0.0010	100	70	130			
Lab ID: CCV		Continuing Calibration Verification Standard								01/21/15 18:35
Arsenic		0.0496	mg/L	0.0010	99	90	110			
Lab ID: CCB		Continuing Calibration Blank								01/21/15 18:45
Arsenic		6.90E-06	mg/L	0.0010						
Method: SW6020										Batch: 27659
Lab ID: MB-27659		Method Blank				Run: ICPMS204-B_150122A				01/21/15 21:01
Arsenic		ND	mg/kg	0.3						
Lab ID: LCS-27659		Laboratory Control Sample				Run: ICPMS204-B_150122A				01/21/15 21:06
Arsenic		308	mg/kg	1.0	90	72.3	106.4			
Lab ID: LFB-27659		Laboratory Fortified Blank				Run: ICPMS204-B_150122A				01/21/15 21:11
Arsenic		47.2	mg/kg	1.0	94	80	120			
Lab ID: H14120495-057AMS		Sample Matrix Spike				Run: ICPMS204-B_150122A				01/22/15 02:00
Arsenic		137	mg/kg	1.0	96	75	125			
Lab ID: H14120495-057AMSD		Sample Matrix Spike Duplicate				Run: ICPMS204-B_150122A				01/22/15 02:05
Arsenic		139	mg/kg	1.0	100	75	125	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120495

Login completed by: Tracy L. Lorash

Date Received: 12/31/2014

Reviewed by: BL2000\rwilliams

Received by: tsp

Reviewed Date: 1/2/2015

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comment		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 1.2°C, Cooler 2 at 2.2°C. Samples were received on wet ice. TI 12/31/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120495

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-337-4854	1651	12/22/14	Soil	A	B		1
3-337-5460	1650	12/22/14	Soil	A	B		1
3-349-3642	1621	12/22/14	Soil	A	B		1
3-349-4248	1620	12/22/14	Soil	A	B		1
3-359-1824	1609	12/22/14	Soil	A	B		1
3-359-2430	1608	12/22/14	Soil	A	B		1
3-359-3036	1607	12/22/14	Soil	A	B		1
3-361-3036	1517	12/22/14	Soil	A	B		1
3-361-3642	1516	12/22/14	Soil	A	B		1
3-361-4248	1515	12/22/14	Soil	A	B		1
3-362-3642	1536	12/22/14	Soil	A	B		1
3-362-4248	1535	12/22/14	Soil	A	B		1
3-362-4854	1603	12/22/14	Soil	A	B		1
3-366-4854	1245	12/22/14	Soil	A	B		1
3-366-5460	1244	12/22/14	Soil	A	B		1
3-368-1218	1330	12/22/14	Soil	A	B		1
3-368-1824	1329	12/22/14	Soil	A	B		1
3-368-2430	1328	12/22/14	Soil	A	B		1
3-375-3642	1211	12/22/14	Soil	A	B		1
3-375-4248	1210	12/22/14	Soil	A	B		1

C2.1

C2.1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1)	(1)	(2)	(2)
Date/Time: 12/31/14 12:30	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	C1- 1.2 C.2 2.2 on Ice	12-31-14 12:30

COC122214TP.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120495

SAMPLE ID C2.1	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-380-2430	1148	12/22/14	Soil	A	B		1
3-380-3036	1147	12/22/14	Soil	A	B		1
3-380-3642	1146	12/22/14	Soil	A	B		1
3-380w-0612	1446	12/22/14	Soil	A	B		1
3-380w-1218	1445	12/22/14	Soil	A	B		1
3-380w-1824	1444	12/22/14	Soil	A	B		1
3-382-2430	1108	12/22/14	Soil	A	B		1
3-382-3036	1107	12/22/14	Soil	A	B		1
3-382-3642	1106	12/22/14	Soil	A	B		1
3-388-3036	1122	12/22/14	Soil	A	B		1
3-388-3642	1121	12/22/14	Soil	A	B		1
3-388-4248	1120	12/22/14	Soil	A	B		1
3-389-1824	1044	12/22/14	Soil	A	B		1
3-389-2430	1043	12/22/14	Soil	A	B		1
3-389-3036	1042	12/22/14	Soil	A	B		1
3-389w-0612	1357	12/22/14	Soil	A	B		1
3-389w-1218	1355	12/22/14	Soil	A	B		1
3-389w-1218d	1356	12/22/14	Soil	A	B		1
3-389w-1824	1354	12/22/14	Soil	A	B		1
3-393-2430	943	12/22/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/31/14 12:30	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1 1.2 C2 2.2 01 [illegible]	12-31-14 12:30

COC122214TP.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120495

SAMPLE ID C1.1	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-393-3036	942	12/22/14	Soil	A	B		1
3-393-3642	941	12/22/14	Soil	A	B		1
3-394-1218	1005	12/22/14	Soil	A	B		1
3-394-1824	1004	12/22/14	Soil	A	B		1
3-394-2430	1003	12/22/14	Soil	A	B		1
3-395-1824	1024	12/22/14	Soil	A	B		1
3-395-2430	1023	12/22/14	Soil	A	B		1
3-395-3036	1022	12/22/14	Soil	A	B		1
3-395w-0612	1416	12/22/14	Soil	A	B		1
3-395w-1218	1415	12/22/14	Soil	A	B		1
3-395w-1824	1414	12/22/14	Soil	A	B		1
3-406-0006	927	12/22/14	Soil	A	B		1
3-406-0612	926	12/22/14	Soil	A	B		1
3-409-0006	903	12/22/14	Soil	A	B		1
3-409-0612	902	12/22/14	Soil	A	B		1
3-414-0006	822	12/22/14	Soil	A	B		1
3-414-0612	821	12/22/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/31/14 12:30	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] Tyler Rud C1-1.2 C2.22 cr. tan	12-31-14 12:30

ANALYTICAL SUMMARY REPORT

January 23, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120494

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 25 samples for MT DEQ-Federal Superfund on 12/31/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120494-001	4-028-1218	12/24/14 8:10	12/31/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120494-002	4-028-1824	12/24/14 8:09	12/31/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120494-003	4-028-2430	12/24/14 8:08	12/31/14	Soil	Same As Above
H14120494-004	4-028w-0612	12/24/14 11:17	12/31/14	Soil	Same As Above
H14120494-005	4-028w-1218	12/24/14 11:16	12/31/14	Soil	Same As Above
H14120494-006	4-028w-1824	12/24/14 11:15	12/31/14	Soil	Same As Above
H14120494-007	4-033-3036	12/24/14 8:27	12/31/14	Soil	Same As Above
H14120494-008	4-033-3642	12/24/14 8:26	12/31/14	Soil	Same As Above
H14120494-009	4-033-4248	12/24/14 8:25	12/31/14	Soil	Same As Above
H14120494-010	4-035-1824	12/24/14 10:59	12/31/14	Soil	Same As Above
H14120494-011	4-035-2430	12/24/14 10:58	12/31/14	Soil	Same As Above
H14120494-012	4-035-3036	12/24/14 10:57	12/31/14	Soil	Same As Above
H14120494-013	4-036-0612	12/24/14 10:41	12/31/14	Soil	Same As Above
H14120494-014	4-036-1824	12/24/14 10:39	12/31/14	Soil	Same As Above
H14120494-015	4-037-1218	12/24/14 9:15	12/31/14	Soil	Same As Above
H14120494-016	4-037-1824	12/24/14 9:14	12/31/14	Soil	Same As Above
H14120494-017	4-037-2430	12/24/14 9:13	12/31/14	Soil	Same As Above
H14120494-018	4-038-0612	12/24/14 8:51	12/31/14	Soil	Same As Above
H14120494-019	4-038-0612d	12/24/14 8:52	12/31/14	Soil	Same As Above
H14120494-020	4-038-1218	12/24/14 8:50	12/31/14	Soil	Same As Above
H14120494-021	4-038-1824	12/24/14 8:49	12/31/14	Soil	Same As Above
H14120494-022	4-038w-0612	12/24/14 11:32	12/31/14	Soil	Same As Above
H14120494-023	4-038w-1218	12/24/14 11:31	12/31/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120494-024	4-038w-1824	12/24/14 11:30 12/31/14	Soil	Same As Above
H14120494-025	4-036-1218	12/24/14 10:40 12/31/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120494

Report Date: 01/23/15
Date Received: 12/31/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120494-001	4-028-1218	0	0	7.5	62	49	3630	26	9930
H14120494-002	4-028-1824	0	0	7.5	184	10	2060	116	2720
H14120494-003	4-028-2430	0	0	7.5	20	< 1	74	18	310
H14120494-004	4-028w-0612	0	0	7.8	736	8	4610	429	2540
H14120494-005	4-028w-1218	0	0	7.8	33	< 1	61	14	174
H14120494-006	4-028w-1824	0	0	7.4	33	< 1	53	21	136
H14120494-007	4-033-3036	0	0	7.1	41	< 1	288	44	395
H14120494-008	4-033-3642	0	0	7.4	16	< 1	52	17	272
H14120494-009	4-033-4248	0	0	7.4	52	< 1	49	11	75
H14120494-010	4-035-1824	0	0	6.4	33	14	4240	45	5230
H14120494-011	4-035-2430	0	0	5.5	21	3	233	32	1060
H14120494-012	4-035-3036	0	0	6.3	8	3	331	13	1410
H14120494-013	4-036-0612	0	0	7.0	1690	3	2840	1090	1680
H14120494-014	4-036-1824	0	0	7.4	14	< 1	83	16	150
H14120494-015	4-037-1218	0	0	7.6	1820	9	9790	1070	3140
H14120494-016	4-037-1824	0	0	7.4	16	< 1	99	20	222
H14120494-017	4-037-2430	0	0	7.1	9	< 1	49	15	68
H14120494-018	4-038-0612	0	0	7.3	644	5	2270	393	1750
H14120494-019	4-038-0612d	0	0	7.3	860	6	2240	486	2110
H14120494-020	4-038-1218	0	0	7.5	1850	16	13400	811	4040
H14120494-021	4-038-1824	0	0	7.2	29	< 1	143	22	572
H14120494-022	4-038w-0612	0	0	7.6	1020	8	7400	632	2340
H14120494-023	4-038w-1218	0	0	7.5	19	< 1	130	21	103
H14120494-024	4-038w-1824	0	0	7.2	10	< 1	48	21	78
H14120494-025	4-036-1218	0	0	7.5	11	2	194	13	506

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150121A		
Lab ID: ICV_1_150119_1		Initial Calibration Verification Standard							01/20/15 08:16	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150119_1		Initial Calibration Verification Standard							01/20/15 08:38	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150119_1		Initial Calibration Verification Standard							01/20/15 09:10	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150119_1		Initial Calibration Verification Standard							01/20/15 09:41	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150119_1		Initial Calibration Verification Standard							01/20/15 10:11	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150120_1		Continuing Calibration Verification Standard							01/21/15 07:53	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150120_1		Continuing Calibration Verification Standard							01/21/15 07:54	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150120_1		Initial Calibration Verification Standard							01/21/15 07:54	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150120_1		Continuing Calibration Verification Standard							01/21/15 08:05	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150120_1		Continuing Calibration Verification Standard							01/21/15 08:14	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150120_1		Initial Calibration Verification Standard							01/21/15 07:07	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27754
Lab ID: LCS-27754		Laboratory Control Sample				Run: SOIL PH METER_150121A			01/21/15 07:55	
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H14120494-010ADUP		Sample Duplicate				Run: SOIL PH METER_150121A			01/21/15 08:04	
pH, sat. paste		6.39	s.u.	0.10				0.3	30	
Lab ID: H14120494-020ADUP		Sample Duplicate				Run: SOIL PH METER_150121A			01/21/15 08:13	
pH, sat. paste		7.46	s.u.	0.10				0.0	30	
Lab ID: H14120494-025ADUP		Sample Duplicate				Run: SOIL PH METER_150121A			01/21/15 08:18	
pH, sat. paste		7.48	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150113B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/13/15 16:06
Arsenic			0.824	mg/L	0.0085	103	90	110			
Cadmium			0.397	mg/L	0.0010	99	90	110			
Copper			0.809	mg/L	0.010	101	90	110			
Lead			0.794	mg/L	0.010	99	90	110			
Zinc			0.827	mg/L	0.010	103	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/13/15 16:21
Arsenic			0.0130	mg/L	0.0085		0	0			
Cadmium			-0.000270	mg/L	0.0010		0	0			
Copper			7.00E-05	mg/L	0.010		0	0			
Lead			-0.0243	mg/L	0.010		0	0			
Zinc			0.00373	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/13/15 16:25
Arsenic			0.994	mg/L	0.0085	99	80	120			
Cadmium			0.912	mg/L	0.0010	91	80	120			
Copper			0.508	mg/L	0.010	102	80	120			
Lead			0.942	mg/L	0.010	94	80	120			
Zinc			0.993	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/13/15 16:55
Arsenic			2.55	mg/L	0.0085	102	90	110			
Cadmium			2.54	mg/L	0.0010	102	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.56	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/13/15 16:59
Arsenic			0.00201	mg/L	0.0085						
Cadmium			0.000100	mg/L	0.0010						
Copper			0.00137	mg/L	0.010						
Lead			-0.0223	mg/L	0.010						
Zinc			0.000420	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/14/15 05:12
Arsenic			2.50	mg/L	0.0085	100	90	110			
Cadmium			2.50	mg/L	0.0010	100	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.51	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/14/15 05:16
Arsenic			0.0103	mg/L	0.0085						
Cadmium			-0.000600	mg/L	0.0010						
Copper			-0.00252	mg/L	0.010						
Lead			0.0143	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150113B	
Lab ID: CCB	5	Continuing Calibration Blank							01/14/15 05:16	
Zinc		0.000410	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150114A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/14/15 10:07
Arsenic			0.784	mg/L	0.0085	98	90	110			
Cadmium			0.383	mg/L	0.0010	96	90	110			
Copper			0.781	mg/L	0.010	98	90	110			
Lead			0.743	mg/L	0.010	93	90	110			
Zinc			0.788	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/14/15 10:22
Arsenic			0.00468	mg/L	0.0085		0	0			
Cadmium			-0.000890	mg/L	0.0010		0	0			
Copper			0.000960	mg/L	0.010		0	0			
Lead			-0.00397	mg/L	0.010		0	0			
Zinc			0.00217	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/14/15 10:26
Arsenic			0.943	mg/L	0.0085	94	80	120			
Cadmium			0.873	mg/L	0.0010	87	80	120			
Copper			0.490	mg/L	0.010	98	80	120			
Lead			0.874	mg/L	0.010	87	80	120			
Zinc			0.959	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/14/15 10:57
Arsenic			2.55	mg/L	0.0085	102	90	110			
Cadmium			2.52	mg/L	0.0010	101	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Lead			2.51	mg/L	0.010	100	90	110			
Zinc			2.55	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/14/15 11:00
Arsenic			-0.00964	mg/L	0.0085						
Cadmium			-0.00100	mg/L	0.0010						
Copper			0.000160	mg/L	0.010						
Lead			-0.0147	mg/L	0.010						
Zinc			0.00153	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/15/15 01:54
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.44	mg/L	0.0010	97	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.48	mg/L	0.010	99	90	110			
Zinc			2.50	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/15/15 01:57
Arsenic			-0.00503	mg/L	0.0085						
Cadmium			0.00183	mg/L	0.0010						
Copper			-0.00189	mg/L	0.010						
Lead			0.00833	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150114A	
Lab ID: CCB	5	Continuing Calibration Blank							01/15/15 01:57	
Zinc		0.00213	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150116B		
Lab ID:	**CCV**		Continuing Calibration Verification Standard							01/17/15 07:55	
Lead			0.0486	mg/L	0.010	97	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							01/17/15 08:04	
Lead			-2.90E-06	mg/L	0.010						
Method:	**E200.8**								Analytical Run: ICPMS204-B_150121C		
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							01/22/15 22:35	
Arsenic			0.0502	mg/L	0.0050	100	90	110			
Cadmium			0.0493	mg/L	0.0010	99	90	110			
Lead			0.0498	mg/L	0.010	100	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							01/22/15 22:45	
Arsenic			-2.49E-05	mg/L	0.0050						
Cadmium			-4.10E-06	mg/L	0.0010						
Lead			-6.30E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27630	
Lab ID:	**MB-27630**	5	Method Blank				Run: ICP2-HE_150113B			01/14/15 02:52	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27630**	5	Laboratory Fortified Blank				Run: ICP2-HE_150113B			01/14/15 02:56	
Arsenic			45.1	mg/kg	1.0	90	80	120			
Cadmium			22.1	mg/kg	1.0	88	80	120			
Copper			47.8	mg/kg	1.0	96	80	120			
Lead			44.6	mg/kg	1.0	89	80	120			
Zinc			46.1	mg/kg	1.0	91	80	120			
Lab ID:	**LCS-27630**	5	Laboratory Control Sample				Run: ICP2-HE_150113B			01/14/15 03:00	
Arsenic			267	mg/kg	1.8	79	72.3	106.4			
Cadmium			111	mg/kg	1.0	82	73	105.1			
Copper			244	mg/kg	1.1	89	77.5	109.6			
Lead			168	mg/kg	3.1	92	75.9	108.6			
Zinc			182	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120493-063APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150113B			01/14/15 03:47	
Arsenic			281	mg/kg	1.9	85	75	125			
Cadmium			105	mg/kg	1.0	81	75	125			
Copper			618	mg/kg	1.1	88	75	125			
Lead			267	mg/kg	3.3	79	75	125			
Zinc			704	mg/kg	1.0	86	75	125			
Lab ID:	**H14120493-063AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150113B			01/14/15 03:51	
Arsenic			103	mg/kg	1.8	78	75	125			
Cadmium			22.5	mg/kg	1.0	84	75	125			
Copper			420	mg/kg	1.1		75	125			A
Lead			101	mg/kg	3.2	76	75	125			
Zinc			524	mg/kg	1.0		75	125			A
Lab ID:	**H14120493-063AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150113B			01/14/15 03:55	
Arsenic			107	mg/kg	1.8	87	75	125	4.3	20	
Cadmium			22.6	mg/kg	1.0	84	75	125	0.4	20	
Copper			425	mg/kg	1.1		75	125	1.3	20	A
Lead			101	mg/kg	3.2	76	75	125	0.2	20	
Zinc			529	mg/kg	1.0		75	125	1.0	20	A
Lab ID:	**H14120494-007APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150113B			01/14/15 05:01	
Arsenic			265	mg/kg	1.8	89	75	125			
Cadmium			109	mg/kg	1.0	86	75	125			
Copper			510	mg/kg	1.1	88	75	125			
Lead			263	mg/kg	3.2	87	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27630
Lab ID:	**H14120494-007APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150113B			01/14/15 05:01	
Zinc			628	mg/kg	1.0	92	75	125			
Lab ID:	**H14120494-007AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150113B			01/14/15 05:05	
Arsenic			86.5	mg/kg	1.8	93	75	125			
Cadmium			22.2	mg/kg	1.0	87	75	125			
Copper			342	mg/kg	1.1		75	125			A
Lead			84.9	mg/kg	3.1	83	75	125			
Zinc			463	mg/kg	1.0		75	125			A
Lab ID:	**H14120494-007AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150113B			01/14/15 05:09	
Arsenic			90.4	mg/kg	1.8	101	75	125	4.4	20	
Cadmium			22.9	mg/kg	1.0	90	75	125	3.1	20	
Copper			337	mg/kg	1.1		75	125	1.6	20	A
Lead			88.7	mg/kg	3.1	90	75	125	4.4	20	
Zinc			471	mg/kg	1.0		75	125	1.8	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27631	
Lab ID:	**MB-27631**	5	Method Blank				Run: ICP2-HE_150114A			01/15/15 00:21	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.9	mg/kg	0.09						
Lab ID:	**LFB-27631**	5	Laboratory Fortified Blank				Run: ICP2-HE_150114A			01/15/15 00:33	
Arsenic			45.3	mg/kg	1.0	91	80	120			
Cadmium			22.0	mg/kg	1.0	88	80	120			
Copper			47.5	mg/kg	1.0	95	80	120			
Lead			43.8	mg/kg	1.0	88	80	120			
Zinc			46.7	mg/kg	1.0	92	80	120			
Lab ID:	**LCS-27631**	5	Laboratory Control Sample				Run: ICP2-HE_150114A			01/15/15 00:36	
Arsenic			257	mg/kg	1.8	75	72.3	106.4			
Cadmium			108	mg/kg	1.0	79	73	105.1			
Copper			235	mg/kg	1.1	84	77.5	109.6			
Lead			156	mg/kg	3.1	83	75.9	108.6			
Zinc			177	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H14120494-025APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150114A			01/15/15 02:05	
Arsenic			230	mg/kg	1.8	86	75	125			
Cadmium			107	mg/kg	1.0	83	75	125			
Copper			424	mg/kg	1.1	90	75	125			
Lead			225	mg/kg	3.2	83	75	125			
Zinc			717	mg/kg	1.0	83	75	125			
Lab ID:	**H14120494-025AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150114A			01/15/15 02:09	
Arsenic			53.9	mg/kg	1.8	89	75	125			
Cadmium			22.4	mg/kg	1.0	84	75	125			
Copper			235	mg/kg	1.1	83	75	125			
Lead			57.8	mg/kg	3.2	90	75	125			
Zinc			545	mg/kg	1.0		75	125			A
Lab ID:	**H14120494-025AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150114A			01/15/15 02:12	
Arsenic			54.4	mg/kg	1.8	90	75	125	1.0	20	
Cadmium			22.4	mg/kg	1.0	84	75	125	0.0	20	
Copper			248	mg/kg	1.1	109	75	125	5.4	20	
Lead			57.6	mg/kg	3.2	89	75	125	0.3	20	
Zinc			558	mg/kg	1.0		75	125	2.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150116B		
Lab ID:	**ICV STD**		Initial Calibration Verification Standard							01/16/15 23:01	
Lead			0.0580	mg/L	0.0010	97	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							01/16/15 23:06	
Lead			0.000220	mg/L	0.0010						
Lab ID:	**ICSAB**		Interference Check Sample AB							01/16/15 23:11	
Lead			0.000220	mg/L	0.0010		0	0			
Lab ID:	**CCV**		Continuing Calibration Verification Standard							01/16/15 23:21	
Lead			0.0482	mg/L	0.0010	96	90	110			
Lab ID:	**CCB**		Continuing Calibration Blank							01/16/15 23:30	
Lead			-4.90E-06	mg/L	0.0010						
Method:	**SW6020**										Batch: 27630
Lab ID:	**MB-27630**		Method Blank				Run: ICPMS204-B_150116B			01/17/15 05:55	
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27630**		Laboratory Control Sample				Run: ICPMS204-B_150116B			01/17/15 06:00	
Lead			178	mg/kg	1.0	95	75.9	108.6			
Lab ID:	**LFB-27630**		Laboratory Fortified Blank				Run: ICPMS204-B_150116B			01/17/15 06:04	
Lead			44.6	mg/kg	1.0	89	80	120			
Lab ID:	**H14120493-063APDS**		Post Digestion/Distillation Spike				Run: ICPMS204-B_150116B			01/17/15 06:43	
Lead			2590	mg/kg	1.0	101	75	125			
Lab ID:	**H14120493-063AMS**		Sample Matrix Spike				Run: ICPMS204-B_150116B			01/17/15 06:47	
Lead			108	mg/kg	1.0	90	75	125			
Lab ID:	**H14120493-063AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS204-B_150116B			01/17/15 06:52	
Lead			108	mg/kg	1.0	90	75	125	0.2	20	
Lab ID:	**H14120494-007APDS**		Post Digestion/Distillation Spike				Run: ICPMS204-B_150116B			01/17/15 07:41	
Lead			2530	mg/kg	1.0	102	75	125			
Lab ID:	**H14120494-007AMS**		Sample Matrix Spike				Run: ICPMS204-B_150116B			01/17/15 07:45	
Lead			84.0	mg/kg	1.0	98	75	125			
Lab ID:	**H14120494-007AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS204-B_150116B			01/17/15 07:50	
Lead			81.1	mg/kg	1.0	92	75	125	3.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150121C		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							01/22/15 18:52	
Arsenic			0.0583	mg/L	0.0010	97	90	110			
Cadmium			0.0304	mg/L	0.0010	101	90	110			
Lead			0.0572	mg/L	0.0010	95	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							01/22/15 18:57	
Arsenic			0.000102	mg/L	0.0010						
Cadmium			0.000394	mg/L	0.0010						
Lead			0.000205	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							01/22/15 19:01	
Arsenic			0.00997	mg/L	0.0010	100	70	130			
Cadmium			0.00919	mg/L	0.0010	92	70	130			
Lead			0.000195	mg/L	0.0010		0	0			
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							01/22/15 19:11	
Arsenic			0.0503	mg/L	0.0010	101	90	110			
Cadmium			0.0495	mg/L	0.0010	99	90	110			
Lead			0.0496	mg/L	0.0010	99	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							01/22/15 19:21	
Arsenic			0.000238	mg/L	0.0010						
Cadmium			-2.90E-06	mg/L	0.0010						
Lead			-2.00E-06	mg/L	0.0010						
Method:	**SW6020**										Batch: 27631
Lab ID:	**MB-27631**	3	Method Blank				Run: ICPMS204-B_150121C			01/22/15 19:50	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27631**	3	Laboratory Control Sample				Run: ICPMS204-B_150121C			01/22/15 19:55	
Arsenic			284	mg/kg	1.0	83	72.3	106.4			
Cadmium			114	mg/kg	1.0	83	73	105.1			
Lead			172	mg/kg	1.0	92	75.9	108.6			
Lab ID:	**LFB-27631**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150121C			01/22/15 20:00	
Arsenic			47.8	mg/kg	1.0	96	80	120			
Cadmium			23.6	mg/kg	1.0	95	80	120			
Lead			46.5	mg/kg	1.0	93	80	120			
Lab ID:	**H14120494-025APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150121C			01/22/15 20:59	
Arsenic			2340	mg/kg	1.0	94	75	125			
Cadmium			1120	mg/kg	1.0	90	75	125			
Lead			2300	mg/kg	1.0	93	75	125			
Lab ID:	**H14120494-025AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150121C			01/22/15 21:03	
Arsenic			56.7	mg/kg	1.0	93	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/23/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120494

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 27631
Lab ID: H14120494-025AMS	3	Sample Matrix Spike				Run: ICPMS204-B_150121C			01/22/15 21:03	
Cadmium		24.1	mg/kg	1.0	89	75	125			
Lead		58.0	mg/kg	1.0	91	75	125			
Lab ID: H14120494-025AMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150121C			01/22/15 21:08	
Arsenic		57.9	mg/kg	1.0	96	75	125	2.1	20	
Cadmium		24.7	mg/kg	1.0	92	75	125	2.3	20	
Lead		60.0	mg/kg	1.0	95	75	125	3.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120494

Login completed by: Tracy L. Lorash

Date Received: 12/31/2014

Reviewed by: BL2000\rwilliams

Received by: tsp

Reviewed Date: 1/2/2015

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	1.2°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120494

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-028-1218	810	12/24/14	Soil	A	B		1
4-028-1824	809	12/24/14	Soil	A	B		1
4-028-2430	808	12/24/14	Soil	A	B		1
4-028w-0612	1117	12/24/14	Soil	A	B		1
4-028w-1218	1116	12/24/14	Soil	A	B		1
4-028w-1824	1115	12/24/14	Soil	A	B		1
4-033-3036	827	12/24/14	Soil	A	B		1
4-033-3642	826	12/24/14	Soil	A	B		1
4-033-4248	825	12/24/14	Soil	A	B		1
4-035-1824	1059	12/24/14	Soil	A	B		1
4-035-2430	1058	12/24/14	Soil	A	B		1
4-035-3036	1057	12/24/14	Soil	A	B		1
4-036-0612	1041	12/24/14	Soil	A	B		1
4-036-1824	1039	12/24/14	Soil	A	B		1
4-037-1218	915	12/24/14	Soil	A	B		1
4-037-1824	914	12/24/14	Soil	A	B		1
4-037-2430	913	12/24/14	Soil	A	B		1
4-038-0612	851	12/24/14	Soil	A	B		1
4-038-0612d	852	12/24/14	Soil	A	B		1
4-038-1218	850	12/24/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/31/14 12:30	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 1.2 on Ice Hose Dd	12-31-14 12:30

COC122414TP.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120494

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
4-038-1824	849	12/24/14	Soil	A	B		1
4-038w-0612	1132	12/24/14	Soil	A	B		1
4-038w-1218	1131	12/24/14	Soil	A	B		1
4-038w-1824	1130	12/24/14	Soil	A	B		1
4-036-1218	1040	12/24/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/31/14 12:30	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 1.2 on Ice Hank Did	12-31-14 12:20

COC1224141P.xls

ANALYTICAL SUMMARY REPORT

January 22, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120493

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 63 samples for MT DEQ-Federal Superfund on 12/31/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120493-001	3-334-2430	12/23/14 10:13	12/31/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120493-002	3-334-3036	12/23/14 10:12	12/31/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120493-003	3-334-3642	12/23/14 10:11	12/31/14	Soil	Same As Above
H14120493-004	3-339-3036	12/23/14 8:07	12/31/14	Soil	Same As Above
H14120493-005	3-339-3642	12/23/14 8:06	12/31/14	Soil	Same As Above
H14120493-006	3-339-4248	12/23/14 8:05	12/31/14	Soil	Same As Above
H14120493-007	3-342-2430	12/23/14 10:33	12/31/14	Soil	Same As Above
H14120493-008	3-342-3036	12/23/14 10:32	12/31/14	Soil	Same As Above
H14120493-009	3-342-3642	12/23/14 10:31	12/31/14	Soil	Same As Above
H14120493-010	3-351-3036	12/23/14 8:27	12/31/14	Soil	Same As Above
H14120493-011	3-351-3642	12/23/14 8:26	12/31/14	Soil	Same As Above
H14120493-012	3-351-4248	12/23/14 8:25	12/31/14	Soil	Same As Above
H14120493-013	3-352-1824	12/23/14 8:49	12/31/14	Soil	Same As Above
H14120493-014	3-352-2430	12/23/14 8:48	12/31/14	Soil	Same As Above
H14120493-015	3-352-3036	12/23/14 8:47	12/31/14	Soil	Same As Above
H14120493-016	3-353-1824	12/23/14 9:54	12/31/14	Soil	Same As Above
H14120493-017	3-353-2430	12/23/14 9:53	12/31/14	Soil	Same As Above
H14120493-018	3-353-3036	12/23/14 9:52	12/31/14	Soil	Same As Above
H14120493-019	3-353w-0612	12/23/14 11:02	12/31/14	Soil	Same As Above
H14120493-020	3-353w-1218	12/23/14 11:01	12/31/14	Soil	Same As Above
H14120493-021	3-353w-1824	12/23/14 11:00	12/31/14	Soil	Same As Above
H14120493-022	3-356-2430	12/23/14 9:28	12/31/14	Soil	Same As Above
H14120493-023	3-356-3036	12/23/14 9:27	12/31/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120493-024	3-356-3642	12/23/14 9:26	12/31/14	Soil	Same As Above
H14120493-025	3-368w-0612	12/23/14 11:12	12/31/14	Soil	Same As Above
H14120493-026	3-368w-1218	12/23/14 11:11	12/31/14	Soil	Same As Above
H14120493-027	3-368w-1824	12/23/14 11:10	12/31/14	Soil	Same As Above
H14120493-028	3-368w2-0612	12/23/14 12:07	12/31/14	Soil	Same As Above
H14120493-029	3-368w2-1218	12/23/14 12:06	12/31/14	Soil	Same As Above
H14120493-030	3-368w2-1824	12/23/14 12:05	12/31/14	Soil	Same As Above
H14120493-031	3-380w2-1218	12/23/14 11:46	12/31/14	Soil	Same As Above
H14120493-032	3-380w2-1824	12/23/14 11:45	12/31/14	Soil	Same As Above
H14120493-033	3-380w2-2430	12/23/14 11:58	12/31/14	Soil	Same As Above
H14120493-034	3-395w2-0612	12/23/14 12:27	12/31/14	Soil	Same As Above
H14120493-035	3-395w2-1218	12/23/14 12:26	12/31/14	Soil	Same As Above
H14120493-036	3-395w2-1824	12/23/14 12:25	12/31/14	Soil	Same As Above
H14120493-037	4-004-3642	12/23/14 13:16	12/31/14	Soil	Same As Above
H14120493-038	4-004-4248	12/23/14 13:15	12/31/14	Soil	Same As Above
H14120493-039	4-005-1824	12/23/14 13:39	12/31/14	Soil	Same As Above
H14120493-040	4-005-2430	12/23/14 13:38	12/31/14	Soil	Same As Above
H14120493-041	4-005-3036	12/23/14 13:37	12/31/14	Soil	Same As Above
H14120493-042	4-006-0006	12/23/14 13:02	12/31/14	Soil	Same As Above
H14120493-043	4-006-0612	12/23/14 13:01	12/31/14	Soil	Same As Above
H14120493-044	4-010-0612	12/23/14 14:26	12/31/14	Soil	Same As Above
H14120493-045	4-010-1218	12/23/14 14:25	12/31/14	Soil	Same As Above
H14120493-046	4-010-1824	12/23/14 14:24	12/31/14	Soil	Same As Above
H14120493-047	4-011-0006	12/23/14 14:27	12/31/14	Soil	Same As Above
H14120493-048	4-011-0612	12/23/14 14:26	12/31/14	Soil	Same As Above
H14120493-049	4-012-0612	12/23/14 14:07	12/31/14	Soil	Same As Above
H14120493-050	4-012-1218	12/23/14 14:05	12/31/14	Soil	Same As Above
H14120493-051	4-012-1218d	12/23/14 14:06	12/31/14	Soil	Same As Above
H14120493-052	4-012-1824	12/23/14 14:04	12/31/14	Soil	Same As Above
H14120493-053	4-015-1218	12/23/14 15:10	12/31/14	Soil	Same As Above
H14120493-054	4-015-1824	12/23/14 15:09	12/31/14	Soil	Same As Above
H14120493-055	4-015-2430	12/23/14 15:08	12/31/14	Soil	Same As Above
H14120493-056	4-015w-0006	12/23/14 16:13	12/31/14	Soil	Same As Above
H14120493-057	4-015w-0612	12/23/14 16:12	12/31/14	Soil	Same As Above
H14120493-058	4-020-0612	12/23/14 15:31	12/31/14	Soil	Same As Above
H14120493-059	4-020-1218	12/23/14 15:30	12/31/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120493-060	4-020-1824	12/23/14 15:29	12/31/14	Soil	Same As Above
H14120493-061	4-024-0006	12/23/14 16:03	12/31/14	Soil	Same As Above
H14120493-062	4-024-0612	12/23/14 16:01	12/31/14	Soil	Same As Above
H14120493-063	4-024-0612d	12/23/14 16:02	12/31/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120493

Report Date: 01/22/15
Date Received: 12/31/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120493-001	3-334-2430	0	0	7.6	1240	13	10800	801	3760
H14120493-002	3-334-3036	0	0	7.5	21	< 1	143	22	358
H14120493-003	3-334-3642	0	0	7.1	4	< 1	35	9	51
H14120493-004	3-339-3036	0	0	6.5	9	4	5520	17	796
H14120493-005	3-339-3642	0	0	7.0	7	5	337	12	843
H14120493-006	3-339-4248	0	0	7.1	8	< 1	32	10	41
H14120493-007	3-342-2430	0	0	7.0	345	6	5490	1100	1900
H14120493-008	3-342-3036	0	0	6.7	15	< 1	41	24	91
H14120493-009	3-342-3642	0	0	7.0	6	< 1	30	19	86
H14120493-010	3-351-3036	0	0	6.6	337	11	3580	1910	3630
H14120493-011	3-351-3642	0	0	5.9	25	1	108	47	536
H14120493-012	3-351-4248	0	0	6.8	145	3	2450	122	478
H14120493-013	3-352-1824	0	0	7.1	1440	5	9210	1480	2870
H14120493-014	3-352-2430	0	0	6.6	20	2	1180	42	643
H14120493-015	3-352-3036	0	0	6.8	13	2	68	18	689
H14120493-016	3-353-1824	0	0	7.6	40	< 1	347	35	267
H14120493-017	3-353-2430	0	0	7.6	2	< 1	17	7	70
H14120493-018	3-353-3036	0	0	7.6	2	< 1	15	7	70
H14120493-019	3-353w-0612	0	0	7.7	698	8	4620	445	2280
H14120493-020	3-353w-1218	0	0	7.4	11	< 1	55	19	107
H14120493-021	3-353w-1824	0	0	7.4	12	< 1	57	25	111
H14120493-022	3-356-2430	0	0	7.2	834	3	1180	628	1400
H14120493-023	3-356-3036	0	0	7.1	662	2	837	388	876
H14120493-024	3-356-3642	0	0	7.8	35	< 1	589	15	203
H14120493-025	3-368w-0612	0	0	7.6	1050	9	8910	589	2180
H14120493-026	3-368w-1218	0	0	7.7	29	< 1	97	15	115
H14120493-027	3-368w-1824	0	0	7.5	10	< 1	45	20	98
H14120493-028	3-368w2-0612	0	0	7.4	189	5	1510	233	1030
H14120493-029	3-368w2-1218	0	0	7.0	18	< 1	44	15	95
H14120493-030	3-368w2-1824	0	0	7.0	6	< 1	43	15	84
H14120493-031	3-380w2-1218	0	0	7.1	714	10	3550	572	3360
H14120493-032	3-380w2-1824	0	0	7.7	23	< 1	109	29	155
H14120493-033	3-380w2-2430	0	0	7.7	22	< 1	127	26	132
H14120493-034	3-395w2-0612	0	0	7.5	2190	13	17100	693	2640
H14120493-035	3-395w2-1218	0	0	7.4	23	3	122	14	916
H14120493-036	3-395w2-1824	0	0	7.3	7	< 1	35	16	215
H14120493-037	4-004-3642	0	0	6.4	251	8	2660	375	4400
H14120493-038	4-004-4248	0	0	6.8	165	5	2230	199	2090
H14120493-039	4-005-1824	0	0	5.8	15	3	350	18	1680
H14120493-040	4-005-2430	0	0	6.1	6	3	32	13	877

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120493

Report Date: 01/22/15
Date Received: 12/31/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120493-041	4-005-3036	0	0	5.6	15	5	65	23	895
H14120493-042	4-006-0006	0	0	8.1	112	1	378	78	345
H14120493-043	4-006-0612	0	0	8.1	66	< 1	221	52	226
H14120493-044	4-010-0612	0	0	7.5	59	11	2120	25	2620
H14120493-045	4-010-1218	0	0	7.7	30	< 1	149	26	315
H14120493-046	4-010-1824	0	0	7.8	12	< 1	32	20	118
H14120493-047	4-011-0006	0	0	7.6	374	5	2220	250	1320
H14120493-048	4-011-0612	0	0	7.8	119	4	839	83	1060
H14120493-049	4-012-0612	0	0	7.7	340	5	2300	240	1790
H14120493-050	4-012-1218	0	0	7.8	18	< 1	79	22	130
H14120493-051	4-012-1218d	0	0	7.7	24	< 1	109	25	170
H14120493-052	4-012-1824	0	0	7.8	9	< 1	27	16	80
H14120493-053	4-015-1218	0	0	7.6	32	8	350	29	2030
H14120493-054	4-015-1824	0	0	7.6	17	4	195	19	1050
H14120493-055	4-015-2430	0	0	7.6	8	2	45	18	753
H14120493-056	4-015w-0006	0	0	8.0	422	5	1630	264	1450
H14120493-057	4-015w-0612	0	0	7.7	25	< 1	145	28	154
H14120493-058	4-020-0612	0	0	7.7	266	7	1750	199	2190
H14120493-059	4-020-1218	0	0	7.6	16	1	64	16	528
H14120493-060	4-020-1824	0	0	7.7	7	< 1	28	12	119
H14120493-061	4-024-0006	0	0	7.5	438	4	1920	369	1480
H14120493-062	4-024-0612	0	0	7.6	101	2	604	92	657
H14120493-063	4-024-0612d	0	0	7.6	63	2	391	63	482

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150121A		
Lab ID: ICV_1_150119_1		Initial Calibration Verification Standard								01/20/15 08:16
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150119_1		Initial Calibration Verification Standard								01/20/15 08:38
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150119_1		Continuing Calibration Verification Standard								01/20/15 09:09
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150119_1		Continuing Calibration Verification Standard								01/20/15 09:10
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150119_1		Initial Calibration Verification Standard								01/20/15 09:10
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150119_1		Continuing Calibration Verification Standard								01/20/15 09:20
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150119_1		Continuing Calibration Verification Standard								01/20/15 09:40
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150119_1		Continuing Calibration Verification Standard								01/20/15 09:40
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150119_1		Initial Calibration Verification Standard								01/20/15 09:41
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150119_1		Continuing Calibration Verification Standard								01/20/15 09:51
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150119_1		Continuing Calibration Verification Standard								01/20/15 10:09
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150119_1		Continuing Calibration Verification Standard								01/20/15 10:10
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150119_1		Initial Calibration Verification Standard								01/20/15 10:11
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150119_1		Continuing Calibration Verification Standard								01/20/15 10:20
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150119_1		Continuing Calibration Verification Standard								01/20/15 10:28
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150120_1		Initial Calibration Verification Standard								01/21/15 07:54
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150120_1		Initial Calibration Verification Standard								01/21/15 07:07
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27730
Lab ID: LCS-27730		Laboratory Control Sample				Run: SOIL PH METER_150121A				01/20/15 09:12
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H14120493-010ADUP		Sample Duplicate				Run: SOIL PH METER_150121A				01/20/15 09:20
pH, sat. paste		6.61	s.u.	0.10				0.2	30	
Lab ID: H14120493-020ADUP		Sample Duplicate				Run: SOIL PH METER_150121A				01/20/15 09:29
pH, sat. paste		7.38	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27731
Lab ID: LCS-27731		Laboratory Control Sample				Run: SOIL PH METER_150121A				01/20/15 09:42
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H14120493-030ADUP		Sample Duplicate				Run: SOIL PH METER_150121A				01/20/15 09:51
pH, sat. paste		6.97	s.u.	0.10				0.3	30	
Lab ID: H14120493-040ADUP		Sample Duplicate				Run: SOIL PH METER_150121A				01/20/15 09:59
pH, sat. paste		6.10	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27732
Lab ID: LCS-27732		Laboratory Control Sample				Run: SOIL PH METER_150121A				01/20/15 10:11
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H14120493-050ADUP		Sample Duplicate				Run: SOIL PH METER_150121A				01/20/15 10:20
pH, sat. paste		7.78	s.u.	0.10				0.3	30	
Lab ID: H14120493-060ADUP		Sample Duplicate				Run: SOIL PH METER_150121A				01/20/15 10:27
pH, sat. paste		7.68	s.u.	0.10				0.1	30	
Lab ID: H14120493-063ADUP		Sample Duplicate				Run: SOIL PH METER_150121A				01/20/15 10:30
pH, sat. paste		7.60	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150112C		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/12/15 10:44	
Arsenic			0.775	mg/L	0.0085	97	90	110			
Cadmium			0.385	mg/L	0.0010	96	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.764	mg/L	0.010	95	90	110			
Zinc			0.786	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/12/15 10:59	
Arsenic			-0.00134	mg/L	0.0085		0	0			
Cadmium			0.00448	mg/L	0.0010		0	0			
Copper			-0.00212	mg/L	0.010		0	0			
Lead			0.0385	mg/L	0.010		0	0			
Zinc			0.00295	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/12/15 11:03	
Arsenic			0.985	mg/L	0.0085	99	80	120			
Cadmium			0.916	mg/L	0.0010	92	80	120			
Copper			0.501	mg/L	0.010	100	80	120			
Lead			0.911	mg/L	0.010	91	80	120			
Zinc			0.992	mg/L	0.010	99	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_150113B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/13/15 16:06	
Arsenic			0.824	mg/L	0.0085	103	90	110			
Cadmium			0.397	mg/L	0.0010	99	90	110			
Copper			0.809	mg/L	0.010	101	90	110			
Lead			0.794	mg/L	0.010	99	90	110			
Zinc			0.827	mg/L	0.010	103	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/13/15 16:21	
Arsenic			0.0130	mg/L	0.0085		0	0			
Cadmium			-0.000270	mg/L	0.0010		0	0			
Copper			7.00E-05	mg/L	0.010		0	0			
Lead			-0.0243	mg/L	0.010		0	0			
Zinc			0.00373	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/13/15 16:25	
Arsenic			0.994	mg/L	0.0085	99	80	120			
Cadmium			0.912	mg/L	0.0010	91	80	120			
Copper			0.508	mg/L	0.010	102	80	120			
Lead			0.942	mg/L	0.010	94	80	120			
Zinc			0.993	mg/L	0.010	99	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150114A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/14/15 10:07	
Arsenic			0.784	mg/L	0.0085	98	90	110			
Cadmium			0.383	mg/L	0.0010	96	90	110			
Copper			0.781	mg/L	0.010	98	90	110			
Lead			0.743	mg/L	0.010	93	90	110			
Zinc			0.788	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/14/15 10:22	
Arsenic			0.00468	mg/L	0.0085		0	0			
Cadmium			-0.000890	mg/L	0.0010		0	0			
Copper			0.000960	mg/L	0.010		0	0			
Lead			-0.00397	mg/L	0.010		0	0			
Zinc			0.00217	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/14/15 10:26	
Arsenic			0.943	mg/L	0.0085	94	80	120			
Cadmium			0.873	mg/L	0.0010	87	80	120			
Copper			0.490	mg/L	0.010	98	80	120			
Lead			0.874	mg/L	0.010	87	80	120			
Zinc			0.959	mg/L	0.010	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27627
Lab ID:	**MB-27627**	5	Method Blank				Run: ICP2-HE_150112C				01/13/15 00:33
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			0.8	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27627**	5	Laboratory Fortified Blank				Run: ICP2-HE_150112C				01/13/15 00:37
Arsenic			45.1	mg/kg	1.0	90	80	120			
Cadmium			23.1	mg/kg	1.0	92	80	120			
Copper			47.4	mg/kg	1.0	95	80	120			
Lead			47.3	mg/kg	1.0	93	80	120			
Zinc			47.6	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27627**	5	Laboratory Control Sample				Run: ICP2-HE_150112C				01/13/15 00:41
Arsenic			280	mg/kg	1.8	82	72.3	106.4			
Cadmium			122	mg/kg	1.0	89	73	105.1			
Copper			246	mg/kg	1.1	88	77.5	109.6			
Lead			176	mg/kg	3.2	94	75.9	108.6			
Zinc			195	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120493-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C				01/13/15 02:10
Arsenic			233	mg/kg	1.8	91	75	125			
Cadmium			115	mg/kg	1.0	90	75	125			
Copper			244	mg/kg	1.1	89	75	125			
Lead			237	mg/kg	3.3	88	75	125			
Zinc			306	mg/kg	1.0	92	75	125			
Lab ID:	**H14120493-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150112C				01/13/15 02:13
Arsenic			44.9	mg/kg	1.8	90	75	125			
Cadmium			22.0	mg/kg	1.0	88	75	125			
Copper			62.6	mg/kg	1.1	95	75	125			
Lead			58.2	mg/kg	3.2	94	75	125			
Zinc			116	mg/kg	1.0	92	75	125			
Lab ID:	**H14120493-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C				01/13/15 02:24
Arsenic			45.2	mg/kg	1.8	91	75	125	0.8	20	
Cadmium			22.4	mg/kg	1.0	90	75	125	2.1	20	
Copper			62.4	mg/kg	1.1	95	75	125	0.4	20	
Lead			56.3	mg/kg	3.2	90	75	125	3.3	20	
Zinc			116	mg/kg	1.0	92	75	125	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27628
Lab ID:	**MB-27628**	5	Method Blank				Run: ICP2-HE_150113B			01/13/15 22:48	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.03	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			3	mg/kg	0.09						
Lab ID:	**LFB-27628**	5	Laboratory Fortified Blank				Run: ICP2-HE_150113B			01/13/15 22:52	
Arsenic			49.0	mg/kg	1.0	98	80	120			
Cadmium			24.3	mg/kg	1.0	97	80	120			
Copper			49.6	mg/kg	1.0	99	80	120			
Lead			47.2	mg/kg	1.0	94	80	120			
Zinc			49.8	mg/kg	1.0	93	80	120			
Lab ID:	**LCS-27628**	5	Laboratory Control Sample				Run: ICP2-HE_150113B			01/13/15 22:56	
Arsenic			274	mg/kg	1.7	82	72.3	106.4			
Cadmium			115	mg/kg	1.0	87	73	105.1			
Copper			257	mg/kg	1.1	94	77.5	109.6			
Lead			169	mg/kg	3.1	93	75.9	108.6			
Zinc			183	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120493-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150113B			01/14/15 00:47	
Arsenic			237	mg/kg	1.9	89	75	125			
Cadmium			112	mg/kg	1.0	87	75	125			
Copper			265	mg/kg	1.1	90	75	125			
Lead			242	mg/kg	3.3	87	75	125			
Zinc			440	mg/kg	1.0	87	75	125			
Lab ID:	**H14120493-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150113B			01/14/15 00:51	
Arsenic			51.5	mg/kg	1.8	89	75	125			
Cadmium			21.7	mg/kg	1.0	87	75	125			
Copper			78.9	mg/kg	1.1	89	75	125			
Lead			61.7	mg/kg	3.2	85	75	125			
Zinc			268	mg/kg	1.0		75	125			A
Lab ID:	**H14120493-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150113B			01/14/15 00:54	
Arsenic			48.6	mg/kg	1.8	83	75	125	5.6	20	
Cadmium			21.8	mg/kg	1.0	87	75	125	0.4	20	
Copper			80.4	mg/kg	1.1	92	75	125	2.0	20	
Lead			64.1	mg/kg	3.2	90	75	125	4.0	20	
Zinc			270	mg/kg	1.0		75	125	0.5	20	A
Method:	**SW6010B**										Batch: 27629
Lab ID:	**MB-27629**	5	Method Blank				Run: ICP2-HE_150113B			01/14/15 00:58	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27629
Lab ID:	**MB-27629**	5	Method Blank				Run: ICP2-HE_150113B			01/14/15 00:58	
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27629**	5	Laboratory Fortified Blank				Run: ICP2-HE_150113B			01/14/15 01:02	
Arsenic			45.6	mg/kg	1.0	91	80	120			
Cadmium			22.4	mg/kg	1.0	89	80	120			
Copper			48.2	mg/kg	1.0	96	80	120			
Lead			44.9	mg/kg	1.0	90	80	120			
Zinc			47.3	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27629**	5	Laboratory Control Sample				Run: ICP2-HE_150113B			01/14/15 01:05	
Arsenic			268	mg/kg	1.7	80	72.3	106.4			
Cadmium			111	mg/kg	1.0	83	73	105.1			
Copper			250	mg/kg	1.1	92	77.5	109.6			
Lead			164	mg/kg	3.1	91	75.9	108.6			
Zinc			180	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120493-054APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150113B			01/14/15 02:34	
Arsenic			231	mg/kg	1.8	86	75	125			
Cadmium			108	mg/kg	1.0	83	75	125			
Copper			417	mg/kg	1.1	89	75	125			
Lead			234	mg/kg	3.2	86	75	125			
Zinc			1270	mg/kg	1.0		75	125			A
Lab ID:	**H14120493-054AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150113B			01/14/15 02:37	
Arsenic			59.7	mg/kg	1.7	91	75	125			
Cadmium			24.1	mg/kg	1.0	84	75	125			
Copper			235	mg/kg	1.1		75	125			A
Lead			64.8	mg/kg	3.1	94	75	125			
Zinc			1080	mg/kg	1.0		75	125			A
Lab ID:	**H14120493-054AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150113B			01/14/15 02:41	
Arsenic			57.1	mg/kg	1.7	85	75	125	4.5	20	
Cadmium			23.7	mg/kg	1.0	82	75	125	1.7	20	
Copper			242	mg/kg	1.1		75	125	3.1	20	A
Lead			61.8	mg/kg	3.1	88	75	125	4.6	20	
Zinc			1080	mg/kg	1.0		75	125	0.5	20	A
Method:	**SW6010B**										Batch: 27630
Lab ID:	**MB-27630**	5	Method Blank				Run: ICP2-HE_150113B			01/14/15 02:52	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27630
Lab ID:	**LFB-27630**	5	Laboratory Fortified Blank				Run: ICP2-HE_150113B				01/14/15 02:56
Arsenic			45.1	mg/kg	1.0	90	80	120			
Cadmium			22.1	mg/kg	1.0	88	80	120			
Copper			47.8	mg/kg	1.0	96	80	120			
Lead			44.6	mg/kg	1.0	89	80	120			
Zinc			46.1	mg/kg	1.0	91	80	120			
Lab ID:	**LCS-27630**	5	Laboratory Control Sample				Run: ICP2-HE_150113B				01/14/15 03:00
Arsenic			267	mg/kg	1.8	79	72.3	106.4			
Cadmium			111	mg/kg	1.0	82	73	105.1			
Copper			244	mg/kg	1.1	89	77.5	109.6			
Lead			168	mg/kg	3.1	92	75.9	108.6			
Zinc			182	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120493-063APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150113B				01/14/15 03:47
Arsenic			281	mg/kg	1.9	85	75	125			
Cadmium			105	mg/kg	1.0	81	75	125			
Copper			618	mg/kg	1.1	88	75	125			
Lead			267	mg/kg	3.3	79	75	125			
Zinc			704	mg/kg	1.0	86	75	125			
Lab ID:	**H14120493-063AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150113B				01/14/15 03:51
Arsenic			103	mg/kg	1.8	78	75	125			
Cadmium			22.5	mg/kg	1.0	84	75	125			
Copper			420	mg/kg	1.1		75	125			A
Lead			101	mg/kg	3.2	76	75	125			
Zinc			524	mg/kg	1.0		75	125			A
Lab ID:	**H14120493-063AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150113B				01/14/15 03:55
Arsenic			107	mg/kg	1.8	87	75	125	4.3	20	
Cadmium			22.6	mg/kg	1.0	84	75	125	0.4	20	
Copper			425	mg/kg	1.1		75	125	1.3	20	A
Lead			101	mg/kg	3.2	76	75	125	0.2	20	
Zinc			529	mg/kg	1.0		75	125	1.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27655
Lab ID:	**MB-27655**	5	Method Blank				Run: ICP2-HE_150114A				01/14/15 23:08
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27655**	5	Laboratory Fortified Blank				Run: ICP2-HE_150114A				01/14/15 23:12
Arsenic			44.8	mg/kg	1.0	90	80	120			
Cadmium			22.0	mg/kg	1.0	88	80	120			
Copper			47.9	mg/kg	1.0	96	80	120			
Lead			44.0	mg/kg	1.0	88	80	120			
Zinc			46.0	mg/kg	1.0	91	80	120			
Lab ID:	**LCS-27655**	5	Laboratory Control Sample				Run: ICP2-HE_150114A				01/14/15 23:15
Arsenic			263	mg/kg	1.8	77	72.3	106.4			
Cadmium			110	mg/kg	1.0	80	73	105.1			
Copper			245	mg/kg	1.1	88	77.5	109.6			
Lead			160	mg/kg	3.1	85	75.9	108.6			
Zinc			177	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H14120375-045APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150114A				01/14/15 23:52
Arsenic			233	mg/kg	1.8	86	75	125			
Cadmium			106	mg/kg	1.0	84	75	125			
Copper			325	mg/kg	1.1	89	75	125			
Lead			227	mg/kg	3.2	83	75	125			
Zinc			310	mg/kg	1.0	86	75	125			
Lab ID:	**H14120375-045AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150114A				01/14/15 23:56
Arsenic			59.4	mg/kg	1.8	86	75	125			
Cadmium			21.4	mg/kg	1.0	87	75	125			
Copper			152	mg/kg	1.1	103	75	125			
Lead			62.1	mg/kg	3.1	91	75	125			
Zinc			138	mg/kg	1.0	94	75	125			
Lab ID:	**H14120375-045AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150114A				01/14/15 23:59
Arsenic			58.3	mg/kg	1.8	82	75	125	1.9	20	
Cadmium			21.2	mg/kg	1.0	85	75	125	0.9	20	
Copper			156	mg/kg	1.1	108	75	125	2.4	20	
Lead			63.7	mg/kg	3.2	93	75	125	2.5	20	
Zinc			135	mg/kg	1.0	87	75	125	1.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150112B	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							01/12/15 16:56	
Arsenic			0.0584	mg/L	0.0010	97	90	110			
Lead			0.0566	mg/L	0.0010	94	90	110			
Method:	**SW6020**										Batch: 27627
Lab ID:	**MB-27627**	2	Method Blank				Run: ICPMS204-B_150112B			01/13/15 07:19	
Arsenic			0.8	mg/kg	0.3						
Lead			0.6	mg/kg	0.2						
Lab ID:	**LCS-27627**	2	Laboratory Control Sample				Run: ICPMS204-B_150112B			01/13/15 07:24	
Arsenic			304	mg/kg	1.0	89	72.3	106.4			
Lead			186	mg/kg	1.0	99	75.9	108.6			
Lab ID:	**LFB-27627**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150112B			01/13/15 07:28	
Arsenic			49.9	mg/kg	1.0	98	80	120			
Lead			48.0	mg/kg	1.0	95	80	120			
Lab ID:	**H14120493-018APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150112B			01/13/15 09:41	
Arsenic			2430	mg/kg	1.0	97	75	125			
Lead			2420	mg/kg	1.0	97	75	125			
Lab ID:	**H14120493-018AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150112B			01/13/15 09:45	
Arsenic			51.9	mg/kg	1.0	100	75	125			
Lead			56.1	mg/kg	1.0	99	75	125			
Lab ID:	**H14120493-018AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150112B			01/13/15 09:49	
Arsenic			50.0	mg/kg	1.0	96	75	125	3.8	20	
Lead			54.0	mg/kg	1.0	95	75	125	3.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150116B		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							01/16/15 14:46	
Arsenic			0.0590	mg/L	0.0010	98	90	110			
Cadmium			0.0305	mg/L	0.0010	102	90	110			
Lead			0.0580	mg/L	0.0010	97	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							01/16/15 23:01	
Arsenic			0.0585	mg/L	0.0010	98	90	110			
Cadmium			0.0311	mg/L	0.0010	104	90	110			
Lead			0.0580	mg/L	0.0010	97	90	110			
Method:	**SW6020**									Batch: 27628	
Lab ID:	**MB-27628**	3	Method Blank				Run: ICPMS204-B_150116B			01/17/15 02:04	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27628**	3	Laboratory Control Sample				Run: ICPMS204-B_150116B			01/17/15 02:09	
Arsenic			300	mg/kg	1.0	90	72.3	106.4			
Cadmium			124	mg/kg	1.0	94	73	105.1			
Lead			183	mg/kg	1.0	101	75.9	108.6			
Lab ID:	**LFB-27628**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150116B			01/17/15 02:13	
Arsenic			47.6	mg/kg	1.0	95	80	120			
Cadmium			24.6	mg/kg	1.0	98	80	120			
Lead			46.1	mg/kg	1.0	92	80	120			
Lab ID:	**H14120493-036APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150116B			01/17/15 04:04	
Arsenic			2500	mg/kg	1.0	100	75	125			
Cadmium			1260	mg/kg	1.0	101	75	125			
Lead			2560	mg/kg	1.0	102	75	125			
Lab ID:	**H14120493-036AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150116B			01/17/15 04:09	
Arsenic			53.8	mg/kg	1.0	94	75	125			
Cadmium			24.0	mg/kg	1.0	95	75	125			
Lead			61.7	mg/kg	1.0	92	75	125			
Lab ID:	**H14120493-036AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150116B			01/17/15 04:14	
Arsenic			53.6	mg/kg	1.0	94	75	125	0.3	20	
Cadmium			23.8	mg/kg	1.0	94	75	125	0.6	20	
Lead			61.0	mg/kg	1.0	91	75	125	1.1	20	
Method:	**SW6020**									Batch: 27629	
Lab ID:	**MB-27629**	2	Method Blank				Run: ICPMS204-B_150116B			01/17/15 04:23	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27629**	2	Laboratory Control Sample				Run: ICPMS204-B_150116B			01/17/15 04:28	
Arsenic			297	mg/kg	1.0	89	72.3	106.4			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27629
Lab ID:	**LCS-27629**	2	Laboratory Control Sample				Run: ICPMS204-B_150116B				01/17/15 04:28
Lead			181	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-27629**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150116B				01/17/15 04:33
Arsenic			47.0	mg/kg	1.0	94	80	120			
Lead			46.3	mg/kg	1.0	93	80	120			
Lab ID:	**H14120493-054APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150116B				01/17/15 05:26
Arsenic			2440	mg/kg	1.0	97	75	125			
Lead			2460	mg/kg	1.0	98	75	125			
Lab ID:	**H14120493-054AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150116B				01/17/15 05:30
Arsenic			62.7	mg/kg	1.0	94	75	125			
Lead			64.4	mg/kg	1.0	95	75	125			
Lab ID:	**H14120493-054AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150116B				01/17/15 05:35
Arsenic			61.4	mg/kg	1.0	91	75	125	2.1	20	
Lead			63.3	mg/kg	1.0	93	75	125	1.7	20	
Method:	**SW6020**										Batch: 27630
Lab ID:	**MB-27630**	2	Method Blank				Run: ICPMS204-B_150116B				01/17/15 05:55
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27630**	2	Laboratory Control Sample				Run: ICPMS204-B_150116B				01/17/15 06:00
Arsenic			287	mg/kg	1.0	84	72.3	106.4			
Lead			178	mg/kg	1.0	95	75.9	108.6			
Lab ID:	**LFB-27630**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150116B				01/17/15 06:04
Arsenic			45.3	mg/kg	1.0	91	80	120			
Lead			44.6	mg/kg	1.0	89	80	120			
Lab ID:	**H14120493-063APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150116B				01/17/15 06:43
Arsenic			2540	mg/kg	1.0	99	75	125			
Lead			2590	mg/kg	1.0	101	75	125			
Lab ID:	**H14120493-063AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150116B				01/17/15 06:47
Arsenic			110	mg/kg	1.0	88	75	125			
Lead			108	mg/kg	1.0	90	75	125			
Lab ID:	**H14120493-063AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150116B				01/17/15 06:52
Arsenic			109	mg/kg	1.0	86	75	125	0.8	20	
Lead			108	mg/kg	1.0	90	75	125	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120493

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150122A	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							01/21/15 18:13	
Arsenic			0.0577	mg/L	0.0010	96	90	110			
Lead			0.0561	mg/L	0.0010	93	90	110			
Method:	**SW6020**									Batch: 27628	
Lab ID:	**MB-27628**	3	Method Blank				Run: ICPMS204-B_150122A			01/22/15 03:48	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27628**	3	Laboratory Control Sample				Run: ICPMS204-B_150122A			01/22/15 03:53	
Arsenic			306	mg/kg	1.0	92	72.3	106.4			
Cadmium			125	mg/kg	1.0	94	73	105.1			
Lead			186	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-27628**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150122A			01/22/15 03:58	
Arsenic			46.7	mg/kg	1.0	93	80	120			
Cadmium			24.2	mg/kg	1.0	97	80	120			
Lead			46.4	mg/kg	1.0	93	80	120			
Lab ID:	**H14120493-036APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150122A			01/22/15 04:22	
Arsenic			2350	mg/kg	1.0	94	75	125			
Cadmium			1110	mg/kg	1.0	89	75	125			
Lead			2310	mg/kg	1.0	92	75	125			
Lab ID:	**H14120493-036AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150122A			01/22/15 04:26	
Arsenic			55.4	mg/kg	1.0	97	75	125			
Cadmium			23.8	mg/kg	1.0	94	75	125			
Lead			62.8	mg/kg	1.0	95	75	125			
Lab ID:	**H14120493-036AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150122A			01/22/15 04:31	
Arsenic			54.8	mg/kg	1.0	96	75	125	1.0	20	
Cadmium			23.9	mg/kg	1.0	95	75	125	0.2	20	
Lead			63.1	mg/kg	1.0	96	75	125	0.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120493

Login completed by: Austin H. Nearpass

Date Received: 12/31/2014

Reviewed by: BL2000\rwilliams

Received by: tsp

Reviewed Date: 1/2/2015

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	Comments °C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 4.1 °C, Cooler 2 at 1.2 °C. an 12/31/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-334-2430	1013	12/23/14	Soil	A	B		1
3-334-3036	1012	12/23/14	Soil	A	B		1
3-334-3642	1011	12/23/14	Soil	A	B		1
3-339-3036	807	12/23/14	Soil	A	B		1
3-339-3642	806	12/23/14	Soil	A	B		1
3-339-4248	805	12/23/14	Soil	A	B		1
3-342-2430	1033	12/23/14	Soil	A	B		1
3-342-3036	1032	12/23/14	Soil	A	B		1
3-342-3642	1031	12/23/14	Soil	A	B		1
3-351-3036	827	12/23/14	Soil	A	B		1
3-351-3642	826	12/23/14	Soil	A	B		1
3-351-4248	825	12/23/14	Soil	A	B		1
3-352-1824	~~8470~~ 849	12/23/14	Soil	A	B		1
3-352-2430	848	12/23/14	Soil	A	B		1
3-352-3036	847	12/23/14	Soil	A	B		1
3-353-1824	954	12/23/14	Soil	A	B		1
3-353-2430	953	12/23/14	Soil	A	B		1
3-353-3036	952	12/23/14	Soil	A	B		1
3-353w-0612	1102	12/23/14	Soil	A	B		1
3-353w-1218	1101	12/23/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H14120493

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/31/14 12:30

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
~~C1-5~~ on Ice
C1- 4.1
C2 1.2

Date/Time: 12-31-14 12:30

Hand Del

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-353w-1824	1100	12/23/14	Soil	A	B		1
3-356-2430	928	12/23/14	Soil	A	B		1
3-356-3036	927	12/23/14	Soil	A	B		1
3-356-3642	926	12/23/14	Soil	A	B		1
3-368w-0612	1112	12/23/14	Soil	A	B		1
3-368w-1218	1111	12/23/14	Soil	A	B		1
3-368w-1824	1110	12/23/14	Soil	A	B		1
3-368w2-0612	1207	12/23/14	Soil	A	B		1
3-368w2-1218	1206	12/23/14	Soil	A	B		1
3-368w2-1824	1205	12/23/14	Soil	A	B		1
3-380w2-1218	1146	12/23/14	Soil	A	B		1
3-380w2-1824	1145	12/23/14	Soil	A	B		1
3-380w2-2430	1158	12/23/14	Soil	A	B		1
3-395w2-0612	1227	12/23/14	Soil	A	B		1
3-395w2-1218	1226	12/23/14	Soil	A	B		1
3-395w2-1824	1225	12/23/14	Soil	A	B		1
4-004-3642	1316	12/23/14	Soil	A	B		1
4-004-4248	1315	12/23/14	Soil	A	B		1
4-005-1824	1339	12/23/14	Soil	A	B		1
4-005-2430	1338	12/23/14	Soil	A	B		1

C2

H14120493

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature] Date/Time: 12/31/14 12:30

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) _____ Date/Time:

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] [signature]

~~7.5 TB~~ on ice Cl 4.1 Cr 12 Hand Del

Date/Time: 12-31-14 12:30

COC122314TP.xls

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
4-005-3036	1337	12/23/14	Soil	A	B		1
4-006-0006	1302	12/23/14	Soil	A	B		1
4-006-0612	1301	12/23/14	Soil	A	B		1
4-010-0612	1426	12/23/14	Soil	A	B		1
4-010-1218	1425	12/23/14	Soil	A	B		1
4-010-1824	1424	12/23/14	Soil	A	B		1
4-011-0006	1427	12/23/14	Soil	A	B		1
4-011-0612	1426	12/23/14	Soil	A	B		1
4-012-0612	1407	12/23/14	Soil	A	B		1
4-012-1218	1405	12/23/14	Soil	A	B		1
4-012-1218d	1406	12/23/14	Soil	A	B		1
4-012-1824	1404	12/23/14	Soil	A	B		1
4-015-1218	1510	12/23/14	Soil	A	B		1
4-015-1824	1509	12/23/14	Soil	A	B		1
4-015-2430	1508	12/23/14	Soil	A	B		1
4-015w-0006	1613	12/23/14	Soil	A	B		1
4-015w-0612	1612	12/23/14	Soil	A	B		1
4-020-0612	1531	12/23/14	Soil	A	B		1
4-020-1218	1530	12/23/14	Soil	A	B		1
4-020-1824	1529	12/23/14	Soil	A	B		1

C2
C2
C1

H14120493

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 12/31/14 12:30

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 4.1
C2 1.2
on Ice
Date/Time: 12-31-14 12:30

COC1223141P.xls

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
C1							
4-024-0006	1603	12/23/14	Soil	A	B		1
4-024-0612	1601	12/23/14	Soil	A	B		1
4-024-0612d	1602	12/23/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

H14120493

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/31/14 1230	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1 - 4.1 C2 1.2 Hand Del on Ice	12-31-14 1210

COC122314P.xls

ANALYTICAL SUMMARY REPORT

January 20, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120379

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 45 samples for MT DEQ-Federal Superfund on 12/18/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120379-001	3-401E-1218	12/16/14 12:05	12/18/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120379-002	3-401E-1824	12/16/14 12:04	12/18/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120379-003	3-401E-2430	12/16/14 12:03	12/18/14	Soil	Same As Above
H14120379-004	3-407E-0006	12/16/14 9:59	12/18/14	Soil	Same As Above
H14120379-005	3-407E-0612	12/16/14 9:58	12/18/14	Soil	Same As Above
H14120379-006	3-407N-6672	12/16/14 8:45	12/18/14	Soil	Same As Above
H14120379-007	3-407N-7278	12/16/14 9:28	12/18/14	Soil	Same As Above
H14120379-008	3-407N-7884	12/16/14 9:27	12/18/14	Soil	Same As Above
H14120379-009	3-410-3036	12/16/14 12:52	12/18/14	Soil	Same As Above
H14120379-010	3-410-3642	12/16/14 12:51	12/18/14	Soil	Same As Above
H14120379-011	3-412-4854	12/16/14 8:28	12/18/14	Soil	Same As Above
H14120379-012	3-412-5460	12/16/14 8:27	12/18/14	Soil	Same As Above
H14120379-013	3-412-6066	12/16/14 8:26	12/18/14	Soil	Same As Above
H14120379-014	3-413-3642	12/16/14 13:11	12/18/14	Soil	Same As Above
H14120379-015	3-413-4248	12/16/14 13:10	12/18/14	Soil	Same As Above
H14120379-016	3-416-2430	12/16/14 15:53	12/18/14	Soil	Same As Above
H14120379-017	3-416-3036	12/16/14 15:52	12/18/14	Soil	Same As Above
H14120379-018	3-416-3642	12/16/14 15:51	12/18/14	Soil	Same As Above
H14120379-019	3-417-2430	12/16/14 13:43	12/18/14	Soil	Same As Above
H14120379-020	3-417-3036	12/16/14 13:42	12/18/14	Soil	Same As Above
H14120379-021	3-417-3642	12/16/14 13:41	12/18/14	Soil	Same As Above
H14120379-022	3-418-3036	12/16/14 14:02	12/18/14	Soil	Same As Above
H14120379-023	3-418-3642	12/16/14 14:01	12/18/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120379-024	3-418-4248	12/16/14 14:00	12/18/14	Soil	Same As Above
H14120379-025	3-419-1824	12/16/14 14:22	12/18/14	Soil	Same As Above
H14120379-026	3-419-2430	12/16/14 14:21	12/18/14	Soil	Same As Above
H14120379-027	3-419-3036	12/16/14 14:20	12/18/14	Soil	Same As Above
H14120379-028	3-421-3036	12/16/14 10:37	12/18/14	Soil	Same As Above
H14120379-029	3-421-3642	12/16/14 10:36	12/18/14	Soil	Same As Above
H14120379-030	3-421-4248	12/16/14 10:35	12/18/14	Soil	Same As Above
H14120379-031	3-421E-0006	12/16/14 11:22	12/18/14	Soil	Same As Above
H14120379-032	3-421E-0612	12/16/14 11:21	12/18/14	Soil	Same As Above
H14120379-033	3-421S-0006	12/16/14 11:37	12/18/14	Soil	Same As Above
H14120379-034	3-421S-0612	12/16/14 11:36	12/18/14	Soil	Same As Above
H14120379-035	3-422-4248	12/16/14 16:05	12/18/14	Soil	Same As Above
H14120379-036	3-422-4854	12/16/14 16:31	12/18/14	Soil	Same As Above
H14120379-037	3-422-5460	12/16/14 16:30	12/18/14	Soil	Same As Above
H14120379-038	3-423-3036	12/16/14 15:32	12/18/14	Soil	Same As Above
H14120379-039	3-423-3642	12/16/14 15:31	12/18/14	Soil	Same As Above
H14120379-040	3-423-4248	12/16/14 15:30	12/18/14	Soil	Same As Above
H14120379-041	3-424-3642	12/16/14 15:01	12/18/14	Soil	Same As Above
H14120379-042	3-424-4248	12/16/14 15:00	12/18/14	Soil	Same As Above
H14120379-043	3-425-2430	12/16/14 14:41	12/18/14	Soil	Same As Above
H14120379-044	3-425-3036	12/16/14 14:40	12/18/14	Soil	Same As Above
H14120379-045	3-410-4248	12/16/14 12:50	12/18/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120379

Report Date: 01/20/15
Date Received: 12/18/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120379-001	3-401E-1218	0	0	6.8	104	15	791	83	1750
H14120379-002	3-401E-1824	0	0	5.6	79	1	353	50	229
H14120379-003	3-401E-2430	0	0	6.8	21	2	228	14	182
H14120379-004	3-407E-0006	0	0	7.5	140	4	470	121	596
H14120379-005	3-407E-0612	0	0	7.4	113	3	390	93	503
H14120379-006	3-407N-6672	0	0	6.4	13	3	1970	27	619
H14120379-007	3-407N-7278	0	0	6.7	8	< 1	62	12	285
H14120379-008	3-407N-7884	0	0	6.5	6	< 1	50	11	60
H14120379-009	3-410-3036	0	0	7.0	10	2	9500	7	506
H14120379-010	3-410-3642	0	0	7.1	4	< 1	2210	6	372
H14120379-011	3-412-4854	0	0	6.2	58	4	154	45	1650
H14120379-012	3-412-5460	0	0	6.3	86	2	47	48	2220
H14120379-013	3-412-6066	0	0	6.9	15	1	64	33	2200
H14120379-014	3-413-3642	0	0	6.6	1320	9	5810	908	3210
H14120379-015	3-413-4248	0	0	6.5	1400	10	8810	803	3550
H14120379-016	3-416-2430	0	0	6.8	207	4	8120	765	1490
H14120379-017	3-416-3036	0	0	6.8	15	4	261	10	712
H14120379-018	3-416-3642	0	0	6.6	14	2	177	15	757
H14120379-019	3-417-2430	0	0	6.8	773	7	8880	1570	2980
H14120379-020	3-417-3036	0	0	6.8	11	3	366	19	884
H14120379-021	3-417-3642	0	0	7.1	7	1	940	9	249
H14120379-022	3-418-3036	0	0	4.4	54	3	3100	42	816
H14120379-023	3-418-3642	0	0	4.8	18	11	1660	15	644
H14120379-024	3-418-4248	0	0	4.9	400	3	2170	247	851
H14120379-025	3-419-1824	0	0	7.6	185	10	1390	177	3240
H14120379-026	3-419-2430	0	0	7.3	176	3	1030	172	1200
H14120379-027	3-419-3036	0	0	7.2	553	4	1650	468	1450
H14120379-028	3-421-3036	0	0	7.4	230	6	2400	191	1570
H14120379-029	3-421-3642	0	0	7.5	45	< 1	128	31	481
H14120379-030	3-421-4248	0	0	7.1	12	< 1	45	11	55
H14120379-031	3-421E-0006	0	0	6.9	105	2	709	73	782
H14120379-032	3-421E-0612	0	0	6.8	62	3	342	55	423
H14120379-033	3-421S-0006	0	0	6.8	241	2	1510	113	380
H14120379-034	3-421S-0612	0	0	5.8	261	1	1830	115	339
H14120379-035	3-422-4248	0	0	6.2	656	6	10800	1040	2730
H14120379-036	3-422-4854	0	0	7.8	10	< 1	4580	13	324
H14120379-037	3-422-5460	0	0	8.0	5	< 1	3500	10	323
H14120379-038	3-423-3036	0	0	5.2	414	21	10100	698	4980
H14120379-039	3-423-3642	0	0	5.8	73	1	5690	30	539
H14120379-040	3-423-4248	0	0	6.2	9	< 1	2500	12	323

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120379

Report Date: 01/20/15
Date Received: 12/18/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120379-041	3-424-3642	0	0	7.0	391	9	3030	337	3190
H14120379-042	3-424-4248	0	0	6.8	397	9	4210	358	3790
H14120379-043	3-425-2430	0	0	7.7	385	7	1650	159	1800
H14120379-044	3-425-3036	0	0	7.6	449	12	2300	211	2850
H14120379-045	3-410-4248	0	0	7.1	19	< 1	1570	31	368

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150116A		
Lab ID: ICV_1_150114_1	Initial Calibration Verification Standard									01/15/15 09:20
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150114_1	Initial Calibration Verification Standard									01/15/15 09:52
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV1_1_150114_1	Continuing Calibration Verification Standard									01/15/15 10:24
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150114_1	Initial Calibration Verification Standard									01/15/15 10:25
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_4_150114_1	Continuing Calibration Verification Standard									01/15/15 11:18
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150114_1	Continuing Calibration Verification Standard									01/15/15 10:53
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150114_1	Continuing Calibration Verification Standard									01/15/15 10:54
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150114_1	Initial Calibration Verification Standard									01/15/15 10:55
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150114_1	Continuing Calibration Verification Standard									01/15/15 11:07
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150114_1	Continuing Calibration Verification Standard									01/15/15 11:25
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150114_1	Continuing Calibration Verification Standard									01/15/15 11:25
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150114_1	Initial Calibration Verification Standard									01/15/15 11:26
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150114_1	Continuing Calibration Verification Standard									01/15/15 11:36
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150114_1	Continuing Calibration Verification Standard									01/15/15 11:44
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150115_1	Initial Calibration Verification Standard									01/16/15 08:20
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27684
Lab ID: H14120379-020ADUP	Sample Duplicate					Run: SOIL PH METER_150116A				01/15/15 11:16
pH, sat. paste		6.84	s.u.	0.10						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27684
Lab ID: H14120379-022ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 11:20	
pH, sat. paste		4.42	s.u.	0.10				0.5	30	
Lab ID: LCS-27684	Laboratory Control Sample					Run: SOIL PH METER_150116A			01/15/15 10:56	
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H14120379-010ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 11:07	
pH, sat. paste		7.08	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 27685
Lab ID: H14120379-045ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 11:50	
pH, sat. paste		7.10	s.u.	0.10				0.0	30	
Lab ID: LCS-27685	Laboratory Control Sample					Run: SOIL PH METER_150116A			01/15/15 11:28	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14120379-030ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 11:35	
pH, sat. paste		7.08	s.u.	0.10				0.1	30	
Lab ID: H14120379-040ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 11:44	
pH, sat. paste		6.23	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150112C	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/12/15 10:44	
Arsenic			0.775	mg/L	0.0085	97	90	110			
Cadmium			0.385	mg/L	0.0010	96	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.764	mg/L	0.010	95	90	110			
Zinc			0.786	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/12/15 10:59	
Arsenic			-0.00134	mg/L	0.0085		0	0			
Cadmium			0.00448	mg/L	0.0010		0	0			
Copper			-0.00212	mg/L	0.010		0	0			
Lead			0.0385	mg/L	0.010		0	0			
Zinc			0.00295	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/12/15 11:03	
Arsenic			0.985	mg/L	0.0085	99	80	120			
Cadmium			0.916	mg/L	0.0010	92	80	120			
Copper			0.501	mg/L	0.010	100	80	120			
Lead			0.911	mg/L	0.010	91	80	120			
Zinc			0.992	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/12/15 11:34	
Arsenic			2.65	mg/L	0.0085	106	90	110			
Cadmium			2.57	mg/L	0.0010	103	90	110			
Copper			2.58	mg/L	0.010	103	90	110			
Lead			2.60	mg/L	0.010	104	90	110			
Zinc			2.58	mg/L	0.010	103	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/12/15 11:37	
Arsenic			0.00100	mg/L	0.0085						
Cadmium			0.000520	mg/L	0.0010						
Copper			0.000780	mg/L	0.010						
Lead			0.0325	mg/L	0.010						
Zinc			0.00120	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/12/15 15:49	
Arsenic			2.51	mg/L	0.0085	100	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.47	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/13/15 00:48	
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.50	mg/L	0.0010	100	90	110			
Copper			2.44	mg/L	0.010	97	90	110			
Lead			2.49	mg/L	0.010	100	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150112C	
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/13/15 00:48	
Zinc		2.50	mg/L	0.010	100	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/13/15 00:52	
Arsenic		-0.00471	mg/L	0.0085						
Cadmium		0.000650	mg/L	0.0010						
Copper		-0.00610	mg/L	0.010						
Lead		0.00440	mg/L	0.010						
Zinc		0.000170	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150109A		
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/09/15 14:27	
Arsenic			0.0493	mg/L	0.0050	99	90	110			
Cadmium			0.0494	mg/L	0.0010	99	90	110			
Copper			0.0488	mg/L	0.010	98	90	110			
Lead			0.0493	mg/L	0.010	99	90	110			
Zinc			0.0485	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/09/15 14:36	
Arsenic			3.31E-05	mg/L	0.0050						
Cadmium			-5.68E-05	mg/L	0.0010						
Copper			5.57E-05	mg/L	0.010						
Lead			6.50E-06	mg/L	0.010						
Zinc			-2.97E-05	mg/L	0.010						
Method:	**E200.8**								Analytical Run: ICPMS204-B_150112B		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							01/13/15 05:40	
Arsenic			0.0494	mg/L	0.0050	99	90	110			
Lead			0.0491	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							01/13/15 05:49	
Arsenic			9.10E-06	mg/L	0.0050						
Lead			4.50E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27542
Lab ID:	**MB-27542**	5	Method Blank				Run: ICP2-HE_150112C			01/12/15 19:34	
Arsenic			0.5	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27542**	5	Laboratory Fortified Blank				Run: ICP2-HE_150112C			01/12/15 19:38	
Arsenic			46.6	mg/kg	1.0	92	80	120			
Cadmium			22.9	mg/kg	1.0	92	80	120			
Copper			47.9	mg/kg	1.0	96	80	120			
Lead			46.6	mg/kg	1.0	93	80	120			
Zinc			47.1	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27542**	5	Laboratory Control Sample				Run: ICP2-HE_150112C			01/12/15 19:41	
Arsenic			275	mg/kg	1.8	80	72.3	106.4			
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			244	mg/kg	1.1	87	77.5	109.6			
Lead			171	mg/kg	3.2	91	75.9	108.6			
Zinc			186	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120376-053APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C			01/12/15 20:22	
Arsenic			281	mg/kg	1.9	90	75	125			
Cadmium			113	mg/kg	1.0	85	75	125			
Copper			791	mg/kg	1.1	88	75	125			
Lead			276	mg/kg	3.3	90	75	125			
Zinc			900	mg/kg	1.0	95	75	125			
Lab ID:	**H14120376-053AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150112C			01/12/15 20:25	
Arsenic			97.8	mg/kg	1.8	94	75	125			
Cadmium			24.7	mg/kg	1.0	88	75	125			
Copper			604	mg/kg	1.1		75	125			A
Lead			86.4	mg/kg	3.2	82	75	125			
Zinc			702	mg/kg	1.0		75	125			A
Lab ID:	**H14120376-053AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C			01/12/15 20:29	
Arsenic			95.1	mg/kg	1.8	88	75	125	2.8	20	
Cadmium			23.6	mg/kg	1.0	83	75	125	4.7	20	
Copper			611	mg/kg	1.1		75	125	1.1	20	A
Lead			93.2	mg/kg	3.2	96	75	125	7.6	20	
Zinc			673	mg/kg	1.0		75	125	4.2	20	A
Lab ID:	**H14120379-009APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C			01/12/15 21:17	
Arsenic			246	mg/kg	1.8	94	75	125			
Cadmium			116	mg/kg	1.0	92	75	125			
Copper			9750	mg/kg	1.1		75	125			A
Lead			236	mg/kg	3.2	92	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27542
Lab ID:	**H14120379-009APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C				01/12/15 21:17
Zinc			761	mg/kg	1.0	103	75	125			
Lab ID:	**H14120379-009AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150112C				01/12/15 21:21
Arsenic			57.3	mg/kg	1.7	94	75	125			
Cadmium			23.8	mg/kg	1.0	92	75	125			
Copper			9150	mg/kg	1.1		75	125			A
Lead			49.9	mg/kg	3.1	89	75	125			
Zinc			547	mg/kg	1.0		75	125			A
Lab ID:	**H14120379-009AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C				01/12/15 21:32
Arsenic			54.9	mg/kg	1.7	89	75	125	4.2	20	
Cadmium			23.6	mg/kg	1.0	91	75	125	0.5	20	
Copper			9800	mg/kg	1.1		75	125	6.9	20	A
Lead			51.1	mg/kg	3.1	91	75	125	2.3	20	
Zinc			567	mg/kg	1.0		75	125	3.5	20	A
Method:	**SW6010B**										Batch: 27543
Lab ID:	**MB-27543**	5	Method Blank				Run: ICP2-HE_150112C				01/12/15 21:35
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27543**	5	Laboratory Fortified Blank				Run: ICP2-HE_150112C				01/12/15 21:39
Arsenic			46.5	mg/kg	1.0	93	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			47.7	mg/kg	1.0	95	80	120			
Zinc			47.9	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27543**	5	Laboratory Control Sample				Run: ICP2-HE_150112C				01/12/15 21:43
Arsenic			272	mg/kg	1.8	79	72.3	106.4			
Cadmium			113	mg/kg	1.0	82	73	105.1			
Copper			242	mg/kg	1.1	87	77.5	109.6			
Lead			172	mg/kg	3.1	92	75.9	108.6			
Zinc			183	mg/kg	1.0	86	74.2	109.9			
Lab ID:	**H14120379-028APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C				01/12/15 23:41
Arsenic			477	mg/kg	1.9	96	75	125			
Cadmium			123	mg/kg	1.0	91	75	125			
Copper			2630	mg/kg	1.1		75	125			A
Lead			433	mg/kg	3.3	94	75	125			
Zinc			1880	mg/kg	1.0		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B										Batch: 27543
Lab ID: H14120379-028AMS	5	Sample Matrix Spike				Run: ICP2-HE_150112C			01/12/15 23:45	
Arsenic		265	mg/kg	1.8		75	125			A
Cadmium		26.7	mg/kg	1.0	84	75	125			
Copper		2460	mg/kg	1.1		75	125			A
Lead		225	mg/kg	3.2	67	75	125			S
Zinc		1550	mg/kg	1.0		75	125			A
- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.										
Lab ID: H14120379-028AMSD	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C			01/12/15 23:49	
Arsenic		268	mg/kg	1.8		75	125	1.2	20	A
Cadmium		27.1	mg/kg	1.0	86	75	125	1.4	20	
Copper		2390	mg/kg	1.1		75	125	3.0	20	A
Lead		229	mg/kg	3.2	75	75	125	1.8	20	
Zinc		1560	mg/kg	1.0		75	125	1.0	20	A
Method: SW6010B										Batch: 27544
Lab ID: MB-27544		Method Blank				Run: ICP2-HE_150112C			01/12/15 23:52	
Lead		1	mg/kg	0.6						
Lab ID: LFB-27544		Laboratory Fortified Blank				Run: ICP2-HE_150112C			01/12/15 23:56	
Lead		47.3	mg/kg	1.0	92	80	120			
Lab ID: LCS-27544		Laboratory Control Sample				Run: ICP2-HE_150112C			01/13/15 00:00	
Lead		169	mg/kg	3.2	90	75.9	108.6			
Lab ID: H14120379-045APDS		Post Digestion/Distillation Spike				Run: ICP2-HE_150112C			01/13/15 00:22	
Lead		270	mg/kg	3.3	93	75	125			
Lab ID: H14120379-045AMS		Sample Matrix Spike				Run: ICP2-HE_150112C			01/13/15 00:26	
Lead		72.8	mg/kg	3.2	80	75	125			
Lab ID: H14120379-045AMSD		Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C			01/13/15 00:29	
Lead		79.1	mg/kg	3.2	93	75	125	8.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150109A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							01/09/15 10:00	
Arsenic			0.0588	mg/L	0.0010	98	90	110			
Cadmium			0.0308	mg/L	0.0010	103	90	110			
Copper			0.0599	mg/L	0.0010	100	90	110			
Lead			0.0591	mg/L	0.0010	98	90	110			
Zinc			0.0596	mg/L	0.0010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/09/15 10:04	
Arsenic			9.90E-05	mg/L	0.0010						
Cadmium			0.000423	mg/L	0.0010						
Copper			0.000297	mg/L	0.0010						
Lead			0.000225	mg/L	0.0010						
Zinc			0.000967	mg/L	0.0010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/09/15 10:09	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Cadmium			0.0100	mg/L	0.0010	101	70	130			
Copper			0.0207	mg/L	0.0010	103	70	130			
Lead			0.000222	mg/L	0.0010		0	0			
Zinc			0.0110	mg/L	0.0010	110	70	130			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/09/15 10:18	
Arsenic			0.0494	mg/L	0.0010	99	90	110			
Cadmium			0.0501	mg/L	0.0010	100	90	110			
Copper			0.0501	mg/L	0.0010	100	90	110			
Lead			0.0498	mg/L	0.0010	100	90	110			
Zinc			0.0500	mg/L	0.0010	100	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/09/15 10:27	
Arsenic			4.20E-05	mg/L	0.0010						
Cadmium			-5.45E-05	mg/L	0.0010						
Copper			-1.17E-05	mg/L	0.0010						
Lead			-8.00E-07	mg/L	0.0010						
Zinc			-4.09E-05	mg/L	0.0010						
Method:	**SW6020**									Batch: 27544	
Lab ID:	**MB-27544**	5	Method Blank				Run: ICPMS204-B_150109A			01/09/15 12:12	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			2	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			4	mg/kg	4						
Lab ID:	**LCS-27544**	5	Laboratory Control Sample				Run: ICPMS204-B_150109A			01/09/15 12:17	
Arsenic			292	mg/kg	1.0	85	72.3	106.4			
Cadmium			118	mg/kg	1.0	86	73	105.1			
Copper			263	mg/kg	1.0	94	77.5	109.6			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27544
Lab ID:	**LCS-27544**	5	Laboratory Control Sample				Run: ICPMS204-B_150109A			01/09/15 12:17	
Lead			175	mg/kg	1.0	94	75.9	108.6			
Zinc			202	mg/kg	3.5	93	74.2	109.9			
Lab ID:	**LFB-27544**	5	Laboratory Fortified Blank				Run: ICPMS204-B_150109A			01/09/15 12:21	
Arsenic			46.6	mg/kg	1.0	93	80	120			
Cadmium			22.5	mg/kg	1.0	90	80	120			
Copper			48.9	mg/kg	1.0	94	80	120			
Lead			44.7	mg/kg	1.0	89	80	120			
Zinc			50.7	mg/kg	3.5	93	80	120			
Lab ID:	**H14120379-045APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150109A			01/09/15 14:14	
Arsenic			2360	mg/kg	1.0	94	75	125			
Cadmium			1190	mg/kg	1.0	96	75	125			
Copper			3740	mg/kg	1.0	87	75	125			
Lead			2450	mg/kg	1.0	97	75	125			
Zinc			2620	mg/kg	3.5	90	75	125			
Lab ID:	**H14120379-045AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_150109A			01/09/15 14:18	
Arsenic			64.6	mg/kg	1.0	90	75	125			
Cadmium			24.1	mg/kg	1.0	95	75	125			
Copper			1510	mg/kg	1.0		75	125			A
Lead			68.9	mg/kg	1.0	77	75	125			
Zinc			392	mg/kg	3.5		75	125			A
Lab ID:	**H14120379-045AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150109A			01/09/15 14:23	
Arsenic			64.2	mg/kg	1.0	90	75	125	0.7	20	
Cadmium			24.2	mg/kg	1.0	96	75	125	0.2	20	
Copper			1550	mg/kg	1.0		75	125	2.7	20	A
Lead			72.5	mg/kg	1.0	84	75	125	5.1	20	
Zinc			406	mg/kg	3.5		75	125	3.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150112B		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							01/12/15 16:56	
Arsenic			0.0584	mg/L	0.0010	97	90	110			
Lead			0.0566	mg/L	0.0010	94	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							01/12/15 17:01	
Arsenic			4.20E-05	mg/L	0.0010						
Lead			0.000204	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							01/12/15 17:05	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Lead			0.000203	mg/L	0.0010		0	0			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							01/12/15 17:14	
Arsenic			0.0493	mg/L	0.0010	99	90	110			
Lead			0.0475	mg/L	0.0010	95	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							01/12/15 17:23	
Arsenic			-2.00E-07	mg/L	0.0010						
Lead			-5.00E-07	mg/L	0.0010						
Method:	**SW6020**									Batch: 27542	
Lab ID:	**MB-27542**	2	Method Blank				Run: ICPMS204-B_150112B			01/13/15 00:54	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27542**	2	Laboratory Control Sample				Run: ICPMS204-B_150112B			01/13/15 00:59	
Arsenic			310	mg/kg	1.0	90	72.3	106.4			
Lead			191	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27542**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150112B			01/13/15 01:04	
Arsenic			50.0	mg/kg	1.0	100	80	120			
Lead			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**H14120376-053APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150112B			01/13/15 02:03	
Arsenic			2480	mg/kg	1.0	97	75	125			
Lead			2470	mg/kg	1.0	97	75	125			
Lab ID:	**H14120376-053AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150112B			01/13/15 02:07	
Arsenic			108	mg/kg	1.0	98	75	125			
Lead			97.9	mg/kg	1.0	98	75	125			
Lab ID:	**H14120376-053AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150112B			01/13/15 02:11	
Arsenic			105	mg/kg	1.0	92	75	125	2.9	20	
Lead			93.1	mg/kg	1.0	88	75	125	4.9	20	
Lab ID:	**H14120379-009APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150112B			01/13/15 03:19	
Arsenic			2380	mg/kg	1.0	98	75	125			
Lead			2380	mg/kg	1.0	98	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27542
Lab ID:	**H14120379-009AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150112B				01/13/15 03:24
Arsenic			57.8	mg/kg	1.0	98	75	125			
Lead			51.6	mg/kg	1.0	93	75	125			
Lab ID:	**H14120379-009AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150112B				01/13/15 03:28
Arsenic			55.3	mg/kg	1.0	93	75	125	4.4	20	
Lead			51.6	mg/kg	1.0	93	75	125	0.0	20	
Method:	**SW6020**										Batch: 27543
Lab ID:	**MB-27543**	2	Method Blank				Run: ICPMS204-B_150112B				01/13/15 03:37
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27543**	2	Laboratory Control Sample				Run: ICPMS204-B_150112B				01/13/15 03:42
Arsenic			294	mg/kg	1.0	86	72.3	106.4			
Lead			177	mg/kg	1.0	95	75.9	108.6			
Lab ID:	**LFB-27543**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150112B				01/13/15 03:46
Arsenic			47.5	mg/kg	1.0	95	80	120			
Lead			46.3	mg/kg	1.0	93	80	120			
Lab ID:	**H14120379-028APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150112B				01/13/15 06:03
Arsenic			2680	mg/kg	1.0	97	75	125			
Lead			2620	mg/kg	1.0	97	75	125			
Lab ID:	**H14120379-028AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150112B				01/13/15 06:07
Arsenic			299	mg/kg	1.0		75	125			A
Lead			235	mg/kg	1.0	90	75	125			
Lab ID:	**H14120379-028AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150112B				01/13/15 06:11
Arsenic			294	mg/kg	1.0		75	125	1.5	20	A
Lead			236	mg/kg	1.0	91	75	125	0.3	20	
Method:	**SW6020**										Batch: 27544
Lab ID:	**MB-27544**	5	Method Blank				Run: ICPMS204-B_150112B				01/13/15 06:20
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			0.7	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			4	mg/kg	4						
Lab ID:	**LCS-27544**	5	Laboratory Control Sample				Run: ICPMS204-B_150112B				01/13/15 06:25
Arsenic			303	mg/kg	1.0	89	72.3	106.4			
Cadmium			130	mg/kg	1.0	95	73	105.1			
Copper			273	mg/kg	1.0	98	77.5	109.6			
Lead			185	mg/kg	1.0	99	75.9	108.6			
Zinc			210	mg/kg	3.5	97	74.2	109.9			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/20/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27544
Lab ID:	**LFB-27544**	5	Laboratory Fortified Blank				Run: ICPMS204-B_150112B			01/13/15 06:30	
Arsenic			48.6	mg/kg	1.0	97	80	120			
Cadmium			26.0	mg/kg	1.0	104	80	120			
Copper			50.3	mg/kg	1.0	99	80	120			
Lead			47.7	mg/kg	1.0	95	80	120			
Zinc			54.8	mg/kg	3.5	101	80	120			
Lab ID:	**H14120379-045APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_150112B			01/13/15 07:01	
Arsenic			2460	mg/kg	1.0	99	75	125			
Cadmium			1250	mg/kg	1.0	101	75	125			
Copper			3900	mg/kg	1.0	157	75	125			S
Lead			2480	mg/kg	1.0	99	75	125			
Zinc			2750	mg/kg	3.5	111	75	125			
Lab ID:	**H14120379-045AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_150112B			01/13/15 07:06	
Arsenic			67.2	mg/kg	1.0	135	75	125			S
Cadmium			27.0	mg/kg	1.0	108	75	125			
Copper			1590	mg/kg	1.0	3190	75	125			S
Lead			72.9	mg/kg	1.0	139	75	125			S
Zinc			414	mg/kg	3.5	828	75	125			S
Lab ID:	**H14120379-045AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150112B			01/13/15 07:10	
Arsenic			67.9	mg/kg	1.0	136	75	125	1.0	20	S
Cadmium			26.8	mg/kg	1.0	108	75	125	0.9	20	
Copper			1650	mg/kg	1.0	3310	75	125	3.6	20	S
Lead			75.2	mg/kg	1.0	144	75	125	3.2	20	S
Zinc			438	mg/kg	3.5	879	75	125	5.7	20	S

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120379

Login completed by: Austin H. Nearpass
Date Received: 12/18/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 12/30/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	Comments °C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was 2.7 degrees C on wet ice, Cooler 2 was on wet ice at 1.4 degrees C.
The COC states that a third cooler was used but no samples for this work order were in cooler 3.AN 12/22/14

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-401E-1218	1205	12/16/14	Soil	A	B		1
3-401E-1824	1204	12/16/14	Soil	A	B		1
3-401E-2430	1203	12/16/14	Soil	A	B		1
3-407E-0006	959	12/16/14	Soil	A	B		1
3-407E-0612	958	12/16/14	Soil	A	B		1
3-407N-6672	845	12/16/14	Soil	A	B		1
3-407N-7278	928	12/16/14	Soil	A	B		1
3-407N-7884	927	12/16/14	Soil	A	B		1
3-410-3036	1252	12/16/14	Soil	A	B		1
3-410-3642	1251	12/16/14	Soil	A	B		1
3-410-4248	1250	12/16/14	Soil	A	B		1
3-412-4854	828	12/16/14	Soil	A	B		1
3-412-5460	827	12/16/14	Soil	A	B		1
3-412-6066	826	12/16/14	Soil	A	B		1
3-413-3642	1311	12/16/14	Soil	A	B		1
3-413-4248	1310	12/16/14	Soil	A	B		1
3-416-2430	1553	12/16/14	Soil	A	B		1
3-416-3036	1552	12/16/14	Soil	A	B		1
3-416-3642	1551	12/16/14	Soil	A	B		1
3-417-2430	1343	12/16/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H1412079

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1)	(1)	(2)	(2)
Date/Time: 12/18/14 1655	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	C1=2.7 C2=1.4 > TB on ice C3=5.4	hand 12/18/14 16:55

COC121614TP.xls

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
C1							
3-423-4248	1530	12/16/14	Soil	A	B		1
3-424-3642	1501	12/16/14	Soil	A	B		1
3-424-4248	1500	12/16/14	Soil	A	B		1
3-425-2430	1441	12/16/14	Soil	A	B		1
3-425-3036	1440	12/16/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H14120379

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/18/14 1655

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 2.7
C2 = 1.4
C3 = 5.4
} TB on ice

Date/Time: 12/18/14 16:55 hand

COC121614TP.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-417-3036	1342	12/16/14	Soil	A	B		1
3-417-3642	1341	12/16/14	Soil	A	B		1
3-418-3036	1402	12/16/14	Soil	A	B		1
3-418-3642	1401	12/16/14	Soil	A	B		1
3-418-4248	1400	12/16/14	Soil	A	B		1
3-419-1824	1422	12/16/14	Soil	A	B		1
3-419-2430	1421	12/16/14	Soil	A	B		1
3-419-3036	1420	12/16/14	Soil	A	B		1
3-421-3036	1037	12/16/14	Soil	A	B		1
3-421-3642	1036	12/16/14	Soil	A	B		1
3-421-4248	1035	12/16/14	Soil	A	B		1
3-421E-0006	1122	12/16/14	Soil	A	B		1
3-421E-0612	1121	12/16/14	Soil	A	B		1
3-421S-0006	1137	12/16/14	Soil	A	B		1
3-421S-0612	1136	12/16/14	Soil	A	B		1
3-422-4248	1605	12/16/14	Soil	A	B		1
3-422-4854	1631	12/16/14	Soil	A	B		1
3-422-5460	1630	12/16/14	Soil	A	B		1
3-423-3036	1532	12/16/14	Soil	A	B		1
3-423-3642	1531	12/16/14	Soil	A	B		1

C2

C1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H141203 79

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/18/14 1655

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1=2.7
C2=1.4
C3=5.4
} TB once

Date/Time: Hand
12/18/14 16:55

COC121614TP.xls

ANALYTICAL SUMMARY REPORT

January 20, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120376

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 53 samples for MT DEQ-Federal Superfund on 12/18/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120376-001	3-208-1824	12/17/14 12:43	12/18/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120376-002	3-208-2430	12/17/14 12:42	12/18/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120376-003	3-208-3036	12/17/14 12:41	12/18/14	Soil	Same As Above
H14120376-004	3-222-1824	12/17/14 13:05	12/18/14	Soil	Same As Above
H14120376-005	3-222-2430	12/17/14 13:04	12/18/14	Soil	Same As Above
H14120376-006	3-222-3036	12/17/14 13:03	12/18/14	Soil	Same As Above
H14120376-007	3-235-1824	12/17/14 15:44	12/18/14	Soil	Same As Above
H14120376-008	3-235-1824d	12/17/14 15:45	12/18/14	Soil	Same As Above
H14120376-009	3-235-2430	12/17/14 15:43	12/18/14	Soil	Same As Above
H14120376-010	3-235-3036	12/17/14 15:42	12/18/14	Soil	Same As Above
H14120376-011	3-236-1824	12/17/14 13:30	12/18/14	Soil	Same As Above
H14120376-012	3-236-2430	12/17/14 13:29	12/18/14	Soil	Same As Above
H14120376-013	3-236-2430d	12/17/14 13:29	12/18/14	Soil	Same As Above
H14120376-014	3-236-3036	12/17/14 13:27	12/18/14	Soil	Same As Above
H14120376-015	3-256-0612	12/17/14 16:06	12/18/14	Soil	Same As Above
H14120376-016	3-256-1218	12/17/14 16:05	12/18/14	Soil	Same As Above
H14120376-017	3-256-1824	12/17/14 16:04	12/18/14	Soil	Same As Above
H14120376-018	3-257-2430	12/17/14 14:08	12/18/14	Soil	Same As Above
H14120376-019	3-257-3036	12/17/14 14:07	12/18/14	Soil	Same As Above
H14120376-020	3-257-3642	12/17/14 14:06	12/18/14	Soil	Same As Above
H14120376-021	3-277-1218	12/17/14 16:35	12/18/14	Soil	Same As Above
H14120376-022	3-277-1824	12/17/14 16:34	12/18/14	Soil	Same As Above
H14120376-023	3-277-2430	12/17/14 16:33	12/18/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120376-024	3-278-1824	12/17/14 14:30	12/18/14	Soil	Same As Above
H14120376-025	3-278-2430	12/17/14 14:29	12/18/14	Soil	Same As Above
H14120376-026	3-278-3036	12/17/14 14:28	12/18/14	Soil	Same As Above
H14120376-027	3-295-2430	12/17/14 14:53	12/18/14	Soil	Same As Above
H14120376-028	3-295-3036	12/17/14 14:52	12/18/14	Soil	Same As Above
H14120376-029	3-295-3642	12/17/14 14:51	12/18/14	Soil	Same As Above
H14120376-030	3-335-0006	12/17/14 11:49	12/18/14	Soil	Same As Above
H14120376-031	3-335-0612	12/17/14 11:48	12/18/14	Soil	Same As Above
H14120376-032	3-348e-1218	12/17/14 8:50	12/18/14	Soil	Same As Above
H14120376-033	3-348e-1824	12/17/14 8:49	12/18/14	Soil	Same As Above
H14120376-034	3-348e-2430	12/17/14 8:48	12/18/14	Soil	Same As Above
H14120376-035	3-348e2-0006	12/17/14 10:23	12/18/14	Soil	Same As Above
H14120376-036	3-348e2-0612	12/17/14 10:22	12/18/14	Soil	Same As Above
H14120376-037	3-360e-0612	12/17/14 8:36	12/18/14	Soil	Same As Above
H14120376-038	3-360e-1218	12/17/14 8:35	12/18/14	Soil	Same As Above
H14120376-039	3-360e-1824	12/17/14 8:34	12/18/14	Soil	Same As Above
H14120376-040	3-376e-1824	12/17/14 9:13	12/18/14	Soil	Same As Above
H14120376-041	3-376e-2430	12/17/14 9:12	12/18/14	Soil	Same As Above
H14120376-042	3-376e-3036	12/17/14 9:11	12/18/14	Soil	Same As Above
H14120376-043	3-376e2-0006	12/17/14 10:53	12/18/14	Soil	Same As Above
H14120376-044	3-376e2-0612	12/17/14 10:57	12/18/14	Soil	Same As Above
H14120376-045	3-376s-1218	12/17/14 8:16	12/18/14	Soil	Same As Above
H14120376-046	3-376s-1824	12/17/14 8:14	12/18/14	Soil	Same As Above
H14120376-047	3-376s-1824d	12/17/14 8:14	12/18/14	Soil	Same As Above
H14120376-048	3-376s-2430	12/17/14 8:13	12/18/14	Soil	Same As Above
H14120376-049	3-376se-1218	12/17/14 9:51	12/18/14	Soil	Same As Above
H14120376-050	3-376se-1824	12/17/14 9:50	12/18/14	Soil	Same As Above
H14120376-051	3-376se-2430	12/17/14 10:13	12/18/14	Soil	Same As Above
H14120376-052	3-376se2-0006	12/17/14 11:17	12/18/14	Soil	Same As Above
H14120376-053	3-376se2-0612	12/17/14 11:16	12/18/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

ANALYTICAL SUMMARY REPORT

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120376

Report Date: 01/20/15
Date Received: 12/18/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120376-001	3-208-1824	0	0	6.6	351	39	3910	461	7310
H14120376-002	3-208-2430	0	0	7.4	87	< 1	1230	85	643
H14120376-003	3-208-3036	0	0	7.8	45	< 1	675	15	445
H14120376-004	3-222-1824	0	0	6.8	1760	30	13200	840	8300
H14120376-005	3-222-2430	0	0	6.9	131	2	1070	97	895
H14120376-006	3-222-3036	0	0	7.5	37	< 1	209	33	496
H14120376-007	3-235-1824	0	0	6.8	9	3	807	12	528
H14120376-008	3-235-1824d	0	0	7.0	4	3	1020	9	626
H14120376-009	3-235-2430	0	0	7.3	5	< 1	847	6	215
H14120376-010	3-235-3036	0	0	7.0	21	< 1	839	21	210
H14120376-011	3-236-1824	0	0	6.9	1020	11	7730	651	3420
H14120376-012	3-236-2430	0	0	7.0	69	< 1	134	22	90
H14120376-013	3-236-2430d	0	0	7.2	55	< 1	81	19	71
H14120376-014	3-236-3036	0	0	7.8	9	< 1	24	19	325
H14120376-015	3-256-0612	0	0	7.2	695	4	3860	617	1280
H14120376-016	3-256-1218	0	0	7.1	22	< 1	80	19	318
H14120376-017	3-256-1824	0	0	7.2	11	< 1	71	20	102
H14120376-018	3-257-2430	0	0	6.8	1960	24	13700	841	8530
H14120376-019	3-257-3036	0	0	7.3	49	< 1	620	36	517
H14120376-020	3-257-3642	0	0	6.9	11	13	65	15	1770
H14120376-021	3-277-1218	0	0	7.5	225	24	6910	495	5950
H14120376-022	3-277-1824	0	0	7.6	14	< 1	79	21	118
H14120376-023	3-277-2430	0	0	7.7	9	< 1	48	19	101
H14120376-024	3-278-1824	0	0	7.0	841	10	4880	528	2860
H14120376-025	3-278-2430	0	0	7.6	8	< 1	69	18	212
H14120376-026	3-278-3036	0	0	7.8	10	< 1	279	19	166
H14120376-027	3-295-2430	0	0	6.9	1900	26	13200	787	8130
H14120376-028	3-295-3036	0	0	7.4	22	< 1	57	16	60
H14120376-029	3-295-3642	0	0	7.4	4	< 1	20	7	33
H14120376-030	3-335-0006	0	0	7.9	450	6	2230	379	2020
H14120376-031	3-335-0612	0	0	7.6	114	2	768	169	666
H14120376-032	3-348e-1218	0	0	7.4	40	2	146	10	1660
H14120376-033	3-348e-1824	0	0	7.3	7	< 1	32	12	97
H14120376-034	3-348e-2430	0	0	7.1	6	< 1	34	10	137
H14120376-035	3-348e2-0006	0	0	7.4	203	6	1630	272	1360
H14120376-036	3-348e2-0612	0	0	7.6	284	5	2530	255	1380
H14120376-037	3-360e-0612	0	0	7.1	793	7	4120	478	2010
H14120376-038	3-360e-1218	0	0	7.4	38	< 1	104	14	329
H14120376-039	3-360e-1824	0	0	7.4	29	< 1	65	13	297
H14120376-040	3-376e-1824	0	0	7.4	250	3	1920	299	757

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120376

Report Date: 01/20/15
Date Received: 12/18/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120376-041	3-376e-2430	0	0	7.6	15	< 1	85	19	85
H14120376-042	3-376e-3036	0	0	7.4	6	< 1	40	14	79
H14120376-043	3-376e2-0006	0	0	7.6	361	11	3340	407	2390
H14120376-044	3-376e2-0612	0	0	7.7	364	5	2810	330	1670
H14120376-045	3-376s-1218	0	0	7.2	2650	19	18300	956	4470
H14120376-046	3-376s-1824	0	0	7.4	151	2	1290	78	1040
H14120376-047	3-376s-1824d	0	0	7.4	161	5	1650	136	1940
H14120376-048	3-376s-2430	0	0	7.4	25	< 1	165	26	215
H14120376-049	3-376se-1218	0	0	7.4	2460	18	18000	904	3680
H14120376-050	3-376se-1824	0	0	7.3	43	1	169	18	555
H14120376-051	3-376se-2430	0	0	7.2	14	< 1	48	17	160
H14120376-052	3-376se2-0006	0	0	7.5	198	8	1660	293	1680
H14120376-053	3-376se2-0612	0	0	7.6	51	3	565	45	657

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150116A	
Lab ID: CCV_1_150114_1		Continuing Calibration Verification Standard								01/15/15 09:19
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150114_1		Continuing Calibration Verification Standard								01/15/15 09:19
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150114_1		Initial Calibration Verification Standard								01/15/15 09:20
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150114_1		Continuing Calibration Verification Standard								01/15/15 09:31
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150114_1		Continuing Calibration Verification Standard								01/15/15 09:51
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150114_1		Continuing Calibration Verification Standard								01/15/15 09:51
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150114_1		Initial Calibration Verification Standard								01/15/15 09:52
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150114_1		Continuing Calibration Verification Standard								01/15/15 10:02
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150114_1		Continuing Calibration Verification Standard								01/15/15 10:24
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150114_1		Continuing Calibration Verification Standard								01/15/15 10:24
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150114_1		Initial Calibration Verification Standard								01/15/15 10:25
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150114_1		Continuing Calibration Verification Standard								01/15/15 10:35
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150114_1		Initial Calibration Verification Standard								01/15/15 10:55
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150114_1		Initial Calibration Verification Standard								01/15/15 11:26
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150115_1		Initial Calibration Verification Standard								01/16/15 08:20
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27666
Lab ID: LCS-27666		Laboratory Control Sample				Run: SOIL PH METER_150116A				01/15/15 09:21
pH, sat. paste		7.61	s.u.	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27666
Lab ID: H14120376-010ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 09:31	
pH, sat. paste		7.04	s.u.	0.10				0.1	30	
Lab ID: H14120376-020ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 09:40	
pH, sat. paste		6.93	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 27667
Lab ID: LCS-27667	Laboratory Control Sample					Run: SOIL PH METER_150116A			01/15/15 09:53	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14120376-030ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 10:02	
pH, sat. paste		7.89	s.u.	0.10				0.4	30	
Lab ID: H14120376-040ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 10:11	
pH, sat. paste		7.39	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27668
Lab ID: LCS-27668	Laboratory Control Sample					Run: SOIL PH METER_150116A			01/15/15 10:26	
pH, sat. paste		7.66	s.u.	0.10	102	95	105			
Lab ID: H14120376-050ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 10:34	
pH, sat. paste		7.35	s.u.	0.10				0.1	30	
Lab ID: H14120376-053ADUP	Sample Duplicate					Run: SOIL PH METER_150116A			01/15/15 10:38	
pH, sat. paste		7.61	s.u.	0.10				0.4	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150108A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/08/15 14:57
Arsenic			0.777	mg/L	0.0085	97	90	110			
Cadmium			0.382	mg/L	0.0010	95	90	110			
Copper			0.792	mg/L	0.010	99	90	110			
Lead			0.746	mg/L	0.010	93	90	110			
Zinc			0.782	mg/L	0.010	98	90	110			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/08/15 15:01
Arsenic			2.56	mg/L	0.0085	102	90	110			
Cadmium			2.51	mg/L	0.0010	101	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.46	mg/L	0.010	98	90	110			
Zinc			2.54	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/08/15 15:04
Arsenic			0.000430	mg/L	0.0085						
Cadmium			0.000570	mg/L	0.0010						
Copper			-0.00216	mg/L	0.010						
Lead			-0.00623	mg/L	0.010						
Zinc			0.00499	mg/L	0.010						
Lab ID:	**ICSA**	5	Interference Check Sample A								01/08/15 15:12
Arsenic			0.00600	mg/L	0.0085		0	0			
Cadmium			-0.000950	mg/L	0.0010		0	0			
Copper			-0.00438	mg/L	0.010		0	0			
Lead			-0.0353	mg/L	0.010		0	0			
Zinc			0.000880	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/08/15 15:16
Arsenic			0.961	mg/L	0.0085	96	80	120			
Cadmium			0.877	mg/L	0.0010	88	80	120			
Copper			0.506	mg/L	0.010	101	80	120			
Lead			0.826	mg/L	0.010	83	80	120			
Zinc			0.967	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/08/15 19:15
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.47	mg/L	0.0010	99	90	110			
Copper			2.53	mg/L	0.010	101	90	110			
Lead			2.48	mg/L	0.010	99	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/08/15 19:19
Arsenic			0.00115	mg/L	0.0085						
Cadmium			0.00114	mg/L	0.0010						
Copper			0.00561	mg/L	0.010						
Lead			0.00286	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150108A	
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/08/15 19:19	
Zinc			0.00558	mg/L	0.010						
Lab ID:	**ICSA**	5	Interference Check Sample A							01/08/15 19:27	
Arsenic			0.0137	mg/L	0.0085		0	0			
Cadmium			-0.000570	mg/L	0.0010		0	0			
Copper			-5.00E-05	mg/L	0.010		0	0			
Lead			-0.0125	mg/L	0.010		0	0			
Zinc			0.00363	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/08/15 19:31	
Arsenic			0.957	mg/L	0.0085	96	80	120			
Cadmium			0.874	mg/L	0.0010	87	80	120			
Copper			0.491	mg/L	0.010	98	80	120			
Lead			0.885	mg/L	0.010	89	80	120			
Zinc			0.963	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/08/15 20:01	
Arsenic			2.50	mg/L	0.0085	100	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/08/15 20:04	
Arsenic			0.00903	mg/L	0.0085						
Cadmium			0.000980	mg/L	0.0010						
Copper			0.00236	mg/L	0.010						
Lead			0.0120	mg/L	0.010						
Zinc			0.00532	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/09/15 07:38	
Arsenic			2.60	mg/L	0.0085	104	90	110			
Cadmium			2.59	mg/L	0.0010	104	90	110			
Copper			2.58	mg/L	0.010	103	90	110			
Lead			2.60	mg/L	0.010	104	90	110			
Zinc			2.60	mg/L	0.010	104	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/09/15 07:42	
Arsenic			0.00775	mg/L	0.0085						
Cadmium			0.000590	mg/L	0.0010						
Copper			0.00224	mg/L	0.010						
Lead			-0.0121	mg/L	0.010						
Zinc			-0.000690	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150112C	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/12/15 10:44	
Arsenic			0.775	mg/L	0.0085	97	90	110			
Cadmium			0.385	mg/L	0.0010	96	90	110			
Copper			0.799	mg/L	0.010	100	90	110			
Lead			0.764	mg/L	0.010	95	90	110			
Zinc			0.786	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/12/15 10:59	
Arsenic			-0.00134	mg/L	0.0085		0	0			
Cadmium			0.00448	mg/L	0.0010		0	0			
Copper			-0.00212	mg/L	0.010		0	0			
Lead			0.0385	mg/L	0.010		0	0			
Zinc			0.00295	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/12/15 11:03	
Arsenic			0.985	mg/L	0.0085	99	80	120			
Cadmium			0.916	mg/L	0.0010	92	80	120			
Copper			0.501	mg/L	0.010	100	80	120			
Lead			0.911	mg/L	0.010	91	80	120			
Zinc			0.992	mg/L	0.010	99	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/12/15 11:34	
Arsenic			2.65	mg/L	0.0085	106	90	110			
Cadmium			2.57	mg/L	0.0010	103	90	110			
Copper			2.58	mg/L	0.010	103	90	110			
Lead			2.60	mg/L	0.010	104	90	110			
Zinc			2.58	mg/L	0.010	103	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/12/15 11:37	
Arsenic			0.00100	mg/L	0.0085						
Cadmium			0.000520	mg/L	0.0010						
Copper			0.000780	mg/L	0.010						
Lead			0.0325	mg/L	0.010						
Zinc			0.00120	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/12/15 18:46	
Arsenic			2.37	mg/L	0.0085	95	90	110			
Cadmium			2.39	mg/L	0.0010	96	90	110			
Copper			2.50	mg/L	0.010	100	90	110			
Lead			2.36	mg/L	0.010	94	90	110			
Zinc			2.39	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/12/15 18:49	
Arsenic			0.00516	mg/L	0.0085						
Cadmium			0.000890	mg/L	0.0010						
Copper			0.00322	mg/L	0.010						
Lead			0.0423	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150112C	
Lab ID: CCB	5	Continuing Calibration Blank							01/12/15 18:49	
Zinc		0.00163	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150115A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/15/15 10:26	
Arsenic			0.829	mg/L	0.0085	104	90	110			
Cadmium			0.407	mg/L	0.0010	102	90	110			
Copper			0.814	mg/L	0.010	102	90	110			
Lead			0.811	mg/L	0.010	101	90	110			
Zinc			0.834	mg/L	0.010	104	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/15/15 10:41	
Arsenic			-0.00315	mg/L	0.0085		0	0			
Cadmium			0.00545	mg/L	0.0010		0	0			
Copper			-0.00237	mg/L	0.010		0	0			
Lead			0.00445	mg/L	0.010		0	0			
Zinc			0.00222	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/15/15 10:45	
Arsenic			0.962	mg/L	0.0085	96	80	120			
Cadmium			0.882	mg/L	0.0010	88	80	120			
Copper			0.509	mg/L	0.010	102	80	120			
Lead			0.880	mg/L	0.010	88	80	120			
Zinc			0.969	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/15/15 11:15	
Arsenic			2.53	mg/L	0.0085	101	90	110			
Cadmium			2.53	mg/L	0.0010	101	90	110			
Copper			2.60	mg/L	0.010	104	90	110			
Lead			2.53	mg/L	0.010	101	90	110			
Zinc			2.56	mg/L	0.010	102	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/15/15 11:19	
Arsenic			-0.00630	mg/L	0.0085						
Cadmium			0.000630	mg/L	0.0010						
Copper			-0.00776	mg/L	0.010						
Lead			-0.0156	mg/L	0.010						
Zinc			-0.000240	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/15/15 19:38	
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.45	mg/L	0.0010	98	90	110			
Copper			2.49	mg/L	0.010	100	90	110			
Lead			2.41	mg/L	0.010	96	90	110			
Zinc			2.46	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/15/15 19:42	
Arsenic			0.00974	mg/L	0.0085						
Cadmium			0.000780	mg/L	0.0010						
Copper			0.00392	mg/L	0.010						
Lead			0.00191	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150115A	
Lab ID: CCB	5	Continuing Calibration Blank							01/15/15 19:42	
Zinc		0.00128	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_150108A		
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard							01/09/15 06:53	
Arsenic			0.0494	mg/L	0.0050	99	90	110			
Cadmium			0.0492	mg/L	0.0010	98	90	110			
Copper			0.0484	mg/L	0.010	97	90	110			
Lead			0.0489	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank							01/09/15 07:02	
Arsenic			-9.30E-06	mg/L	0.0050						
Cadmium			8.00E-07	mg/L	0.0010						
Copper			-0.000261	mg/L	0.010						
Lead			6.50E-06	mg/L	0.010						
Method:	**E200.8**								Analytical Run: ICPMS204-B_150112B		
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							01/13/15 01:40	
Arsenic			0.0492	mg/L	0.0050	99	90	110			
Lead			0.0493	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							01/13/15 01:49	
Arsenic			-5.90E-06	mg/L	0.0050						
Lead			5.20E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27539	
Lab ID:	**MB-27539**	5	Method Blank				Run: ICP2-HE_150108A			01/09/15 03:41	
Arsenic			0.5	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27539**	5	Laboratory Fortified Blank				Run: ICP2-HE_150108A			01/09/15 03:45	
Arsenic			46.8	mg/kg	1.0	93	80	120			
Cadmium			23.0	mg/kg	1.0	92	80	120			
Copper			49.6	mg/kg	1.0	96	80	120			
Lead			45.4	mg/kg	1.0	91	80	120			
Zinc			47.7	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27539**	5	Laboratory Control Sample				Run: ICP2-HE_150108A			01/09/15 03:49	
Arsenic			278	mg/kg	1.8	81	72.3	106.4			
Cadmium			116	mg/kg	1.0	85	73	105.1			
Copper			252	mg/kg	1.1	89	77.5	109.6			
Lead			177	mg/kg	3.2	95	75.9	108.6			
Zinc			188	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H14120376-009APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150108A			01/09/15 05:25	
Arsenic			227	mg/kg	1.8	88	75	125			
Cadmium			109	mg/kg	1.0	86	75	125			
Copper			1080	mg/kg	1.1	91	75	125			
Lead			232	mg/kg	3.2	85	75	125			
Zinc			444	mg/kg	1.0	90	75	125			
Lab ID:	**H14120376-009AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150108A			01/09/15 05:28	
Arsenic			51.3	mg/kg	1.8	95	75	125			
Cadmium			22.5	mg/kg	1.0	89	75	125			
Copper			858	mg/kg	1.1		75	125			A
Lead			53.2	mg/kg	3.1	76	75	125			
Zinc			253	mg/kg	1.0		75	125			A
Lab ID:	**H14120376-009AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150108A			01/09/15 05:32	
Arsenic			51.1	mg/kg	1.8	94	75	125	0.4	20	
Cadmium			22.9	mg/kg	1.0	90	75	125	1.8	20	
Copper			860	mg/kg	1.1		75	125	0.1	20	A
Lead			53.9	mg/kg	3.1	77	75	125	1.4	20	
Zinc			253	mg/kg	1.0		75	125	0.2	20	A
Method:	**SW6010B**									Batch: 27540	
Lab ID:	**MB-27540**	5	Method Blank				Run: ICP2-HE_150108A			01/09/15 05:36	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			6	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27540
Lab ID:	**MB-27540**	5	Method Blank				Run: ICP2-HE_150108A				01/09/15 05:36
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27540**	5	Laboratory Fortified Blank				Run: ICP2-HE_150108A				01/09/15 05:40
Arsenic			45.7	mg/kg	1.0	91	80	120			
Cadmium			22.3	mg/kg	1.0	89	80	120			
Copper			54.8	mg/kg	1.0	98	80	120			
Lead			44.8	mg/kg	1.0	90	80	120			
Zinc			48.3	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27540**	5	Laboratory Control Sample				Run: ICP2-HE_150108A				01/09/15 05:51
Arsenic			263	mg/kg	1.8	77	72.3	106.4			
Cadmium			111	mg/kg	1.0	81	73	105.1			
Copper			244	mg/kg	1.1	85	77.5	109.6			
Lead			163	mg/kg	3.2	87	75.9	108.6			
Zinc			182	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H14120376-028APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150108A				01/09/15 07:46
Arsenic			235	mg/kg	1.8	88	75	125			
Cadmium			111	mg/kg	1.0	87	75	125			
Copper			290	mg/kg	1.1	91	75	125			
Lead			239	mg/kg	3.3	87	75	125			
Zinc			289	mg/kg	1.0	89	75	125			
Lab ID:	**H14120376-028AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150108A				01/09/15 07:49
Arsenic			55.4	mg/kg	1.8	90	75	125			
Cadmium			23.0	mg/kg	1.0	92	75	125			
Copper			105	mg/kg	1.1	96	75	125			
Lead			60.3	mg/kg	3.2	89	75	125			
Zinc			112	mg/kg	1.0	103	75	125			
Lab ID:	**H14120376-028AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150108A				01/09/15 07:53
Arsenic			53.8	mg/kg	1.8	87	75	125	2.9	20	
Cadmium			22.6	mg/kg	1.0	91	75	125	1.7	20	
Copper			106	mg/kg	1.1	98	75	125	1.4	20	
Lead			62.5	mg/kg	3.2	94	75	125	3.6	20	
Zinc			111	mg/kg	1.0	102	75	125	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27541
Lab ID:	**MB-27541**	3	Method Blank				Run: ICP2-HE_150112C				01/12/15 16:04
Arsenic			ND	mg/kg	0.4						
Copper			ND	mg/kg	0.2						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27541**	3	Laboratory Fortified Blank				Run: ICP2-HE_150112C				01/12/15 16:08
Arsenic			49.1	mg/kg	1.0	98	80	120			
Copper			48.8	mg/kg	1.0	98	80	120			
Zinc			49.6	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27541**	3	Laboratory Control Sample				Run: ICP2-HE_150112C				01/12/15 16:11
Arsenic			287	mg/kg	1.8	84	72.3	106.4			
Copper			251	mg/kg	1.1	90	77.5	109.6			
Zinc			190	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14120376-046APDS**	3	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C				01/12/15 17:36
Arsenic			375	mg/kg	1.9	89	75	125			
Copper			1470	mg/kg	1.1		75	125			A
Zinc			1230	mg/kg	1.0		75	125			A
Lab ID:	**H14120376-046AMS**	3	Sample Matrix Spike				Run: ICP2-HE_150112C				01/12/15 17:40
Arsenic			189	mg/kg	1.8	86	75	125			
Copper			1290	mg/kg	1.1		75	125			A
Zinc			1060	mg/kg	1.0		75	125			A
Lab ID:	**H14120376-046AMSD**	3	Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C				01/12/15 17:43
Arsenic			195	mg/kg	1.8	97	75	125	3.0	20	
Copper			1370	mg/kg	1.1		75	125	6.1	20	A
Zinc			1070	mg/kg	1.0		75	125	0.7	20	A
Method:	**SW6010B**										Batch: 27542
Lab ID:	**MB-27542**	5	Method Blank				Run: ICP2-HE_150112C				01/12/15 19:34
Arsenic			0.5	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27542**	5	Laboratory Fortified Blank				Run: ICP2-HE_150112C				01/12/15 19:38
Arsenic			46.6	mg/kg	1.0	92	80	120			
Cadmium			22.9	mg/kg	1.0	92	80	120			
Copper			47.9	mg/kg	1.0	96	80	120			
Lead			46.6	mg/kg	1.0	93	80	120			
Zinc			47.1	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27542**	5	Laboratory Control Sample				Run: ICP2-HE_150112C				01/12/15 19:41
Arsenic			275	mg/kg	1.8	80	72.3	106.4			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27542	
Lab ID:	**LCS-27542**	5	Laboratory Control Sample				Run: ICP2-HE_150112C			01/12/15 19:41	
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			244	mg/kg	1.1	87	77.5	109.6			
Lead			171	mg/kg	3.2	91	75.9	108.6			
Zinc			186	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120376-053APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C			01/12/15 20:22	
Arsenic			281	mg/kg	1.9	90	75	125			
Cadmium			113	mg/kg	1.0	85	75	125			
Copper			791	mg/kg	1.1	88	75	125			
Lead			276	mg/kg	3.3	90	75	125			
Zinc			900	mg/kg	1.0	95	75	125			
Lab ID:	**H14120376-053AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150112C			01/12/15 20:25	
Arsenic			97.8	mg/kg	1.8	94	75	125			
Cadmium			24.7	mg/kg	1.0	88	75	125			
Copper			604	mg/kg	1.1		75	125			A
Lead			86.4	mg/kg	3.2	82	75	125			
Zinc			702	mg/kg	1.0		75	125			A
Lab ID:	**H14120376-053AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C			01/12/15 20:29	
Arsenic			95.1	mg/kg	1.8	88	75	125	2.8	20	
Cadmium			23.6	mg/kg	1.0	83	75	125	4.7	20	
Copper			611	mg/kg	1.1		75	125	1.1	20	A
Lead			93.2	mg/kg	3.2	96	75	125	7.6	20	
Zinc			673	mg/kg	1.0		75	125	4.2	20	A
Method:	**SW6010B**									Batch: 27626	
Lab ID:	**MB-27626**	5	Method Blank				Run: ICP2-HE_150112C			01/12/15 17:47	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			1	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27626**	5	Laboratory Fortified Blank				Run: ICP2-HE_150112C			01/12/15 17:51	
Arsenic			47.3	mg/kg	1.0	95	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			47.3	mg/kg	1.0	92	80	120			
Zinc			48.8	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27626**	5	Laboratory Control Sample				Run: ICP2-HE_150112C			01/12/15 17:54	
Arsenic			282	mg/kg	1.8	82	72.3	106.4			
Cadmium			120	mg/kg	1.0	88	73	105.1			
Copper			241	mg/kg	1.1	86	77.5	109.6			
Lead			178	mg/kg	3.1	95	75.9	108.6			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27626
Lab ID:	**LCS-27626**	5	Laboratory Control Sample				Run: ICP2-HE_150112C			01/12/15 17:54	
Zinc			195	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120373-029APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C			01/12/15 18:31	
Arsenic			753	mg/kg	1.8	92	75	125			
Cadmium			123	mg/kg	1.0	92	75	125			
Copper			4610	mg/kg	1.1		75	125			A
Lead			784	mg/kg	3.3	87	75	125			
Zinc			1970	mg/kg	1.0		75	125			A
Lab ID:	**H14120373-029AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150112C			01/12/15 18:35	
Arsenic			541	mg/kg	1.8		75	125			A
Cadmium			27.6	mg/kg	1.0	92	75	125			
Copper			4280	mg/kg	1.1		75	125			A
Lead			590	mg/kg	3.2		75	125			A
Zinc			1720	mg/kg	1.0		75	125			A
Lab ID:	**H14120373-029AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C			01/12/15 18:38	
Arsenic			538	mg/kg	1.8		75	125	0.4	20	A
Cadmium			27.4	mg/kg	1.0	91	75	125	0.8	20	
Copper			4200	mg/kg	1.1		75	125	1.8	20	A
Lead			595	mg/kg	3.2		75	125	0.9	20	A
Zinc			1720	mg/kg	1.0		75	125	0.2	20	A
Lab ID:	**H14120376-024APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C			01/12/15 19:23	
Arsenic			1090	mg/kg	1.9	96	75	125			
Cadmium			123	mg/kg	1.0	88	75	125			
Copper			5200	mg/kg	1.1		75	125			A
Lead			755	mg/kg	3.3	88	75	125			
Zinc			3080	mg/kg	1.0		75	125			A
Lab ID:	**H14120376-024AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150112C			01/12/15 19:27	
Arsenic			922	mg/kg	1.8		75	125			A
Cadmium			33.0	mg/kg	1.0	93	75	125			
Copper			4940	mg/kg	1.1		75	125			A
Lead			596	mg/kg	3.2		75	125			A
Zinc			2990	mg/kg	1.0		75	125			A
Lab ID:	**H14120376-024AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C			01/12/15 19:30	
Arsenic			911	mg/kg	1.8		75	125	1.2	20	A
Cadmium			32.4	mg/kg	1.0	91	75	125	1.8	20	
Copper			4910	mg/kg	1.1		75	125	0.6	20	A
Lead			582	mg/kg	3.2		75	125	2.3	20	A
Zinc			2920	mg/kg	1.0		75	125	2.2	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27655	
Lab ID:	**MB-27655**	5	Method Blank				Run: ICP2-HE_150114A			01/14/15 23:08	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27655**	5	Laboratory Fortified Blank				Run: ICP2-HE_150114A			01/14/15 23:12	
Arsenic			44.8	mg/kg	1.0	90	80	120			
Cadmium			22.0	mg/kg	1.0	88	80	120			
Copper			47.9	mg/kg	1.0	96	80	120			
Lead			44.0	mg/kg	1.0	88	80	120			
Zinc			46.0	mg/kg	1.0	91	80	120			
Lab ID:	**LCS-27655**	5	Laboratory Control Sample				Run: ICP2-HE_150114A			01/14/15 23:15	
Arsenic			263	mg/kg	1.8	77	72.3	106.4			
Cadmium			110	mg/kg	1.0	80	73	105.1			
Copper			245	mg/kg	1.1	88	77.5	109.6			
Lead			160	mg/kg	3.1	85	75.9	108.6			
Zinc			177	mg/kg	1.0	83	74.2	109.9			
Method:	**SW6010B**									Batch: 27655	
Lab ID:	**H14120376-043AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150115A			01/15/15 19:20	
Arsenic			433	mg/kg	1.9		75	125			A
Cadmium			34.8	mg/kg	1.0	90	75	125			
Copper			3550	mg/kg	1.2		75	125			A
Lead			475	mg/kg	3.4		75	125			A
Zinc			2580	mg/kg	1.0		75	125			A
Lab ID:	**H14120376-043AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150115A			01/15/15 19:23	
Arsenic			404	mg/kg	1.8		75	125	6.8	20	A
Cadmium			33.0	mg/kg	1.0	87	75	125	5.1	20	
Copper			3370	mg/kg	1.1		75	125	5.1	20	A
Lead			454	mg/kg	3.2		75	125	4.5	20	A
Zinc			2420	mg/kg	1.0		75	125	6.5	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150108A		
Lab ID:	**ICV STD**	4	Initial Calibration Verification Standard							01/08/15 18:33	
Arsenic			0.0594	mg/L	0.0010	99	90	110			
Cadmium			0.0306	mg/L	0.0010	102	90	110			
Copper			0.0604	mg/L	0.0010	101	90	110			
Lead			0.0581	mg/L	0.0010	97	90	110			
Lab ID:	**ICSA**	4	Interference Check Sample A							01/08/15 18:38	
Arsenic			3.70E-05	mg/L	0.0010						
Cadmium			0.000604	mg/L	0.0010						
Copper			0.000211	mg/L	0.0010						
Lead			0.000212	mg/L	0.0010						
Lab ID:	**ICSAB**	4	Interference Check Sample AB							01/08/15 18:42	
Arsenic			0.0101	mg/L	0.0010	101	70	130			
Cadmium			0.00998	mg/L	0.0010	100	70	130			
Copper			0.0204	mg/L	0.0010	102	70	130			
Lead			0.000214	mg/L	0.0010		0	0			
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard							01/08/15 18:51	
Arsenic			0.0496	mg/L	0.0010	99	90	110			
Cadmium			0.0501	mg/L	0.0010	100	90	110			
Copper			0.0498	mg/L	0.0010	100	90	110			
Lead			0.0493	mg/L	0.0010	99	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank							01/08/15 19:00	
Arsenic			-1.91E-05	mg/L	0.0010						
Cadmium			3.10E-06	mg/L	0.0010						
Copper			9.71E-05	mg/L	0.0010						
Lead			3.00E-07	mg/L	0.0010						
Method:	**SW6020**										Batch: 27539
Lab ID:	**MB-27539**	3	Method Blank				Run: ICPMS204-B_150108A			01/08/15 23:14	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27539**	3	Laboratory Control Sample				Run: ICPMS204-B_150108A			01/08/15 23:19	
Arsenic			317	mg/kg	1.0	92	72.3	106.4			
Cadmium			129	mg/kg	1.0	94	73	105.1			
Lead			194	mg/kg	1.0	104	75.9	108.6			
Lab ID:	**LFB-27539**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150108A			01/08/15 23:23	
Arsenic			49.4	mg/kg	1.0	99	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27539
Lab ID:	**H14120376-009AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150108A			01/09/15 01:44	
Arsenic			50.5	mg/kg	1.0	93	75	125			
Cadmium			23.6	mg/kg	1.0	93	75	125			
Lead			52.3	mg/kg	1.0	95	75	125			
Lab ID:	**H14120376-009AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150108A			01/09/15 01:49	
Arsenic			51.5	mg/kg	1.0	95	75	125	2.0	20	
Cadmium			24.3	mg/kg	1.0	96	75	125	3.0	20	
Lead			53.8	mg/kg	1.0	98	75	125	2.9	20	
Method:	**SW6020**										Batch: 27540
Lab ID:	**MB-27540**		Method Blank				Run: ICPMS204-B_150108A			01/09/15 02:07	
Arsenic			ND	mg/kg	0.3						
Lab ID:	**LCS-27540**		Laboratory Control Sample				Run: ICPMS204-B_150108A			01/09/15 02:11	
Arsenic			284	mg/kg	1.0	83	72.3	106.4			
Lab ID:	**LFB-27540**		Laboratory Fortified Blank				Run: ICPMS204-B_150108A			01/09/15 02:16	
Arsenic			49.3	mg/kg	1.0	99	80	120			
Lab ID:	**H14120376-028AMS**		Sample Matrix Spike				Run: ICPMS204-B_150108A			01/09/15 04:23	
Arsenic			58.4	mg/kg	1.0	74	75	125			S
Lab ID:	**H14120376-028AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS204-B_150108A			01/09/15 04:28	
Arsenic			58.6	mg/kg	1.0	74	75	125	0.3	20	S

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150112B		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							01/12/15 16:56	
Arsenic			0.0584	mg/L	0.0010	97	90	110			
Lead			0.0566	mg/L	0.0010	94	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							01/12/15 17:01	
Arsenic			4.20E-05	mg/L	0.0010						
Lead			0.000204	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							01/12/15 17:05	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Lead			0.000203	mg/L	0.0010		0	0			
Method:	**SW6020**										Batch: 27539
Lab ID:	**MB-27539**	3	Method Blank				Run: ICPMS204-B_150112B			01/12/15 21:00	
Arsenic			1	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			0.8	mg/kg	0.2						
Lab ID:	**LCS-27539**	3	Laboratory Control Sample				Run: ICPMS204-B_150112B			01/12/15 21:04	
Arsenic			309	mg/kg	1.0	90	72.3	106.4			
Cadmium			126	mg/kg	1.0	92	73	105.1			
Lead			186	mg/kg	1.0	99	75.9	108.6			
Lab ID:	**LFB-27539**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150112B			01/12/15 21:09	
Arsenic			49.6	mg/kg	1.0	97	80	120			
Cadmium			25.4	mg/kg	1.0	102	80	120			
Lead			48.6	mg/kg	1.0	96	80	120			
Method:	**SW6020**										Batch: 27541
Lab ID:	**MB-27541**	4	Method Blank				Run: ICPMS204-B_150112B			01/12/15 22:25	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27541**	4	Laboratory Control Sample				Run: ICPMS204-B_150112B			01/12/15 22:30	
Arsenic			311	mg/kg	1.0	91	72.3	106.4			
Cadmium			127	mg/kg	1.0	93	73	105.1			
Copper			276	mg/kg	1.0	99	77.5	109.6			
Lead			186	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-27541**	4	Laboratory Fortified Blank				Run: ICPMS204-B_150112B			01/12/15 22:35	
Arsenic			48.3	mg/kg	1.0	97	80	120			
Cadmium			25.3	mg/kg	1.0	101	80	120			
Copper			50.9	mg/kg	1.0	102	80	120			
Lead			47.2	mg/kg	1.0	94	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/22/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120376

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 27541	
Lab ID:	**H14120376-046APDS**	4	Post Digestion/Distillation Spike				Run: ICPMS204-B_150112B			01/13/15 00:28	
Arsenic			2590	mg/kg	1.0	98	75	125			
Cadmium			1190	mg/kg	1.0	95	75	125			
Copper			3680	mg/kg	1.0	91	75	125			
Lead			2500	mg/kg	1.0	96	75	125			
Lab ID:	**H14120376-046AMS**	4	Sample Matrix Spike				Run: ICPMS204-B_150112B			01/13/15 00:32	
Arsenic			201	mg/kg	1.0	104	75	125			
Cadmium			26.7	mg/kg	1.0	97	75	125			
Copper			1430	mg/kg	1.0		75	125			A
Lead			157	mg/kg	1.0	101	75	125			
Lab ID:	**H14120376-046AMSD**	4	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150112B			01/13/15 00:36	
Arsenic			209	mg/kg	1.0	121	75	125	4.3	20	
Cadmium			27.7	mg/kg	1.0	101	75	125	3.8	20	
Copper			1490	mg/kg	1.0		75	125	4.2	20	A
Lead			164	mg/kg	1.0	116	75	125	4.7	20	
Method:	**SW6020**									Batch: 27542	
Lab ID:	**MB-27542**	2	Method Blank				Run: ICPMS204-B_150112B			01/13/15 00:54	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27542**	2	Laboratory Control Sample				Run: ICPMS204-B_150112B			01/13/15 00:59	
Arsenic			310	mg/kg	1.0	90	72.3	106.4			
Lead			191	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27542**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150112B			01/13/15 01:04	
Arsenic			50.0	mg/kg	1.0	100	80	120			
Lead			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**H14120376-053APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150112B			01/13/15 02:03	
Arsenic			2480	mg/kg	1.0	97	75	125			
Lead			2470	mg/kg	1.0	97	75	125			
Lab ID:	**H14120376-053AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150112B			01/13/15 02:07	
Arsenic			108	mg/kg	1.0	98	75	125			
Lead			97.9	mg/kg	1.0	98	75	125			
Lab ID:	**H14120376-053AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150112B			01/13/15 02:11	
Arsenic			105	mg/kg	1.0	92	75	125	2.9	20	
Lead			93.1	mg/kg	1.0	88	75	125	4.9	20	
Method:	**SW6020**									Batch: 27540	
Lab ID:	**H14120376-028APDS**		Post Digestion/Distillation Spike				Run: ICPMS204-B_150122A			01/21/15 20:42	
Arsenic			2370	mg/kg	1.0	94	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14120376

Login completed by: Austin H. Nearpass
Date Received: 12/18/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 12/29/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	comments °C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 on wet ice at 3.9 degrees C. Cooler 2 on wet ice at 2.2 degrees C. Cooler 3 on wet ice at 5.4 degrees C. The temp from cooler 1 does not match because these samples were found in another "Cooler 1" at 2.7 degrees C. The login prep checklist correctly states correct coolers and temps.
Time smeared on bag "3-235-1824D" used COC at login.
Time on bag 2-236-2430D states 1328, COC states 1327. Used COC at login.
Time on bag 2-276s-1824 states 815, COC states 814. Used COC at login. An 12/22/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-208-1824 C3	1243	12/17/14	Soil	A	B		1
3-208-2430	1242	12/17/14	Soil	A	B		1
3-208-3036	1241	12/17/14	Soil	A	B		1
3-222-1824	1305	12/17/14	Soil	A	B		1
3-222-2430	1304	12/17/14	Soil	A	B		1
3-222-3036	1303	12/17/14	Soil	A	B		1
3-235-1824	1544	12/17/14	Soil	A	B		1
3-235-1824d	1545	12/17/14	Soil	A	B		1
3-235-2430	1543	12/17/14	Soil	A	B		1
3-235-3036	1542	12/17/14	Soil	A	B		1
3-236-1824	1330	12/17/14	Soil	A	B		1
3-236-2430	1329	12/17/14	Soil	A	B		1
3-236-2430d	1329	12/17/14	Soil	A	B		1
3-236-3036	1327	12/17/14	Soil	A	B		1
3-256-0612	1606	12/17/14	Soil	A	B		1
3-256-1218	1605	12/17/14	Soil	A	B		1
3-256-1824	1604	12/17/14	Soil	A	B		1
3-257-2430	1408	12/17/14	Soil	A	B		1
3-257-3036	1407	12/17/14	Soil	A	B		1
3-257-3642	1406	12/17/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

An ~~H14120~~ H14120376

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/18/14 1655	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature]	C1=3.9 C2=2.2 7 TB on ice hmd C3=5.4 12/18/14 16:55

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-277-1218 C3	1635	12/17/14	Soil	A	B		1
3-277-1824	1634	12/17/14	Soil	A	B		1
3-277-2430	1633	12/17/14	Soil	A	B		1
3-278-1824	1430	12/17/14	Soil	A	B		1
3-278-2430	1429	12/17/14	Soil	A	B		1
3-278-3036	1428	12/17/14	Soil	A	B		1
3-295-2430	1453	12/17/14	Soil	A	B		1
3-295-3036	1452	12/17/14	Soil	A	B		1
3-295-3642	1451	12/17/14	Soil	A	B		1
3-335-0006	1149	12/17/14	Soil	A	B		1
3-335-0612	1148	12/17/14	Soil	A	B		1
3-348e-1218	850	12/17/14	Soil	A	B		1
3-348e-1824	849	12/17/14	Soil	A	B		1
3-348e-2430	848	12/17/14	Soil	A	B		1
3-348e2-0006	1023	12/17/14	Soil	A	B		1
3-348e2-0612	1022	12/17/14	Soil	A	B		1
3-360e-0612	836	12/17/14	Soil	A	B		1
3-360e-1218	835	12/17/14	Soil	A	B		1
3-360e-1824	834	12/17/14	Soil	A	B		1
3-376e-1824	913	12/17/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H14120376

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/18/14 1655	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature]	C1 = 3.9 > TB on ice C2 = 2.2 C3 = 5.4 TBonice 12/18/14 16:55 hand

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-376e-2430 C3	912	12/17/14	Soil	A	B		1
3-376e-3036	911	12/17/14	Soil	A	B		1
3-376e2-0006 C1	1053	12/17/14	Soil	A	B		1
3-376e2-0612	1057	12/17/14	Soil	A	B		1
3-376s-1218	816	12/17/14	Soil	A	B		1
3-376s-1824	814	12/17/14	Soil	A	B		1
3-376s-1824d	814	12/17/14	Soil	A	B		1
3-376s-2430	813	12/17/14	Soil	A	B		1
3-376se-1218	951	12/17/14	Soil	A	B		1
3-376se-1824	950	12/17/14	Soil	A	B		1
3-376se-2430	1013	12/17/14	Soil	A	B		1
3-376se2-0006 C3	1117	12/17/14	Soil	A	B		1
3-376se2-0612	1116	12/17/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H141203 76

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/18/14 1655	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1=3.9 C2=2.2 C3=5.4	TB on ice hand 12/18/14 16:55

COC Blank.xls

ANALYTICAL SUMMARY REPORT

January 29, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120375

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 45 samples for MT DEQ-Federal Superfund on 12/18/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120375-001	3-392-3036	12/15/14 8:22	12/18/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120375-002	3-392-3642	12/15/14 8:21	12/18/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120375-003	3-392-4248	12/15/14 8:20	12/18/14	Soil	Same As Above
H14120375-004	3-367-1824	12/15/14 15:14	12/18/14	Soil	Same As Above
H14120375-005	3-367-2430	12/15/14 15:13	12/18/14	Soil	Same As Above
H14120375-006	3-367-3036	12/15/14 15:12	12/18/14	Soil	Same As Above
H14120375-007	3-376-1824	12/15/14 14:14	12/18/14	Soil	Same As Above
H14120375-008	3-376-2430	12/15/14 14:13	12/18/14	Soil	Same As Above
H14120375-009	3-376-3036	12/15/14 14:12	12/18/14	Soil	Same As Above
H14120375-010	3-378-1218	12/15/14 14:46	12/18/14	Soil	Same As Above
H14120375-011	3-378-1824	12/15/14 14:44	12/18/14	Soil	Same As Above
H14120375-012	3-378-1824D	12/15/14 14:45	12/18/14	Soil	Same As Above
H14120375-013	3-383-1218	12/15/14 13:55	12/18/14	Soil	Same As Above
H14120375-014	3-383-1824	12/15/14 13:54	12/18/14	Soil	Same As Above
H14120375-015	3-383-2430	12/15/14 13:53	12/18/14	Soil	Same As Above
H14120375-016	3-385-1218D	12/15/14 13:36	12/18/14	Soil	Same As Above
H14120375-017	3-385-1824	12/15/14 13:34	12/18/14	Soil	Same As Above
H14120375-018	3-385-2430	12/15/14 13:33	12/18/14	Soil	Same As Above
H14120375-019	3-386-1218	12/15/14 13:16	12/18/14	Soil	Same As Above
H14120375-020	3-386-1824	12/15/14 13:14	12/18/14	Soil	Same As Above
H14120375-021	3-386-1824D	12/15/14 13:15	12/18/14	Soil	Same As Above
H14120375-022	3-391-1824	12/15/14 9:14	12/18/14	Soil	Same As Above
H14120375-023	3-391-2430	12/15/14 9:13	12/18/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120375-024	3-391-3036	12/15/14 9:12	12/18/14	Soil	Same As Above
H14120375-025	3-391E-0612	12/15/14 10:47	12/18/14	Soil	Same As Above
H14120375-026	3-391E-1218	12/15/14 10:46	12/18/14	Soil	Same As Above
H14120375-027	3-391E-1824	12/15/14 10:45	12/18/14	Soil	Same As Above
H14120375-028	3-391E2-2430	12/15/14 12:38	12/18/14	Soil	Same As Above
H14120375-029	3-391E2-3036	12/15/14 12:37	12/18/14	Soil	Same As Above
H14120375-030	3-391E2-3642	12/15/14 12:36	12/18/14	Soil	Same As Above
H14120375-031	3-396E-1824	12/15/14 9:30	12/18/14	Soil	Same As Above
H14120375-032	3-396E-2430	12/15/14 9:47	12/18/14	Soil	Same As Above
H14120375-033	3-396E-3036	12/15/14 9:46	12/18/14	Soil	Same As Above
H14120375-034	3-396E2-3036	12/15/14 10:22	12/18/14	Soil	Same As Above
H14120375-035	3-396E2-3642	12/15/14 10:21	12/18/14	Soil	Same As Above
H14120375-036	3-396E2-4248	12/15/14 10:20	12/18/14	Soil	Same As Above
H14120375-037	3-401-0006	12/15/14 11:18	12/18/14	Soil	Same As Above
H14120375-038	3-401-0612	12/15/14 11:17	12/18/14	Soil	Same As Above
H14120375-039	3-407-6066	12/15/14 15:55	12/18/14	Soil	Same As Above
H14120375-040	3-407-6672	12/15/14 15:55	12/18/14	Soil	Same As Above
H14120375-041	3-408-2430	12/15/14 16:14	12/18/14	Soil	Same As Above
H14120375-042	3-408-3036	12/15/14 16:13	12/18/14	Soil	Same As Above
H14120375-043	3-408-3642	12/15/14 16:12	12/18/14	Soil	Same As Above
H14120375-044	3-385-1218	12/15/14 13:35	12/18/14	Soil	Same As Above
H14120375-045	3-386-2430	12/15/14 13:13	12/18/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120375

Report Date: 01/29/15
Date Received: 12/18/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120375-001	3-392-3036	0	0	7.2	125	2	1590	214	869
H14120375-002	3-392-3642	0	0	7.2	12	2	103	17	729
H14120375-003	3-392-4248	0	0	7.7	8	< 1	40	9	1800
H14120375-004	3-367-1824	0	0	7.4	152	2	1160	125	697
H14120375-005	3-367-2430	0	0	7.1	17	< 1	93	24	107
H14120375-006	3-367-3036	0	0	7.1	15	< 1	68	19	78
H14120375-007	3-376-1824	0	0	7.3	2200	23	15300	1410	4730
H14120375-008	3-376-2430	0	0	7.5	623	6	4080	524	1660
H14120375-009	3-376-3036	0	0	7.5	28	< 1	189	29	122
H14120375-010	3-378-1218	0	0	7.3	938	19	24400	637	4760
H14120375-011	3-378-1824	0	0	7.2	38	5	210	14	1570
H14120375-012	3-378-1824D	0	0	7.4	42	4	334	14	1320
H14120375-013	3-383-1218	0	0	7.3	3000	25	21500	829	5000
H14120375-014	3-383-1824	0	0	7.6	61	< 1	61	20	105
H14120375-015	3-383-2430	0	0	7.6	16	< 1	51	16	74
H14120375-016	3-385-1218D	0	0	7.4	2610	21	20300	1350	4440
H14120375-017	3-385-1824	0	0	7.7	22	< 1	76	20	159
H14120375-018	3-385-2430	0	0	7.7	13	< 1	52	17	96
H14120375-019	3-386-1218	0	0	7.5	290	15	1700	162	4150
H14120375-020	3-386-1824	0	0	7.3	9	< 1	52	17	334
H14120375-021	3-386-1824D	0	0	7.2	22	< 1	204	27	208
H14120375-022	3-391-1824	0	0	7.5	37	< 1	91	17	942
H14120375-023	3-391-2430	0	0	7.4	12	< 1	55	20	92
H14120375-024	3-391-3036	0	0	7.3	13	< 1	87	20	92
H14120375-025	3-391E-0612	0	0	7.3	2960	25	22500	799	5010
H14120375-026	3-391E-1218	0	0	7.5	68	< 1	328	73	284
H14120375-027	3-391E-1824	0	0	7.5	47	< 1	107	18	110
H14120375-028	3-391E2-2430	0	0	7.4	1810	15	12300	925	3590
H14120375-029	3-391E2-3036	0	0	7.5	48	< 1	89	19	114
H14120375-030	3-391E2-3642	0	0	7.8	8	< 1	24	12	57
H14120375-031	3-396E-1824	0	0	7.2	126	4	719	67	1250
H14120375-032	3-396E-2430	0	0	7.4	26	< 1	80	15	311
H14120375-033	3-396E-3036	0	0	7.4	26	< 1	122	20	205
H14120375-034	3-396E2-3036	0	0	6.8	230	2	3720	195	805
H14120375-035	3-396E2-3642	0	0	6.8	67	3	184	17	1060
H14120375-036	3-396E2-4248	0	0	7.6	25	1	115	17	485
H14120375-037	3-401-0006	0	0	7.3	116	2	428	100	452
H14120375-038	3-401-0612	0	0	7.3	181	5	584	170	655
H14120375-039	3-407-6066	0	0	6.2	34	2	5350	16	441
H14120375-040	3-407-6672	0	0	6.1	35	3	616	14	777

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120375

Report Date: 01/29/15
Date Received: 12/18/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120375-041	3-408-2430	0	0	6.1	2530	11	18400	506	3390
H14120375-042	3-408-3036	0	0	5.3	36	< 1	254	23	1560
H14120375-043	3-408-3642	0	0	6.4	12	< 1	78	19	113
H14120375-044	3-385-1218	0	0	7.3	2260	17	20600	1270	4100
H14120375-045	3-386-2430	0	0	7.0	17	< 1	101	17	92

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150112A		
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 09:22
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 09:43
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/07/15 10:38
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/07/15 11:28
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 11:29
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 12:14
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150108_1		Continuing Calibration Verification Standard								01/09/15 08:36
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150108_1		Continuing Calibration Verification Standard								01/09/15 08:37
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150108_1		Initial Calibration Verification Standard								01/09/15 08:38
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150108_1		Continuing Calibration Verification Standard								01/09/15 09:04
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150108_1		Continuing Calibration Verification Standard								01/09/15 09:31
pH, sat. paste		6.97	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150108_1		Continuing Calibration Verification Standard								01/09/15 09:32
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150108_1		Initial Calibration Verification Standard								01/09/15 09:33
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150108_1		Continuing Calibration Verification Standard								01/09/15 09:58
pH, sat. paste		6.97	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150108_1		Continuing Calibration Verification Standard								01/09/15 10:08
pH, sat. paste		6.92	s.u.	0.10	99	98.6	101.4			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 08:01
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 08:33
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27624
Lab ID: LCS-27624		Laboratory Control Sample				Run: SOIL PH METER_150112A				01/09/15 08:47
pH, sat. paste		7.60	s.u.	0.10	102	95	105			
Lab ID: H14120375-010ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/09/15 09:03
pH, sat. paste		7.30	s.u.	0.10				0.1	30	
Lab ID: H14120375-020ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/09/15 09:24
pH, sat. paste		7.30	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27625
Lab ID: LCS-27625		Laboratory Control Sample				Run: SOIL PH METER_150112A				01/09/15 09:36
pH, sat. paste		7.61	s.u.	0.10	102	95	105			
Lab ID: H14120375-030ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/09/15 09:58
pH, sat. paste		7.81	s.u.	0.10				0.0	30	
Lab ID: H14120375-040ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/09/15 10:08
pH, sat. paste		6.16	s.u.	0.10				0.7	30	
Lab ID: H14120375-045ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/09/15 10:13
pH, sat. paste		7.06	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150108A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/08/15 14:57
Arsenic			0.777	mg/L	0.0085	97	90	110			
Cadmium			0.382	mg/L	0.0010	95	90	110			
Copper			0.792	mg/L	0.010	99	90	110			
Lead			0.746	mg/L	0.010	93	90	110			
Zinc			0.782	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/08/15 15:12
Arsenic			0.00600	mg/L	0.0085		0	0			
Cadmium			-0.000950	mg/L	0.0010		0	0			
Copper			-0.00438	mg/L	0.010		0	0			
Lead			-0.0353	mg/L	0.010		0	0			
Zinc			0.000880	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/08/15 15:16
Arsenic			0.961	mg/L	0.0085	96	80	120			
Cadmium			0.877	mg/L	0.0010	88	80	120			
Copper			0.506	mg/L	0.010	101	80	120			
Lead			0.826	mg/L	0.010	83	80	120			
Zinc			0.967	mg/L	0.010	97	80	120			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/08/15 19:27
Arsenic			0.0137	mg/L	0.0085		0	0			
Cadmium			-0.000570	mg/L	0.0010		0	0			
Copper			-5.00E-05	mg/L	0.010		0	0			
Lead			-0.0125	mg/L	0.010		0	0			
Zinc			0.00363	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/08/15 19:31
Arsenic			0.957	mg/L	0.0085	96	80	120			
Cadmium			0.874	mg/L	0.0010	87	80	120			
Copper			0.491	mg/L	0.010	98	80	120			
Lead			0.885	mg/L	0.010	89	80	120			
Zinc			0.963	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/08/15 20:01
Arsenic			2.50	mg/L	0.0085	100	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/08/15 20:04
Arsenic			0.00903	mg/L	0.0085						
Cadmium			0.000980	mg/L	0.0010						
Copper			0.00236	mg/L	0.010						
Lead			0.0120	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150108A	
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/08/15 20:04	
Zinc			0.00532	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/09/15 03:04	
Arsenic			2.68	mg/L	0.0085	107	90	110			
Cadmium			2.66	mg/L	0.0010	107	90	110			
Copper			2.54	mg/L	0.010	102	90	110			
Lead			2.69	mg/L	0.010	108	90	110			
Zinc			2.67	mg/L	0.010	107	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/09/15 03:08	
Arsenic			0.00390	mg/L	0.0085						
Cadmium			0.000770	mg/L	0.0010						
Copper			-0.00440	mg/L	0.010						
Lead			0.0241	mg/L	0.010						
Zinc			0.000640	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150114A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/14/15 10:07	
Arsenic			0.784	mg/L	0.0085	98	90	110			
Cadmium			0.383	mg/L	0.0010	96	90	110			
Copper			0.781	mg/L	0.010	98	90	110			
Lead			0.743	mg/L	0.010	93	90	110			
Zinc			0.788	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/14/15 10:22	
Arsenic			0.00468	mg/L	0.0085		0	0			
Cadmium			-0.000890	mg/L	0.0010		0	0			
Copper			0.000960	mg/L	0.010		0	0			
Lead			-0.00397	mg/L	0.010		0	0			
Zinc			0.00217	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/14/15 10:26	
Arsenic			0.943	mg/L	0.0085	94	80	120			
Cadmium			0.873	mg/L	0.0010	87	80	120			
Copper			0.490	mg/L	0.010	98	80	120			
Lead			0.874	mg/L	0.010	87	80	120			
Zinc			0.959	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/14/15 23:41	
Arsenic			2.40	mg/L	0.0085	96	90	110			
Cadmium			2.39	mg/L	0.0010	96	90	110			
Copper			2.51	mg/L	0.010	101	90	110			
Lead			2.43	mg/L	0.010	97	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/14/15 23:45	
Arsenic			0.00978	mg/L	0.0085						
Cadmium			0.000880	mg/L	0.0010						
Copper			-0.00386	mg/L	0.010						
Lead			-0.00979	mg/L	0.010						
Zinc			0.00139	mg/L	0.010						
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/15/15 00:25	
Arsenic			2.37	mg/L	0.0085	95	90	110			
Cadmium			2.34	mg/L	0.0010	94	90	110			
Copper			2.45	mg/L	0.010	98	90	110			
Lead			2.32	mg/L	0.010	93	90	110			
Zinc			2.40	mg/L	0.010	96	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/15/15 00:29	
Arsenic			0.00440	mg/L	0.0085						
Cadmium			0.00121	mg/L	0.0010						
Copper			-0.00200	mg/L	0.010						
Lead			-0.000710	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150114A	
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/15/15 00:29	
Zinc			0.00159	mg/L	0.010						
Method:	**E200.7**									Analytical Run: ICP2-HE_150115A	
Lab ID:	**ICV**	4	Initial Calibration Verification Standard							01/15/15 10:26	
Arsenic			0.829	mg/L	0.0085	104	90	110			
Cadmium			0.407	mg/L	0.0010	102	90	110			
Copper			0.814	mg/L	0.010	102	90	110			
Zinc			0.834	mg/L	0.010	104	90	110			
Lab ID:	**ICSA**	4	Interference Check Sample A							01/15/15 10:41	
Arsenic			-0.00315	mg/L	0.0085		0	0			
Cadmium			0.00545	mg/L	0.0010		0	0			
Copper			-0.00237	mg/L	0.010		0	0			
Zinc			0.00222	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	4	Interference Check Sample AB							01/15/15 10:45	
Arsenic			0.962	mg/L	0.0085	96	80	120			
Cadmium			0.882	mg/L	0.0010	88	80	120			
Copper			0.509	mg/L	0.010	102	80	120			
Zinc			0.969	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard							01/15/15 18:10	
Arsenic			2.41	mg/L	0.0085	97	90	110			
Cadmium			2.43	mg/L	0.0010	97	90	110			
Copper			2.48	mg/L	0.010	99	90	110			
Zinc			2.43	mg/L	0.010	97	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank							01/15/15 18:14	
Arsenic			0.00438	mg/L	0.0085						
Cadmium			0.000520	mg/L	0.0010						
Copper			-0.000660	mg/L	0.010						
Zinc			0.000780	mg/L	0.010						
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard							01/15/15 18:54	
Arsenic			2.47	mg/L	0.0085	99	90	110			
Cadmium			2.46	mg/L	0.0010	98	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Zinc			2.47	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank							01/15/15 18:58	
Arsenic			0.00478	mg/L	0.0085						
Cadmium			0.000270	mg/L	0.0010						
Copper			-0.00364	mg/L	0.010						
Zinc			0.000200	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS204-B_150107A	
Lab ID: CCV	4	Continuing Calibration Verification Standard							01/07/15 16:40	
Arsenic		0.0497	mg/L	0.0050	99	90	110			
Cadmium		0.0495	mg/L	0.0010	99	90	110			
Copper		0.0497	mg/L	0.010	99	90	110			
Lead		0.0493	mg/L	0.010	99	90	110			
Lab ID: CCB	4	Continuing Calibration Blank							01/07/15 16:49	
Arsenic		-2.87E-05	mg/L	0.0050						
Cadmium		6.00E-07	mg/L	0.0010						
Copper		0.000108	mg/L	0.010						
Lead		-5.00E-06	mg/L	0.010						
Lab ID: CCV	4	Continuing Calibration Verification Standard							01/07/15 21:43	
Arsenic		0.0501	mg/L	0.0050	100	90	110			
Cadmium		0.0493	mg/L	0.0010	99	90	110			
Copper		0.0508	mg/L	0.010	102	90	110			
Lead		0.0492	mg/L	0.010	98	90	110			
Lab ID: CCB	4	Continuing Calibration Blank							01/07/15 21:53	
Arsenic		-1.09E-05	mg/L	0.0050						
Cadmium		-1.20E-06	mg/L	0.0010						
Copper		0.000119	mg/L	0.010						
Lead		4.00E-07	mg/L	0.010						
Method: E200.8									Analytical Run: ICPMS204-B_150108A	
Lab ID: CCV	2	Continuing Calibration Verification Standard							01/08/15 20:58	
Arsenic		0.0491	mg/L	0.0050	98	90	110			
Lead		0.0492	mg/L	0.010	98	90	110			
Lab ID: CCB	2	Continuing Calibration Blank							01/08/15 21:07	
Arsenic		-7.40E-06	mg/L	0.0050						
Lead		2.20E-06	mg/L	0.010						
Method: E200.8									Analytical Run: ICPMS204-B_150122A	
Lab ID: CCV	3	Continuing Calibration Verification Standard							01/21/15 22:04	
Arsenic		0.0499	mg/L	0.0050	100	90	110			
Cadmium		0.0493	mg/L	0.0010	99	90	110			
Lead		0.0489	mg/L	0.010	98	90	110			
Lab ID: CCB	3	Continuing Calibration Blank							01/21/15 22:13	
Arsenic		3.11E-05	mg/L	0.0050						
Cadmium		4.70E-06	mg/L	0.0010						
Lead		3.40E-06	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27537
Lab ID:	**MB-27537**	4	Method Blank				Run: ICP2-HE_150108A				01/08/15 22:53
Arsenic			0.6	mg/kg	0.4						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27537**	4	Laboratory Fortified Blank				Run: ICP2-HE_150108A				01/08/15 23:31
Arsenic			48.3	mg/kg	1.0	95	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			49.3	mg/kg	1.0	99	80	120			
Zinc			50.9	mg/kg	1.0	100	80	120			
Lab ID:	**LCS-27537**	4	Laboratory Control Sample				Run: ICP2-HE_150108A				01/08/15 23:35
Arsenic			277	mg/kg	1.8	81	72.3	106.4			
Copper			253	mg/kg	1.1	90	77.5	109.6			
Lead			181	mg/kg	3.1	97	75.9	108.6			
Zinc			187	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120375-018APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150108A				01/09/15 01:03
Arsenic			237	mg/kg	1.8	88	75	125			
Copper			276	mg/kg	1.1	87	75	125			
Lead			245	mg/kg	3.3	88	75	125			
Zinc			324	mg/kg	1.0	89	75	125			
Lab ID:	**H14120375-018AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150108A				01/09/15 01:06
Arsenic			55.6	mg/kg	1.8	90	75	125			
Copper			96.2	mg/kg	1.1	88	75	125			
Lead			62.4	mg/kg	3.2	87	75	125			
Zinc			142	mg/kg	1.0	94	75	125			
Lab ID:	**H14120375-018AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150108A				01/09/15 01:10
Arsenic			55.7	mg/kg	1.8	90	75	125	0.2	20	
Copper			94.7	mg/kg	1.1	85	75	125	1.6	20	
Lead			61.6	mg/kg	3.2	85	75	125	1.4	20	
Zinc			144	mg/kg	1.0	96	75	125	0.8	20	
Method:	**SW6010B**										Batch: 27538
Lab ID:	**MB-27538**	5	Method Blank				Run: ICP2-HE_150108A				01/09/15 01:14
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			1	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27538**	5	Laboratory Fortified Blank				Run: ICP2-HE_150108A				01/09/15 01:18
Arsenic			48.0	mg/kg	1.0	96	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27538
Lab ID:	**LFB-27538**	5	Laboratory Fortified Blank				Run: ICP2-HE_150108A				01/09/15 01:18
Copper			47.9	mg/kg	1.0	96	80	120			
Lead			49.8	mg/kg	1.0	97	80	120			
Zinc			49.3	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27538**	5	Laboratory Control Sample				Run: ICP2-HE_150108A				01/09/15 01:21
Arsenic			276	mg/kg	1.8	81	72.3	106.4			
Cadmium			117	mg/kg	1.0	86	73	105.1			
Copper			247	mg/kg	1.1	88	77.5	109.6			
Lead			179	mg/kg	3.2	95	75.9	108.6			
Zinc			189	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14120375-038APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150108A				01/09/15 02:57
Arsenic			431	mg/kg	1.8	97	75	125			
Cadmium			124	mg/kg	1.0	93	75	125			
Copper			835	mg/kg	1.1	98	75	125			
Lead			405	mg/kg	3.3	92	75	125			
Zinc			917	mg/kg	1.0	102	75	125			
Lab ID:	**H14120375-038AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150108A				01/09/15 03:01
Arsenic			224	mg/kg	1.8	86	75	125			
Cadmium			27.7	mg/kg	1.0	93	75	125			
Copper			615	mg/kg	1.1		75	125			A
Lead			214	mg/kg	3.2	88	75	125			
Zinc			684	mg/kg	1.0		75	125			A
Lab ID:	**H14120375-038AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150108A				01/09/15 03:38
Arsenic			222	mg/kg	1.8	83	75	125	0.7	20	
Cadmium			27.0	mg/kg	1.0	90	75	125	2.6	20	
Copper			616	mg/kg	1.1		75	125	0.2	20	A
Lead			204	mg/kg	3.2	67	75	125	5.0	20	S
Zinc			678	mg/kg	1.0		75	125	0.8	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27655
Lab ID:	**MB-27655**	5	Method Blank				Run: ICP2-HE_150114A				01/14/15 23:08
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27655**	5	Laboratory Fortified Blank				Run: ICP2-HE_150114A				01/14/15 23:12
Arsenic			44.8	mg/kg	1.0	90	80	120			
Cadmium			22.0	mg/kg	1.0	88	80	120			
Copper			47.9	mg/kg	1.0	96	80	120			
Lead			44.0	mg/kg	1.0	88	80	120			
Zinc			46.0	mg/kg	1.0	91	80	120			
Lab ID:	**LCS-27655**	5	Laboratory Control Sample				Run: ICP2-HE_150114A				01/14/15 23:15
Arsenic			263	mg/kg	1.8	77	72.3	106.4			
Cadmium			110	mg/kg	1.0	80	73	105.1			
Copper			245	mg/kg	1.1	88	77.5	109.6			
Lead			160	mg/kg	3.1	85	75.9	108.6			
Zinc			177	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H14120375-045APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150114A				01/14/15 23:52
Arsenic			233	mg/kg	1.8	86	75	125			
Cadmium			106	mg/kg	1.0	84	75	125			
Copper			325	mg/kg	1.1	89	75	125			
Lead			227	mg/kg	3.2	83	75	125			
Zinc			310	mg/kg	1.0	86	75	125			
Lab ID:	**H14120375-045AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150114A				01/14/15 23:56
Arsenic			59.4	mg/kg	1.8	86	75	125			
Cadmium			21.4	mg/kg	1.0	87	75	125			
Copper			152	mg/kg	1.1	103	75	125			
Lead			62.1	mg/kg	3.1	91	75	125			
Zinc			138	mg/kg	1.0	94	75	125			
Lab ID:	**H14120375-045AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150114A				01/14/15 23:59
Arsenic			58.3	mg/kg	1.8	82	75	125	1.9	20	
Cadmium			21.2	mg/kg	1.0	85	75	125	0.9	20	
Copper			156	mg/kg	1.1	108	75	125	2.4	20	
Lead			63.7	mg/kg	3.2	93	75	125	2.5	20	
Zinc			135	mg/kg	1.0	87	75	125	1.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27655
Lab ID:	**H14120376-043APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150115A				01/15/15 19:16
Arsenic			590	mg/kg	1.9	89	75	125			
Cadmium			120	mg/kg	1.0	84	75	125			
Copper			3580	mg/kg	1.1		75	125			A
Lead			619	mg/kg	3.3	82	75	125			
Zinc			2620	mg/kg	1.0		75	125			A
Lab ID:	**H14120376-043AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150115A				01/15/15 19:20
Arsenic			433	mg/kg	1.9		75	125			A
Cadmium			34.8	mg/kg	1.0	90	75	125			
Copper			3550	mg/kg	1.2		75	125			A
Lead			475	mg/kg	3.4		75	125			A
Zinc			2580	mg/kg	1.0		75	125			A
Lab ID:	**H14120376-043AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150115A				01/15/15 19:23
Arsenic			404	mg/kg	1.8		75	125	6.8	20	A
Cadmium			33.0	mg/kg	1.0	87	75	125	5.1	20	
Copper			3370	mg/kg	1.1		75	125	5.1	20	A
Lead			454	mg/kg	3.2		75	125	4.5	20	A
Zinc			2420	mg/kg	1.0		75	125	6.5	20	A
Method:	**SW6010B**										Batch: 27659
Lab ID:	**MB-27659**	4	Method Blank				Run: ICP2-HE_150115A				01/15/15 18:32
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			2	mg/kg	0.2						
Zinc			0.9	mg/kg	0.09						
Lab ID:	**LFB-27659**	4	Laboratory Fortified Blank				Run: ICP2-HE_150115A				01/15/15 18:36
Arsenic			46.9	mg/kg	1.0	93	80	120			
Cadmium			23.1	mg/kg	1.0	93	80	120			
Copper			49.6	mg/kg	1.0	96	80	120			
Zinc			48.3	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27659**	4	Laboratory Control Sample				Run: ICP2-HE_150115A				01/15/15 18:40
Arsenic			273	mg/kg	1.7	79	72.3	106.4			
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			256	mg/kg	1.1	91	77.5	109.6			
Zinc			186	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120375-039APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_150115A				01/15/15 18:51
Arsenic			272	mg/kg	1.9	90	75	125			
Cadmium			118	mg/kg	1.0	87	75	125			
Copper			5650	mg/kg	1.2		75	125			A
Zinc			677	mg/kg	1.0	89	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6010B**										Batch: 27659
Lab ID: **H14120375-039AMS**	4	Sample Matrix Spike				Run: ICP2-HE_150115A			01/15/15 19:02	
Arsenic		83.4	mg/kg	1.9	95	75	125			
Cadmium		25.2	mg/kg	1.0	91	75	125			
Copper		5380	mg/kg	1.1		75	125			A
Zinc		490	mg/kg	1.0		75	125			A
Lab ID: **H14120375-039AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_150115A			01/15/15 19:05	
Arsenic		76.2	mg/kg	1.9	81	75	125	9.1	20	
Cadmium		24.6	mg/kg	1.0	89	75	125	2.5	20	
Copper		5320	mg/kg	1.1		75	125	1.2	20	A
Zinc		482	mg/kg	1.0		75	125	1.8	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150107A		
Lab ID:	**ICV STD**	4	Initial Calibration Verification Standard							01/07/15 10:55	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0308	mg/L	0.0010	103	90	110			
Copper			0.0604	mg/L	0.0010	101	90	110			
Lead			0.0593	mg/L	0.0010	99	90	110			
Lab ID:	**ICSA**	4	Interference Check Sample A							01/07/15 11:00	
Arsenic			7.50E-05	mg/L	0.0010						
Cadmium			0.000585	mg/L	0.0010						
Copper			0.000248	mg/L	0.0010						
Lead			0.000214	mg/L	0.0010						
Lab ID:	**ICSAB**	4	Interference Check Sample AB							01/07/15 11:04	
Arsenic			0.0103	mg/L	0.0010	103	70	130			
Cadmium			0.0100	mg/L	0.0010	100	70	130			
Copper			0.0205	mg/L	0.0010	103	70	130			
Lead			0.000212	mg/L	0.0010		0	0			
Method:	**SW6020**									Batch: 27537	
Lab ID:	**MB-27537**	3	Method Blank				Run: ICPMS204-B_150107A			01/07/15 16:26	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27537**	3	Laboratory Control Sample				Run: ICPMS204-B_150107A			01/07/15 16:31	
Arsenic			320	mg/kg	1.0	93	72.3	106.4			
Cadmium			126	mg/kg	1.0	92	73	105.1			
Lead			191	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27537**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150107A			01/07/15 16:35	
Arsenic			50.0	mg/kg	1.0	100	80	120			
Cadmium			25.6	mg/kg	1.0	102	80	120			
Lead			49.6	mg/kg	1.0	99	80	120			
Lab ID:	**H14120375-018AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150107A			01/07/15 18:37	
Arsenic			73.5	mg/kg	1.0	123	75	125			
Cadmium			23.6	mg/kg	1.0	93	75	125			
Lead			71.1	mg/kg	1.0	109	75	125			
Lab ID:	**H14120375-018AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150107A			01/07/15 18:42	
Arsenic			59.1	mg/kg	1.0	94	75	125	22	20	R
Cadmium			23.2	mg/kg	1.0	92	75	125	1.6	20	
Lead			62.7	mg/kg	1.0	92	75	125	13	20	
Method:	**SW6020**									Batch: 27538	
Lab ID:	**MB-27538**	2	Method Blank				Run: ICPMS204-B_150107A			01/07/15 20:53	
Arsenic			ND	mg/kg	0.3						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27538
Lab ID:	**MB-27538**	2	Method Blank				Run: ICPMS204-B_150107A				01/07/15 20:53
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27538**	2	Laboratory Control Sample				Run: ICPMS204-B_150107A				01/07/15 20:58
Arsenic			307	mg/kg	1.0	90	72.3	106.4			
Lead			187	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-27538**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150107A				01/07/15 21:03
Arsenic			48.1	mg/kg	1.0	96	80	120			
Lead			47.8	mg/kg	1.0	96	80	120			
Method:	**SW6020**										Analytical Run: ICPMS204-B_150108A
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard								01/08/15 18:33
Arsenic			0.0594	mg/L	0.0010	99	90	110			
Lead			0.0581	mg/L	0.0010	97	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A								01/08/15 18:38
Arsenic			3.70E-05	mg/L	0.0010						
Lead			0.000212	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB								01/08/15 18:42
Arsenic			0.0101	mg/L	0.0010	101	70	130			
Lead			0.000214	mg/L	0.0010		0	0			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard								01/08/15 18:51
Arsenic			0.0496	mg/L	0.0010	99	90	110			
Lead			0.0493	mg/L	0.0010	99	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank								01/08/15 19:00
Arsenic			-1.91E-05	mg/L	0.0010						
Lead			3.00E-07	mg/L	0.0010						
Method:	**SW6020**										Batch: 27538
Lab ID:	**MB-27538**	2	Method Blank				Run: ICPMS204-B_150108A				01/08/15 19:05
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**H14120375-038AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150108A				01/08/15 20:31
Arsenic			220	mg/kg	1.0	84	75	125			
Lead			198	mg/kg	1.0	88	75	125			
Lab ID:	**H14120375-038AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150108A				01/08/15 20:35
Arsenic			225	mg/kg	1.0	94	75	125	2.3	20	
Lead			198	mg/kg	1.0	89	75	125	0.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 27655
Lab ID: H14120375-045AMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150121C			01/22/15 19:40	
Arsenic		61.4	mg/kg	1.0	97	75	125	2.5	20	
Cadmium		22.8	mg/kg	1.0	92	75	125	5.4	20	
Lead		62.5	mg/kg	1.0	97	75	125	6.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150122A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							01/21/15 18:13	
Arsenic			0.0577	mg/L	0.0010	96	90	110			
Cadmium			0.0300	mg/L	0.0010	100	90	110			
Lead			0.0561	mg/L	0.0010	93	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							01/21/15 18:18	
Arsenic			5.40E-05	mg/L	0.0010						
Cadmium			0.000425	mg/L	0.0010						
Lead			0.000206	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							01/21/15 18:23	
Arsenic			0.00996	mg/L	0.0010	100	70	130			
Cadmium			0.00906	mg/L	0.0010	91	70	130			
Lead			0.000200	mg/L	0.0010		0	0			
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							01/21/15 18:35	
Arsenic			0.0496	mg/L	0.0010	99	90	110			
Cadmium			0.0492	mg/L	0.0010	98	90	110			
Lead			0.0489	mg/L	0.0010	98	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							01/21/15 18:45	
Arsenic			6.90E-06	mg/L	0.0010						
Cadmium			5.60E-06	mg/L	0.0010						
Lead			-3.00E-07	mg/L	0.0010						
Method:	**SW6020**										Batch: 27655
Lab ID:	**MB-27655**	3	Method Blank				Run: ICPMS204-B_150122A			01/21/15 21:49	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27655**	3	Laboratory Control Sample				Run: ICPMS204-B_150122A			01/21/15 21:54	
Arsenic			297	mg/kg	1.0	87	72.3	106.4			
Cadmium			120	mg/kg	1.0	88	73	105.1			
Lead			176	mg/kg	1.0	94	75.9	108.6			
Lab ID:	**LFB-27655**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150122A			01/21/15 21:59	
Arsenic			46.8	mg/kg	1.0	94	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Lead			46.9	mg/kg	1.0	94	80	120			
Lab ID:	**H14120375-045AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150122A			01/21/15 22:47	
Arsenic			59.9	mg/kg	1.0	94	75	125			
Cadmium			21.6	mg/kg	1.0	87	75	125			
Lead			58.5	mg/kg	1.0	89	75	125			
Method:	**SW6020**										Batch: 27659

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/29/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120375

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 27659
Lab ID:	**MB-27659**	Method Blank				Run: ICPMS204-B_150122A				01/21/15 21:01
Lead		ND	mg/kg	0.2						
Lab ID:	**LCS-27659**	Laboratory Control Sample				Run: ICPMS204-B_150122A				01/21/15 21:06
Lead		193	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-27659**	Laboratory Fortified Blank				Run: ICPMS204-B_150122A				01/21/15 21:11
Lead		47.0	mg/kg	1.0	94	80	120			
Lab ID:	**H14120375-039AMS**	Sample Matrix Spike				Run: ICPMS204-B_150122A				01/21/15 21:34
Lead		64.7	mg/kg	1.0	94	75	125			
Lab ID:	**H14120375-039AMSD**	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150122A				01/21/15 21:39
Lead		63.6	mg/kg	1.0	92	75	125	1.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120375

Login completed by: Austin H. Nearpass

Reviewed by: BL2000\rwilliams

Reviewed Date: 12/23/2014

Date Received: 12/18/2014

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☐	No ☑	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	Comments °C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received on wet ice at 3.9 °C, cooler 2 was received on wet ice at 2.2 °C. an 12/22/14

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-392-3036 C1	822	12/15/14	Soil	A	B		1
3-392-3642	821	12/15/14	Soil	A	B		1
3-392-4248	820	12/15/14	Soil	A	B		1
3-367-1824	1514	12/15/14	Soil	A	B		1
3-367-2430	1513	12/15/14	Soil	A	B		1
3-367-3036	1512	12/15/14	Soil	A	B		1
3-376-1824	1414	12/15/14	Soil	A	B		1
3-376-2430	1413	12/15/14	Soil	A	B		1
3-376-3036	1412	12/15/14	Soil	A	B		1
3-378-1218	1446	12/15/14	Soil	A	B		1
3-378-1824	1444	12/15/14	Soil	A	B		1
3-378-1824D	1445	12/15/14	Soil	A	B		1
3-383-1218	1355	12/15/14	Soil	A	B		1
3-383-1824	1354	12/15/14	Soil	A	B		1
3-383-2430	1353	12/15/14	Soil	A	B		1
3-385-1218D	1336	12/15/14	Soil	A	B		1
3-385-1824	1334	12/15/14	Soil	A	B		1
3-385-2430	1333	12/15/14	Soil	A	B		1
3-386-1218	1316	12/15/14	Soil	A	B		1
3-386-1824	1314	12/15/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

H1412037S

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/18/14 1655

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 = 3.9
C2 = 2.2 ✓ TB once hand
Date/Time: 12/18/14 16:55

COC121514TP.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-386-1824D C1	1315	12/15/14	Soil	A	B		1
3-391-1824	914	12/15/14	Soil	A	B		1
3-391-2430	913	12/15/14	Soil	A	B		1
3-391-3036	912	12/15/14	Soil	A	B		1
3-391E-0612	1047	12/15/14	Soil	A	B		1
3-391E-1218	1046	12/15/14	Soil	A	B		1
3-391E-1824 C2	1045	12/15/14	Soil	A	B		1
3-391E2-2430	1238	12/15/14	Soil	A	B		1
3-391E2-3036	1237	12/15/14	Soil	A	B		1
3-391E2-3642	1236	12/15/14	Soil	A	B		1
3-396E-1824	930	12/15/14	Soil	A	B		1
3-396E-2430	947	12/15/14	Soil	A	B		1
3-396E-3036	946	12/15/14	Soil	A	B		1
3-396E2-3036	1022	12/15/14	Soil	A	B		1
3-396E2-3642	1021	12/15/14	Soil	A	B		1
3-396E2-4248	1020	12/15/14	Soil	A	B		1
3-401-0006	1118	12/15/14	Soil	A	B		1
3-401-0612 C1	1117	12/15/14	Soil	A	B		1
3-407-6066	1555	12/15/14	Soil	A	B		1
3-407-6672	1555	12/15/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H14120375

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/18/14 1655

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 3.9
C2 = 2.2 > TP on ice hand

Date/Time: 12/18/14 16:55

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-408-2430 C1	1614	12/15/14	Soil	A	B		1
3-408-3036	1613	12/15/14	Soil	A	B		1
3-408-3642	1612	12/15/14	Soil	A	B		1
3-385-1218	1335	12/15/14	Soil	A	B		1
3-386-2430	1313	12/15/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H14120375

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/18/14 1655	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature]	C1 = 3.9 C2 = 2.2 YTB on ice hand 12/18/14 16:55

ANALYTICAL SUMMARY REPORT

January 13, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120373

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 43 samples for MT DEQ-Federal Superfund on 12/19/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120373-001	3-233-3642	12/18/14 8:01	12/19/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120373-002	3-233-4248	12/18/14 8:00	12/19/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120373-003	3-234-1218	12/18/14 7:50	12/19/14	Soil	Same As Above
H14120373-004	3-234-1824	12/18/14 7:49	12/19/14	Soil	Same As Above
H14120373-005	3-234-2430	12/18/14 7:48	12/19/14	Soil	Same As Above
H14120373-006	3-253-3642	12/18/14 9:41	12/19/14	Soil	Same As Above
H14120373-007	3-253-4248	12/18/14 9:40	12/19/14	Soil	Same As Above
H14120373-008	3-253-4854	12/18/14 10:01	12/19/14	Soil	Same As Above
H14120373-009	3-254-2430	12/18/14 8:48	12/19/14	Soil	Same As Above
H14120373-010	3-254-3036	12/18/14 8:47	12/19/14	Soil	Same As Above
H14120373-011	3-254-3642	12/18/14 8:46	12/19/14	Soil	Same As Above
H14120373-012	3-255-1218	12/18/14 11:00	12/19/14	Soil	Same As Above
H14120373-013	3-255-1824	12/18/14 10:59	12/19/14	Soil	Same As Above
H14120373-014	3-255-2430	12/18/14 10:58	12/19/14	Soil	Same As Above
H14120373-015	3-274-4248	12/18/14 10:15	12/19/14	Soil	Same As Above
H14120373-016	3-274-5460	12/18/14 10:36	12/19/14	Soil	Same As Above
H14120373-017	3-275-3036	12/18/14 9:07	12/19/14	Soil	Same As Above
H14120373-018	3-275-3642	12/18/14 9:06	12/19/14	Soil	Same As Above
H14120373-019	3-275-4248	12/18/14 9:05	12/19/14	Soil	Same As Above
H14120373-020	3-276-3036	12/18/14 11:32	12/19/14	Soil	Same As Above
H14120373-021	3-276-3642	12/18/14 11:31	12/19/14	Soil	Same As Above
H14120373-022	3-276-4248	12/18/14 11:30	12/19/14	Soil	Same As Above
H14120373-023	3-294-4854	12/18/14 12:08	12/19/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120373-024	3-294-5460	12/18/14 12:07	12/19/14	Soil	Same As Above
H14120373-025	3-323-1824	12/18/14 14:09	12/19/14	Soil	Same As Above
H14120373-026	3-323-2430	12/18/14 14:08	12/19/14	Soil	Same As Above
H14120373-027	3-323-3036	12/18/14 14:07	12/19/14	Soil	Same As Above
H14120373-028	3-338-1218	12/18/14 14:30	12/19/14	Soil	Same As Above
H14120373-029	3-338-1218D	12/18/14 14:33	12/19/14	Soil	Same As Above
H14120373-030	3-338-1824	12/18/14 14:29	12/19/14	Soil	Same As Above
H14120373-031	3-338-2430	12/18/14 14:28	12/19/14	Soil	Same As Above
H14120373-032	3-399-0006	12/18/14 16:25	12/19/14	Soil	Same As Above
H14120373-033	3-399-0612	12/18/14 16:24	12/19/14	Soil	Same As Above
H14120373-034	3-411-0006	12/18/14 16:11	12/19/14	Soil	Same As Above
H14120373-035	3-411-0006D	12/18/14 16:12	12/19/14	Soil	Same As Above
H14120373-036	3-411-0612	12/18/14 16:13	12/19/14	Soil	Same As Above
H14120373-037	3-415-0612	12/18/14 15:51	12/19/14	Soil	Same As Above
H14120373-038	3-415-1218	12/18/14 15:50	12/19/14	Soil	Same As Above
H14120373-039	3-415-1824	12/18/14 15:49	12/19/14	Soil	Same As Above
H14120373-040	3-420-1218	12/18/14 15:27	12/19/14	Soil	Same As Above
H14120373-041	3-420-1824	12/18/14 15:26	12/19/14	Soil	Same As Above
H14120373-042	3-426-1824	12/18/14 15:06	12/19/14	Soil	Same As Above
H14120373-043	3-426-2430	12/18/14 15:05	12/19/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120373

Report Date: 01/13/15
Date Received: 12/19/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120373-001	3-233-3642	0	0	7.3	9	4	6080	25	856
H14120373-002	3-233-4248	0	0	7.4	37	9	5690	49	879
H14120373-003	3-234-1218	0	0	7.2	6	4	904	11	1250
H14120373-004	3-234-1824	0	0	7.1	6	< 1	26	13	70
H14120373-005	3-234-2430	0	0	7.2	3	< 1	17	8	90
H14120373-006	3-253-3642	0	0	7.2	5	10	5270	14	1140
H14120373-007	3-253-4248	0	0	6.9	9	1	462	15	1040
H14120373-008	3-253-4854	0	0	7.3	35	< 1	193	23	100
H14120373-009	3-254-2430	0	0	7.7	122	10	2050	687	2880
H14120373-010	3-254-3036	0	0	7.3	11	< 1	35	18	71
H14120373-011	3-254-3642	0	0	6.4	12	< 1	36	18	66
H14120373-012	3-255-1218	0	0	6.7	1930	19	23200	963	2450
H14120373-013	3-255-1824	0	0	7.6	14	3	549	12	483
H14120373-014	3-255-2430	0	0	8.0	5	< 1	187	8	269
H14120373-015	3-274-4248	0	0	7.2	3110	44	27000	800	6650
H14120373-016	3-274-5460	0	0	7.7	1100	8	9140	683	2980
H14120373-017	3-275-3036	0	0	6.8	25	1	3530	21	508
H14120373-018	3-275-3642	0	0	7.0	5	7	4810	10	597
H14120373-019	3-275-4248	0	0	8.0	5	4	2630	9	702
H14120373-020	3-276-3036	0	0	6.9	5	5	157	9	1770
H14120373-021	3-276-3642	0	0	6.6	4	< 1	24	8	934
H14120373-022	3-276-4248	0	0	6.8	6	< 1	37	11	499
H14120373-023	3-294-4854	0	0	7.4	226	19	1660	180	2820
H14120373-024	3-294-5460	0	0	7.4	199	15	1430	150	2300
H14120373-025	3-323-1824	0	0	7.5	106	12	6220	80	3860
H14120373-026	3-323-2430	0	0	7.2	17	< 1	189	17	218
H14120373-027	3-323-3036	0	0	7.1	10	< 1	57	18	96
H14120373-028	3-338-1218	0	0	7.6	430	4	2980	388	1590
H14120373-029	3-338-1218D	0	0	7.6	516	5	4320	560	1730
H14120373-030	3-338-1824	0	0	7.6	31	1	201	33	581
H14120373-031	3-338-2430	0	0	7.3	10	< 1	47	19	114
H14120373-032	3-399-0006	0	0	6.2	412	3	1600	327	1100
H14120373-033	3-399-0612	0	0	7.8	34	< 1	162	26	140
H14120373-034	3-411-0006	0	0	7.7	674	3	1880	519	1030
H14120373-035	3-411-0006D	0	0	7.4	642	3	1950	490	958
H14120373-036	3-411-0612	0	0	8.2	22	< 1	123	19	118
H14120373-037	3-415-0612	0	0	7.3	66	12	4280	48	2710
H14120373-038	3-415-1218	0	0	7.8	13	< 1	70	18	126
H14120373-039	3-415-1824	0	0	7.9	9	< 1	56	17	103
H14120373-040	3-420-1218	0	0	7.5	418	22	3940	536	5800

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120373

Report Date: 01/13/15
Date Received: 12/19/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120373-041	3-420-1824	0	0	7.6	310	12	2500	348	3220
H14120373-042	3-426-1824	0	0	7.6	68	2	177	29	6070
H14120373-043	3-426-2430	0	0	7.8	51	2	92	22	8860

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150112A	
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 09:22
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 09:43
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/07/15 10:38
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/07/15 11:28
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150107_1		Continuing Calibration Verification Standard								01/08/15 11:28
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150107_1		Continuing Calibration Verification Standard								01/08/15 11:28
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 11:29
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150107_1		Continuing Calibration Verification Standard								01/08/15 11:45
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150107_1		Continuing Calibration Verification Standard								01/08/15 12:13
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150107_1		Continuing Calibration Verification Standard								01/08/15 12:14
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 12:14
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150107_1		Continuing Calibration Verification Standard								01/08/15 12:23
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150107_1		Continuing Calibration Verification Standard								01/08/15 12:31
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150108_1		Initial Calibration Verification Standard								01/09/15 08:38
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150108_1		Initial Calibration Verification Standard								01/09/15 09:33
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 08:01
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 08:33
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27622
Lab ID: LCS-27622		Laboratory Control Sample				Run: SOIL PH METER_150112A				01/08/15 11:31
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H14120373-010ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/08/15 11:45
pH, sat. paste		7.35	s.u.	0.10				0.3	30	
Lab ID: H14120373-020ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/08/15 11:54
pH, sat. paste		6.90	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27623
Lab ID: LCS-27623		Laboratory Control Sample				Run: SOIL PH METER_150112A				01/08/15 12:15
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H14120373-030ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/08/15 12:23
pH, sat. paste		7.58	s.u.	0.10				0.1	30	
Lab ID: H14120373-040ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/08/15 12:31
pH, sat. paste		7.48	s.u.	0.10				0.3	30	
Lab ID: H14120373-043ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/08/15 12:35
pH, sat. paste		7.86	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150106A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/06/15 08:56
Arsenic			0.794	mg/L	0.0085	99	90	110			
Cadmium			0.397	mg/L	0.0010	99	90	110			
Copper			0.790	mg/L	0.010	99	90	110			
Lead			0.771	mg/L	0.010	96	90	110			
Zinc			0.812	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/06/15 09:11
Arsenic			0.00908	mg/L	0.0085		0	0			
Cadmium			0.00438	mg/L	0.0010		0	0			
Copper			-0.00272	mg/L	0.010		0	0			
Lead			-0.00928	mg/L	0.010		0	0			
Zinc			0.00339	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/06/15 09:15
Arsenic			1.03	mg/L	0.0085	103	80	120			
Cadmium			0.938	mg/L	0.0010	94	80	120			
Copper			0.513	mg/L	0.010	103	80	120			
Lead			0.935	mg/L	0.010	94	80	120			
Zinc			1.04	mg/L	0.010	104	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/06/15 09:46
Arsenic			2.63	mg/L	0.0085	105	90	110			
Cadmium			2.58	mg/L	0.0010	103	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.57	mg/L	0.010	103	90	110			
Zinc			2.60	mg/L	0.010	104	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/06/15 09:49
Arsenic			0.00734	mg/L	0.0085						
Cadmium			0.000140	mg/L	0.0010						
Copper			-0.00153	mg/L	0.010						
Lead			0.0207	mg/L	0.010						
Zinc			0.00112	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150112C	
Lab ID: ICV	5	Initial Calibration Verification Standard							01/12/15 10:44	
Arsenic		0.775	mg/L	0.0085	97	90	110			
Cadmium		0.385	mg/L	0.0010	96	90	110			
Copper		0.799	mg/L	0.010	100	90	110			
Lead		0.764	mg/L	0.010	95	90	110			
Zinc		0.786	mg/L	0.010	98	90	110			
Lab ID: ICSA	5	Interference Check Sample A							01/12/15 10:59	
Arsenic		-0.00134	mg/L	0.0085		0	0			
Cadmium		0.00448	mg/L	0.0010		0	0			
Copper		-0.00212	mg/L	0.010		0	0			
Lead		0.0385	mg/L	0.010		0	0			
Zinc		0.00295	mg/L	0.010		0	0			
Lab ID: ICSAB	5	Interference Check Sample AB							01/12/15 11:03	
Arsenic		0.985	mg/L	0.0085	99	80	120			
Cadmium		0.916	mg/L	0.0010	92	80	120			
Copper		0.501	mg/L	0.010	100	80	120			
Lead		0.911	mg/L	0.010	91	80	120			
Zinc		0.992	mg/L	0.010	99	80	120			
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/12/15 11:34	
Arsenic		2.65	mg/L	0.0085	106	90	110			
Cadmium		2.57	mg/L	0.0010	103	90	110			
Copper		2.58	mg/L	0.010	103	90	110			
Lead		2.60	mg/L	0.010	104	90	110			
Zinc		2.58	mg/L	0.010	103	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/12/15 11:37	
Arsenic		0.00100	mg/L	0.0085						
Cadmium		0.000520	mg/L	0.0010						
Copper		0.000780	mg/L	0.010						
Lead		0.0325	mg/L	0.010						
Zinc		0.00120	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27534
Lab ID:	**MB-27534**	5	Method Blank				Run: ICP2-HE_150106A				01/06/15 11:36
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27534**	5	Laboratory Fortified Blank				Run: ICP2-HE_150106A				01/06/15 11:40
Arsenic			50.1	mg/kg	1.0	100	80	120			
Cadmium			23.4	mg/kg	1.0	93	80	120			
Copper			49.4	mg/kg	1.0	98	80	120			
Lead			48.5	mg/kg	1.0	97	80	120			
Zinc			49.8	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27534**	5	Laboratory Control Sample				Run: ICP2-HE_150106A				01/06/15 11:43
Arsenic			303	mg/kg	1.8	88	72.3	106.4			
Cadmium			119	mg/kg	1.0	87	73	105.1			
Copper			260	mg/kg	1.1	93	77.5	109.6			
Lead			181	mg/kg	3.1	97	75.9	108.6			
Zinc			196	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120316-042APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150106A				01/06/15 12:13
Arsenic			281	mg/kg	1.9	96	75	125			
Cadmium			108	mg/kg	1.0	84	75	125			
Copper			399	mg/kg	1.1	93	75	125			
Lead			257	mg/kg	3.3	87	75	125			
Zinc			396	mg/kg	1.0	91	75	125			
Lab ID:	**H14120316-042AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150106A				01/06/15 12:17
Arsenic			82.1	mg/kg	1.8	94	75	125			
Cadmium			22.1	mg/kg	1.0	87	75	125			
Copper			213	mg/kg	1.1	104	75	125			
Lead			82.4	mg/kg	3.2	99	75	125			
Zinc			209	mg/kg	1.0	95	75	125			
Lab ID:	**H14120316-042AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150106A				01/06/15 12:20
Arsenic			83.7	mg/kg	1.8	98	75	125	1.9	20	
Cadmium			22.2	mg/kg	1.0	87	75	125	0.1	20	
Copper			211	mg/kg	1.1	101	75	125	0.7	20	
Lead			80.8	mg/kg	3.2	96	75	125	1.9	20	
Zinc			210	mg/kg	1.0	97	75	125	0.5	20	
Lab ID:	**H14120373-012APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150106A				01/06/15 13:45
Arsenic			2180	mg/kg	1.8		75	125			A
Cadmium			127	mg/kg	1.0	86	75	125			
Copper			23500	mg/kg	1.1		75	125			A
Lead			1180	mg/kg	3.2	86	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27534
Lab ID:	**H14120373-012APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150106A				01/06/15 13:45
Zinc			2690	mg/kg	1.0		75	125			A
Lab ID:	**H14120373-012AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150106A				01/06/15 13:49
Arsenic			1980	mg/kg	1.8		75	125			A
Cadmium			40.0	mg/kg	1.0	86	75	125			
Copper			23000	mg/kg	1.1		75	125			A
Lead			1020	mg/kg	3.1		75	125			A
Zinc			2480	mg/kg	1.0		75	125			A
Lab ID:	**H14120373-012AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150106A				01/06/15 14:00
Arsenic			2090	mg/kg	1.8		75	125	5.3	20	A
Cadmium			41.9	mg/kg	1.0	94	75	125	4.8	20	
Copper			23200	mg/kg	1.1		75	125	1.1	20	A
Lead			1080	mg/kg	3.1		75	125	5.8	20	A
Zinc			2590	mg/kg	1.0		75	125	4.7	20	A
Method:	**SW6010B**										Batch: 27535
Lab ID:	**MB-27535**	5	Method Blank				Run: ICP2-HE_150106A				01/06/15 14:03
Arsenic			ND	mg/kg	0.4						
Cadmium			0.04	mg/kg	0.01						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27535**	5	Laboratory Fortified Blank				Run: ICP2-HE_150106A				01/06/15 14:07
Arsenic			49.4	mg/kg	1.0	99	80	120			
Cadmium			24.6	mg/kg	1.0	98	80	120			
Copper			49.7	mg/kg	1.0	99	80	120			
Lead			48.8	mg/kg	1.0	98	80	120			
Zinc			50.1	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27535**	5	Laboratory Control Sample				Run: ICP2-HE_150106A				01/06/15 14:11
Arsenic			287	mg/kg	1.8	84	72.3	106.4			
Cadmium			122	mg/kg	1.0	89	73	105.1			
Copper			254	mg/kg	1.1	91	77.5	109.6			
Lead			178	mg/kg	3.2	95	75.9	108.6			
Zinc			196	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120373-030APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150106A				01/06/15 15:35
Arsenic			266	mg/kg	1.8	91	75	125			
Cadmium			110	mg/kg	1.0	85	75	125			
Copper			428	mg/kg	1.1	88	75	125			
Lead			261	mg/kg	3.3	90	75	125			
Zinc			805	mg/kg	1.0	87	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27535	
Lab ID:	**H14120373-030AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150106A			01/06/15 15:39	
Arsenic			77.1	mg/kg	1.8	92	75	125			
Cadmium			22.6	mg/kg	1.0	84	75	125			
Copper			245	mg/kg	1.1		75	125			A
Lead			75.7	mg/kg	3.2	91	75	125			
Zinc			616	mg/kg	1.0		75	125			A
Lab ID:	**H14120373-030AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150106A			01/06/15 15:42	
Arsenic			78.1	mg/kg	1.8	94	75	125	1.3	20	
Cadmium			23.0	mg/kg	1.0	86	75	125	1.8	20	
Copper			239	mg/kg	1.1		75	125	2.3	20	A
Lead			74.1	mg/kg	3.2	88	75	125	2.1	20	
Zinc			636	mg/kg	1.0		75	125	3.2	20	A
Method:	**SW6010B**									Batch: 27536	
Lab ID:	**MB-27536**	5	Method Blank				Run: ICP2-HE_150106A			01/06/15 15:46	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.03	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27536**	5	Laboratory Fortified Blank				Run: ICP2-HE_150106A			01/06/15 15:50	
Arsenic			48.5	mg/kg	1.0	97	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			
Copper			49.1	mg/kg	1.0	97	80	120			
Lead			48.1	mg/kg	1.0	96	80	120			
Zinc			48.5	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27536**	5	Laboratory Control Sample				Run: ICP2-HE_150106A			01/06/15 15:53	
Arsenic			285	mg/kg	1.8	83	72.3	106.4			
Cadmium			118	mg/kg	1.0	86	73	105.1			
Copper			259	mg/kg	1.1	92	77.5	109.6			
Lead			174	mg/kg	3.2	93	75.9	108.6			
Zinc			189	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14120373-043APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150106A			01/06/15 17:29	
Arsenic			279	mg/kg	1.8	89	75	125			
Cadmium			109	mg/kg	1.0	84	75	125			
Copper			326	mg/kg	1.1	92	75	125			
Lead			237	mg/kg	3.3	84	75	125			
Zinc			9170	mg/kg	1.0		75	125			A
Lab ID:	**H14120373-043AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150106A			01/06/15 17:33	
Arsenic			95.7	mg/kg	1.8	90	75	125			
Cadmium			22.9	mg/kg	1.0	83	75	125			
Copper			142	mg/kg	1.1	101	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B										Batch: 27536
Lab ID: H14120373-043AMS	5	Sample Matrix Spike				Run: ICP2-HE_150106A			01/06/15 17:33	
Lead		63.6	mg/kg	3.2	83	75	125			
Zinc		9060	mg/kg	1.0		75	125			A
Lab ID: H14120373-043AMSD	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150106A			01/06/15 17:37	
Arsenic		96.9	mg/kg	1.8	92	75	125	1.3	20	
Cadmium		22.7	mg/kg	1.0	82	75	125	0.7	20	
Copper		143	mg/kg	1.1	104	75	125	1.0	20	
Lead		71.2	mg/kg	3.2	98	75	125	11	20	
Zinc		9090	mg/kg	1.0		75	125	0.3	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27626
Lab ID:	**MB-27626**	5	Method Blank				Run: ICP2-HE_150112C			01/12/15 17:47	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			1	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27626**	5	Laboratory Fortified Blank				Run: ICP2-HE_150112C			01/12/15 17:51	
Arsenic			47.3	mg/kg	1.0	95	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			47.3	mg/kg	1.0	92	80	120			
Zinc			48.8	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27626**	5	Laboratory Control Sample				Run: ICP2-HE_150112C			01/12/15 17:54	
Arsenic			282	mg/kg	1.8	82	72.3	106.4			
Cadmium			120	mg/kg	1.0	88	73	105.1			
Copper			241	mg/kg	1.1	86	77.5	109.6			
Lead			178	mg/kg	3.1	95	75.9	108.6			
Zinc			195	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120316-016APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C			01/12/15 18:13	
Arsenic			373	mg/kg	1.8	87	75	125			
Cadmium			113	mg/kg	1.0	86	75	125			
Copper			713	mg/kg	1.1	85	75	125			
Lead			383	mg/kg	3.3	82	75	125			
Zinc			653	mg/kg	1.0	88	75	125			
Lab ID:	**H14120316-016AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150112C			01/12/15 18:16	
Arsenic			185	mg/kg	1.8	71	75	125			S
Cadmium			22.9	mg/kg	1.0	83	75	125			
Copper			523	mg/kg	1.1		75	125			A
Lead			204	mg/kg	3.2	63	75	125			S
Zinc			463	mg/kg	1.0		75	125			A
- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recove is due to matrix interference.											
Lab ID:	**H14120316-016AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C			01/12/15 18:20	
Arsenic			200	mg/kg	1.8	101	75	125	7.5	20	
Cadmium			23.2	mg/kg	1.0	85	75	125	1.6	20	
Copper			578	mg/kg	1.1		75	125	10.0	20	A
Lead			222	mg/kg	3.2	98	75	125	8.4	20	
Zinc			490	mg/kg	1.0		75	125	5.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150106A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							01/06/15 13:42	
Arsenic			0.0592	mg/L	0.0010	99	90	110			
Cadmium			0.0308	mg/L	0.0010	103	90	110			
Lead			0.0582	mg/L	0.0010	97	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							01/06/15 13:47	
Arsenic			7.90E-05	mg/L	0.0010						
Cadmium			0.000656	mg/L	0.0010						
Lead			0.000216	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							01/06/15 13:51	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Cadmium			0.0101	mg/L	0.0010	101	70	130			
Lead			0.000217	mg/L	0.0010		0	0			
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							01/06/15 14:00	
Arsenic			0.0499	mg/L	0.0010	100	90	110			
Cadmium			0.0489	mg/L	0.0010	98	90	110			
Lead			0.0489	mg/L	0.0010	98	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							01/06/15 14:10	
Arsenic			1.13E-05	mg/L	0.0010						
Cadmium			6.30E-06	mg/L	0.0010						
Lead			-9.00E-07	mg/L	0.0010						
Method:	**SW6020**									Batch: 27534	
Lab ID:	**MB-27534**	3	Method Blank				Run: ICPMS204-B_150106A			01/06/15 18:56	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27534**	3	Laboratory Control Sample				Run: ICPMS204-B_150106A			01/06/15 19:01	
Arsenic			310	mg/kg	1.0	90	72.3	106.4			
Cadmium			124	mg/kg	1.0	91	73	105.1			
Lead			186	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-27534**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150106A			01/06/15 19:05	
Arsenic			48.1	mg/kg	1.0	96	80	120			
Cadmium			23.9	mg/kg	1.0	96	80	120			
Lead			46.6	mg/kg	1.0	93	80	120			
Lab ID:	**H14120316-042AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150106A			01/06/15 19:41	
Arsenic			85.4	mg/kg	1.0	102	75	125			
Cadmium			23.4	mg/kg	1.0	91	75	125			
Lead			77.6	mg/kg	1.0	95	75	125			
Lab ID:	**H14120316-042AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150106A			01/06/15 19:46	
Arsenic			79.8	mg/kg	1.0	91	75	125	6.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27534
Lab ID:	**H14120316-042AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150106A			01/06/15 19:46	
Cadmium			22.8	mg/kg	1.0	88	75	125	2.8	20	
Lead			73.7	mg/kg	1.0	88	75	125	5.2	20	
Lab ID:	**H14120373-012AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150106A			01/06/15 21:21	
Arsenic			2110	mg/kg	1.0		75	125			A
Cadmium			40.4	mg/kg	1.0	87	75	125			
Lead			971	mg/kg	1.0		75	125			A
Lab ID:	**H14120373-012AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150106A			01/06/15 21:26	
Arsenic			2120	mg/kg	1.0		75	125	0.8	20	A
Cadmium			41.0	mg/kg	1.0	90	75	125	1.4	20	
Lead			980	mg/kg	1.0		75	125	0.9	20	A
Method:	**SW6020**										Batch: 27535
Lab ID:	**MB-27535**	3	Method Blank				Run: ICPMS204-B_150106A			01/06/15 21:35	
Arsenic			3	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			1	mg/kg	0.2						
Lab ID:	**LCS-27535**	3	Laboratory Control Sample				Run: ICPMS204-B_150106A			01/06/15 21:39	
Arsenic			310	mg/kg	1.0	90	72.3	106.4			
Cadmium			122	mg/kg	1.0	89	73	105.1			
Lead			183	mg/kg	1.0	97	75.9	108.6			
Lab ID:	**LFB-27535**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150106A			01/06/15 21:44	
Arsenic			50.1	mg/kg	1.0	95	80	120			
Cadmium			24.4	mg/kg	1.0	98	80	120			
Lead			47.5	mg/kg	1.0	92	80	120			
Lab ID:	**H14120373-030AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150106A			01/06/15 23:42	
Arsenic			81.9	mg/kg	1.0	93	75	125			
Cadmium			23.4	mg/kg	1.0	88	75	125			
Lead			79.2	mg/kg	1.0	92	75	125			
Lab ID:	**H14120373-030AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150106A			01/06/15 23:46	
Arsenic			80.8	mg/kg	1.0	91	75	125	1.4	20	
Cadmium			23.1	mg/kg	1.0	87	75	125	1.1	20	
Lead			79.0	mg/kg	1.0	91	75	125	0.3	20	
Method:	**SW6020**										Batch: 27536
Lab ID:	**MB-27536**	3	Method Blank				Run: ICPMS204-B_150106A			01/07/15 00:04	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27536**	3	Laboratory Control Sample				Run: ICPMS204-B_150106A			01/07/15 00:09	
Arsenic			288	mg/kg	1.0	84	72.3	106.4			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120373

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27536
Lab ID:	**LCS-27536**	3	Laboratory Control Sample				Run: ICPMS204-B_150106A			01/07/15 00:09	
Cadmium			114	mg/kg	1.0	83	73	105.1			
Lead			173	mg/kg	1.0	93	75.9	108.6			
Lab ID:	**LFB-27536**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150106A			01/07/15 00:13	
Arsenic			45.9	mg/kg	1.0	92	80	120			
Cadmium			23.1	mg/kg	1.0	93	80	120			
Lead			45.1	mg/kg	1.0	90	80	120			
Lab ID:	**H14120373-043AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150106A			01/07/15 01:44	
Arsenic			106	mg/kg	1.0	98	75	125			
Cadmium			23.6	mg/kg	1.0	89	75	125			
Lead			70.6	mg/kg	1.0	103	75	125			
Lab ID:	**H14120373-043AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150106A			01/07/15 01:49	
Arsenic			106	mg/kg	1.0	99	75	125	0.6	20	
Cadmium			24.1	mg/kg	1.0	91	75	125	2.1	20	
Lead			71.6	mg/kg	1.0	104	75	125	1.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120373

Login completed by: Austin H. Nearpass

Reviewed by: BL2000\rwilliams

Reviewed Date: 12/23/2014

Date Received: 12/19/2014

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	5.3°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-233-3642	801	12/18/14	Soil	A	B		1
3-233-4248	800	12/18/14	Soil	A	B		1
3-234-1218	750	12/18/14	Soil	A	B		1
3-234-1824	749	12/18/14	Soil	A	B		1
3-234-2430	748	12/18/14	Soil	A	B		1
3-253-3642	941	12/18/14	Soil	A	B		1
3-253-4248	940	12/18/14	Soil	A	B		1
3-253-4854	1001	12/18/14	Soil	A	B		1
3-254-2430	848	12/18/14	Soil	A	B		1
3-254-3036	847	12/18/14	Soil	A	B		1
3-254-3642	846	12/18/14	Soil	A	B		1
3-255-1218	1100	12/18/14	Soil	A	B		1
3-255-1824	1059	12/18/14	Soil	A	B		1
3-255-2430	1058	12/18/14	Soil	A	B		1
3-274-4248	1015	12/18/14	Soil	A	B		1
3-274-5460	1036	12/18/14	Soil	A	B		1
3-275-3036	907	12/18/14	Soil	A	B		1
3-275-3642	906	12/18/14	Soil	A	B		1
3-275-4248	905	12/18/14	Soil	A	B		1
3-276-3036	1132	12/18/14	Soil	A	B		1

H14120373

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 12/19/14 1135

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] hand del

Date/Time: 5.3 TB on ice
12/19/14 11:35

COC121814TP.xls

CDM Smith

Chain of Custody No.:

Company Name:
MDEQ - Remediation Division

Report Mail Address:
60 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-276-3642	1131	12/18/14	Soil	A	B		1
3-276-4248	1130	12/18/14	Soil	A	B		1
3-294-4854	1208	12/18/14	Soil	A	B		1
3-294-5460	1207	12/18/14	Soil	A	B		1
3-323-1824	1409	12/18/14	Soil	A	B		1
3-323-2430	1408	12/18/14	Soil	A	B		1
3-323-3036	1407	12/18/14	Soil	A	B		1
3-338-1218	1430	12/18/14	Soil	A	B		1
3-338-1218D	1433	12/18/14	Soil	A	B		1
3-338-1824	1429	12/18/14	Soil	A	B		1
3-338-2430	1428	12/18/14	Soil	A	B		1
3-399-0006	1625	12/18/14	Soil	A	B		1
3-399-0612	1624	12/18/14	Soil	A	B		1
3-411-0006	1611	12/18/14	Soil	A	B		1
3-411-0006D	1612	12/18/14	Soil	A	B		1
3-411-0612	~~1611~~ 1613	12/18/14	Soil	A	B		1
3-415-0612	1551	12/18/14	Soil	A	B		1
3-415-1218	1550	12/18/14	Soil	A	B		1
3-415-1824	1549	12/18/14	Soil	A	B		1
3-420-1218	1527	12/18/14	Soil	A	B		1

H14120373

Preservatives Used:
1 - Ice

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Relinquished By (sign): (1) [signature]
Date/Time: 12/19/14 1135

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

Date/Time: 5.3 TB once handled 12/19/14 11:35

COC121814TP.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

Page 20 of 20

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-420-1824	1526	12/18/14	Soil	A	B		1
3-426-1824	1506	12/18/14	Soil	A	B		1
3-426-2430	1505	12/18/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

H14120373

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1)	(1)	(2)	(2)
Date/Time: 12/19/14 1135	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	hand del	5.3 TB on ice 12/19/14 11:35

COC121814TP.xls

ANALYTICAL SUMMARY REPORT

January 13, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120316

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 42 samples for MT DEQ-Federal Superfund on 12/15/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120316-001	3-145SE-0006	12/09/14 8:03	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120316-002	3-145SE-0612	12/09/14 8:02	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120316-003	3-188-0006	12/09/14 8:47	12/15/14	Soil	Same As Above
H14120316-004	3-188-0612	12/09/14 8:46	12/15/14	Soil	Same As Above
H14120316-005	3-191-1824	12/09/14 10:14	12/15/14	Soil	Same As Above
H14120316-006	3-191-2430	12/09/14 10:13	12/15/14	Soil	Same As Above
H14120316-007	3-191-3036	12/09/14 10:12	12/15/14	Soil	Same As Above
H14120316-008	3-191S-0612	12/09/14 11:22	12/15/14	Soil	Same As Above
H14120316-009	3-191S-1218	12/09/14 11:21	12/15/14	Soil	Same As Above
H14120316-010	3-191S-1824	12/09/14 11:20	12/15/14	Soil	Same As Above
H14120316-011	3-192-1218	12/09/14 9:55	12/15/14	Soil	Same As Above
H14120316-012	3-192-1218D	12/09/14 9:56	12/15/14	Soil	Same As Above
H14120316-013	3-192-1824	12/09/14 9:54	12/15/14	Soil	Same As Above
H14120316-014	3-192-2430	12/09/14 9:53	12/15/14	Soil	Same As Above
H14120316-015	3-192S-0612	12/09/14 11:02	12/15/14	Soil	Same As Above
H14120316-016	3-192S-1218	12/09/14 11:01	12/15/14	Soil	Same As Above
H14120316-017	3-192S-1824	12/09/14 11:00	12/15/14	Soil	Same As Above
H14120316-018	3-210-0006	12/09/14 14:37	12/15/14	Soil	Same As Above
H14120316-019	3-210-0612	12/09/14 14:36	12/15/14	Soil	Same As Above
H14120316-020	3-211-0006	12/09/14 13:27	12/15/14	Soil	Same As Above
H14120316-021	3-211-0612	12/09/14 13:26	12/15/14	Soil	Same As Above
H14120316-022	3-212-1218	12/09/14 11:56	12/15/14	Soil	Same As Above
H14120316-023	3-212-1824	12/09/14 11:54	12/15/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120316-024	3-212-1824D	12/09/14 11:55	12/15/14	Soil	Same As Above
H14120316-025	3-212-2430	12/09/14 11:53	12/15/14	Soil	Same As Above
H14120316-026	3-212S-0612	12/09/14 13:02	12/15/14	Soil	Same As Above
H14120316-027	3-212S-1218	12/09/14 13:01	12/15/14	Soil	Same As Above
H14120316-028	3-212S-1824	12/09/14 13:00	12/15/14	Soil	Same As Above
H14120316-029	3-214-0006	12/09/14 14:08	12/15/14	Soil	Same As Above
H14120316-030	3-214-0612	12/09/14 14:07	12/15/14	Soil	Same As Above
H14120316-031	3-230-0006	12/09/14 15:08	12/15/14	Soil	Same As Above
H14120316-032	3-230-0612	12/09/14 15:07	12/15/14	Soil	Same As Above
H14120316-033	3-231-0612	12/09/14 15:26	12/15/14	Soil	Same As Above
H14120316-034	3-231-1218	12/09/14 15:25	12/15/14	Soil	Same As Above
H14120316-035	3-231-1824	12/09/14 15:24	12/15/14	Soil	Same As Above
H14120316-036	3-232-1824	12/09/14 12:24	12/15/14	Soil	Same As Above
H14120316-037	3-232-2430	12/09/14 12:23	12/15/14	Soil	Same As Above
H14120316-038	3-232-3036	12/09/14 12:22	12/15/14	Soil	Same As Above
H14120316-039	3-252-0006	12/09/14 15:57	12/15/14	Soil	Same As Above
H14120316-040	3-252-0612	12/09/14 15:56	12/15/14	Soil	Same As Above
H14120316-041	3-273-0006	12/09/14 16:12	12/15/14	Soil	Same As Above
H14120316-042	3-273-0612	12/09/14 16:11	12/15/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120316

Report Date: 01/13/15
Date Received: 12/15/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120316-001	3-145SE-0006	0	0	7.9	508	11	3070	538	1920
H14120316-002	3-145SE-0612	0	0	7.7	18	< 1	65	15	80
H14120316-003	3-188-0006	0	0	7.6	73	5	459	146	844
H14120316-004	3-188-0612	0	0	7.8	32	< 1	282	44	176
H14120316-005	3-191-1824	0	0	7.7	997	9	7750	563	2860
H14120316-006	3-191-2430	0	0	7.7	377	3	856	139	888
H14120316-007	3-191-3036	0	0	7.6	25	< 1	45	25	89
H14120316-008	3-191S-0612	0	0	7.8	202	3	1080	273	970
H14120316-009	3-191S-1218	0	0	7.2	9	< 1	33	15	77
H14120316-010	3-191S-1824	0	0	7.1	10	< 1	53	19	102
H14120316-011	3-192-1218	0	0	7.7	291	3	2520	408	1020
H14120316-012	3-192-1218D	0	0	7.7	353	4	2230	468	1190
H14120316-013	3-192-1824	0	0	6.9	13	< 1	44	17	93
H14120316-014	3-192-2430	0	0	6.7	20	< 1	39	20	92
H14120316-015	3-192S-0612	0	0	7.4	164	2	678	176	772
H14120316-016	3-192S-1218	0	0	7.1	150	2	495	173	427
H14120316-017	3-192S-1824	0	0	6.8	10	< 1	46	16	77
H14120316-018	3-210-0006	0	0	7.9	475	5	1010	279	1190
H14120316-019	3-210-0612	0	0	7.8	66	< 1	170	23	129
H14120316-020	3-211-0006	0	0	7.5	152	3	738	167	854
H14120316-021	3-211-0612	0	0	8.0	25	< 1	77	19	106
H14120316-022	3-212-1218	0	0	7.8	960	33	12800	418	6620
H14120316-023	3-212-1824	0	0	7.7	29	1	392	21	452
H14120316-024	3-212-1824D	0	0	7.8	20	< 1	44	13	127
H14120316-025	3-212-2430	0	0	7.5	7	< 1	36	15	79
H14120316-026	3-212S-0612	0	0	7.8	407	6	2230	564	1690
H14120316-027	3-212S-1218	0	0	7.6	30	< 1	46	13	82
H14120316-028	3-212S-1824	0	0	7.1	22	< 1	32	14	75
H14120316-029	3-214-0006	0	0	7.7	115	2	412	102	513
H14120316-030	3-214-0612	0	0	8.3	32	< 1	42	11	59
H14120316-031	3-230-0006	0	0	7.5	104	3	281	72	309
H14120316-032	3-230-0612	0	0	7.9	30	< 1	60	10	64
H14120316-033	3-231-0612	0	0	8.2	271	3	975	206	1020
H14120316-034	3-231-1218	0	0	8.0	19	< 1	44	13	69
H14120316-035	3-231-1824	0	0	8.0	11	< 1	34	12	65
H14120316-036	3-232-1824	0	0	7.8	1080	11	10700	543	3810
H14120316-037	3-232-2430	0	0	7.6	47	4	781	29	1740
H14120316-038	3-232-3036	0	0	7.5	7	< 1	59	17	118
H14120316-039	3-252-0006	0	0	7.7	99	2	419	86	376
H14120316-040	3-252-0612	0	0	7.9	50	< 1	140	40	150

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120316

Report Date: 01/13/15
Date Received: 12/15/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120316-041	3-273-0006	0	0	7.7	352	4	1420	298	1450
H14120316-042	3-273-0612	0	0	8.1	35	< 1	161	33	162

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150112A	
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 09:22
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 09:43
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150107_1		Continuing Calibration Verification Standard								01/07/15 10:37
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150107_1		Continuing Calibration Verification Standard								01/07/15 10:38
pH, sat. paste		3.99	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/07/15 10:38
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150107_1		Continuing Calibration Verification Standard								01/07/15 10:57
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150107_1		Continuing Calibration Verification Standard								01/07/15 11:26
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150107_1		Continuing Calibration Verification Standard								01/07/15 11:27
pH, sat. paste		3.99	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/07/15 11:28
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150107_1		Continuing Calibration Verification Standard								01/07/15 11:43
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150107_1		Continuing Calibration Verification Standard								01/07/15 11:55
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 11:29
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 12:14
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150108_1		Initial Calibration Verification Standard								01/09/15 08:38
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150108_1		Initial Calibration Verification Standard								01/09/15 09:33
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 08:01
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150107_1		Initial Calibration Verification Standard								01/08/15 08:33
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27610
Lab ID: LCS-27610		Laboratory Control Sample				Run: SOIL PH METER_150112A				01/07/15 10:39
pH, sat. paste		7.60	s.u.	0.10	102	95	105			
Lab ID: H14120316-010ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/07/15 10:56
pH, sat. paste		7.02	s.u.	0.10				1.0	30	
Lab ID: H14120316-020ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/07/15 11:12
pH, sat. paste		7.56	s.u.	0.10				0.8	30	
Method: ASAM10-3.2										Batch: 27611
Lab ID: LCS-27611		Laboratory Control Sample				Run: SOIL PH METER_150112A				01/07/15 11:29
pH, sat. paste		7.67	s.u.	0.10	103	95	105			
Lab ID: H14120316-030ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/07/15 11:42
pH, sat. paste		8.26	s.u.	0.10				0.4	30	
Lab ID: H14120316-040ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/07/15 11:54
pH, sat. paste		7.91	s.u.	0.10				0.4	30	
Lab ID: H14120316-042ADUP		Sample Duplicate				Run: SOIL PH METER_150112A				01/07/15 11:57
pH, sat. paste		8.11	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150106A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard								01/06/15 08:56
Arsenic			0.794	mg/L	0.0085	99	90	110			
Cadmium			0.397	mg/L	0.0010	99	90	110			
Copper			0.790	mg/L	0.010	99	90	110			
Lead			0.771	mg/L	0.010	96	90	110			
Zinc			0.812	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A								01/06/15 09:11
Arsenic			0.00908	mg/L	0.0085		0	0			
Cadmium			0.00438	mg/L	0.0010		0	0			
Copper			-0.00272	mg/L	0.010		0	0			
Lead			-0.00928	mg/L	0.010		0	0			
Zinc			0.00339	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB								01/06/15 09:15
Arsenic			1.03	mg/L	0.0085	103	80	120			
Cadmium			0.938	mg/L	0.0010	94	80	120			
Copper			0.513	mg/L	0.010	103	80	120			
Lead			0.935	mg/L	0.010	94	80	120			
Zinc			1.04	mg/L	0.010	104	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard								01/06/15 09:46
Arsenic			2.63	mg/L	0.0085	105	90	110			
Cadmium			2.58	mg/L	0.0010	103	90	110			
Copper			2.52	mg/L	0.010	101	90	110			
Lead			2.57	mg/L	0.010	103	90	110			
Zinc			2.60	mg/L	0.010	104	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank								01/06/15 09:49
Arsenic			0.00734	mg/L	0.0085						
Cadmium			0.000140	mg/L	0.0010						
Copper			-0.00153	mg/L	0.010						
Lead			0.0207	mg/L	0.010						
Zinc			0.00112	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150108A	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/08/15 14:57	
Arsenic			0.777	mg/L	0.0085	97	90	110			
Cadmium			0.382	mg/L	0.0010	95	90	110			
Copper			0.792	mg/L	0.010	99	90	110			
Lead			0.746	mg/L	0.010	93	90	110			
Zinc			0.782	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/08/15 15:12	
Arsenic			0.00600	mg/L	0.0085		0	0			
Cadmium			-0.000950	mg/L	0.0010		0	0			
Copper			-0.00438	mg/L	0.010		0	0			
Lead			-0.0353	mg/L	0.010		0	0			
Zinc			0.000880	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/08/15 15:16	
Arsenic			0.961	mg/L	0.0085	96	80	120			
Cadmium			0.877	mg/L	0.0010	88	80	120			
Copper			0.506	mg/L	0.010	101	80	120			
Lead			0.826	mg/L	0.010	83	80	120			
Zinc			0.967	mg/L	0.010	97	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/08/15 15:47	
Arsenic			2.48	mg/L	0.0085	99	90	110			
Cadmium			2.44	mg/L	0.0010	98	90	110			
Copper			2.55	mg/L	0.010	102	90	110			
Lead			2.41	mg/L	0.010	96	90	110			
Zinc			2.48	mg/L	0.010	99	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/08/15 15:50	
Arsenic			0.00583	mg/L	0.0085						
Cadmium			0.000490	mg/L	0.0010						
Copper			-0.00208	mg/L	0.010						
Lead			-0.00105	mg/L	0.010						
Zinc			0.00495	mg/L	0.010						
Lab ID:	**ICSA**	5	Interference Check Sample A							01/08/15 19:27	
Arsenic			0.0137	mg/L	0.0085		0	0			
Cadmium			-0.000570	mg/L	0.0010		0	0			
Copper			-5.00E-05	mg/L	0.010		0	0			
Lead			-0.0125	mg/L	0.010		0	0			
Zinc			0.00363	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/08/15 19:31	
Arsenic			0.957	mg/L	0.0085	96	80	120			
Cadmium			0.874	mg/L	0.0010	87	80	120			
Copper			0.491	mg/L	0.010	98	80	120			
Lead			0.885	mg/L	0.010	89	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150108A	
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/08/15 19:31	
Zinc			0.963	mg/L	0.010	96	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/08/15 20:01	
Arsenic			2.50	mg/L	0.0085	100	90	110			
Cadmium			2.48	mg/L	0.0010	99	90	110			
Copper			2.51	mg/L	0.010	100	90	110			
Lead			2.50	mg/L	0.010	100	90	110			
Zinc			2.52	mg/L	0.010	101	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/08/15 20:04	
Arsenic			0.00903	mg/L	0.0085						
Cadmium			0.000980	mg/L	0.0010						
Copper			0.00236	mg/L	0.010						
Lead			0.0120	mg/L	0.010						
Zinc			0.00532	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.7									Analytical Run: ICP2-HE_150112C	
Lab ID: ICV	5	Initial Calibration Verification Standard							01/12/15 10:44	
Arsenic		0.775	mg/L	0.0085	97	90	110			
Cadmium		0.385	mg/L	0.0010	96	90	110			
Copper		0.799	mg/L	0.010	100	90	110			
Lead		0.764	mg/L	0.010	95	90	110			
Zinc		0.786	mg/L	0.010	98	90	110			
Lab ID: ICSA	5	Interference Check Sample A							01/12/15 10:59	
Arsenic		-0.00134	mg/L	0.0085		0	0			
Cadmium		0.00448	mg/L	0.0010		0	0			
Copper		-0.00212	mg/L	0.010		0	0			
Lead		0.0385	mg/L	0.010		0	0			
Zinc		0.00295	mg/L	0.010		0	0			
Lab ID: ICSAB	5	Interference Check Sample AB							01/12/15 11:03	
Arsenic		0.985	mg/L	0.0085	99	80	120			
Cadmium		0.916	mg/L	0.0010	92	80	120			
Copper		0.501	mg/L	0.010	100	80	120			
Lead		0.911	mg/L	0.010	91	80	120			
Zinc		0.992	mg/L	0.010	99	80	120			
Lab ID: CCV	5	Continuing Calibration Verification Standard							01/12/15 11:34	
Arsenic		2.65	mg/L	0.0085	106	90	110			
Cadmium		2.57	mg/L	0.0010	103	90	110			
Copper		2.58	mg/L	0.010	103	90	110			
Lead		2.60	mg/L	0.010	104	90	110			
Zinc		2.58	mg/L	0.010	103	90	110			
Lab ID: CCB	5	Continuing Calibration Blank							01/12/15 11:37	
Arsenic		0.00100	mg/L	0.0085						
Cadmium		0.000520	mg/L	0.0010						
Copper		0.000780	mg/L	0.010						
Lead		0.0325	mg/L	0.010						
Zinc		0.00120	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27533
Lab ID:	**MB-27533**	5	Method Blank				Run: ICP2-HE_150106A			01/06/15 09:42	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27533**	5	Laboratory Fortified Blank				Run: ICP2-HE_150106A			01/06/15 09:53	
Arsenic			50.3	mg/kg	1.0	101	80	120			
Cadmium			24.5	mg/kg	1.0	98	80	120			
Copper			49.5	mg/kg	1.0	98	80	120			
Lead			49.6	mg/kg	1.0	99	80	120			
Zinc			51.9	mg/kg	1.0	101	80	120			
Lab ID:	**LCS-27533**	5	Laboratory Control Sample				Run: ICP2-HE_150106A			01/06/15 09:57	
Arsenic			285	mg/kg	1.7	83	72.3	106.4			
Cadmium			117	mg/kg	1.0	86	73	105.1			
Copper			247	mg/kg	1.1	88	77.5	109.6			
Lead			174	mg/kg	3.1	93	75.9	108.6			
Zinc			192	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14120316-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150106A			01/06/15 11:25	
Arsenic			1300	mg/kg	1.8		75	125			A
Cadmium			124	mg/kg	1.0	90	75	125			
Copper			10600	mg/kg	1.1		75	125			A
Lead			762	mg/kg	3.2	87	75	125			
Zinc			3970	mg/kg	1.0		75	125			A
Lab ID:	**H14120316-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150106A			01/06/15 11:29	
Arsenic			1110	mg/kg	1.8		75	125			A
Cadmium			33.7	mg/kg	1.0	92	75	125			
Copper			10500	mg/kg	1.1		75	125			A
Lead			595	mg/kg	3.1		75	125			A
Zinc			3780	mg/kg	1.0		75	125			A
Lab ID:	**H14120316-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150106A			01/06/15 11:32	
Arsenic			1130	mg/kg	1.8		75	125	1.3	20	A
Cadmium			34.1	mg/kg	1.0	93	75	125	1.1	20	
Copper			10500	mg/kg	1.1		75	125	0.1	20	A
Lead			601	mg/kg	3.1		75	125	0.9	20	A
Zinc			3830	mg/kg	1.0		75	125	1.3	20	A
Method:	**SW6010B**										Batch: 27534
Lab ID:	**MB-27534**	5	Method Blank				Run: ICP2-HE_150106A			01/06/15 11:36	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.2	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27534
Lab ID:	**MB-27534**	5	Method Blank				Run: ICP2-HE_150106A				01/06/15 11:36
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27534**	5	Laboratory Fortified Blank				Run: ICP2-HE_150106A				01/06/15 11:40
Arsenic			50.1	mg/kg	1.0	100	80	120			
Cadmium			23.4	mg/kg	1.0	93	80	120			
Copper			49.4	mg/kg	1.0	98	80	120			
Lead			48.5	mg/kg	1.0	97	80	120			
Zinc			49.8	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27534**	5	Laboratory Control Sample				Run: ICP2-HE_150106A				01/06/15 11:43
Arsenic			303	mg/kg	1.8	88	72.3	106.4			
Cadmium			119	mg/kg	1.0	87	73	105.1			
Copper			260	mg/kg	1.1	93	77.5	109.6			
Lead			181	mg/kg	3.1	97	75.9	108.6			
Zinc			196	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120316-042APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150106A				01/06/15 12:13
Arsenic			281	mg/kg	1.9	96	75	125			
Cadmium			108	mg/kg	1.0	84	75	125			
Copper			399	mg/kg	1.1	93	75	125			
Lead			257	mg/kg	3.3	87	75	125			
Zinc			396	mg/kg	1.0	91	75	125			
Lab ID:	**H14120316-042AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150106A				01/06/15 12:17
Arsenic			82.1	mg/kg	1.8	94	75	125			
Cadmium			22.1	mg/kg	1.0	87	75	125			
Copper			213	mg/kg	1.1	104	75	125			
Lead			82.4	mg/kg	3.2	99	75	125			
Zinc			209	mg/kg	1.0	95	75	125			
Lab ID:	**H14120316-042AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150106A				01/06/15 12:20
Arsenic			83.7	mg/kg	1.8	98	75	125	1.9	20	
Cadmium			22.2	mg/kg	1.0	87	75	125	0.1	20	
Copper			211	mg/kg	1.1	101	75	125	0.7	20	
Lead			80.8	mg/kg	3.2	96	75	125	1.9	20	
Zinc			210	mg/kg	1.0	97	75	125	0.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27532
Lab ID:	**MB-27532**	5	Method Blank				Run: ICP2-HE_150108A				01/08/15 21:10
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			1	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.8	mg/kg	0.09						
Lab ID:	**LFB-27532**	5	Laboratory Fortified Blank				Run: ICP2-HE_150108A				01/08/15 21:14
Arsenic			48.3	mg/kg	1.0	97	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			
Copper			50.7	mg/kg	1.0	99	80	120			
Lead			47.3	mg/kg	1.0	95	80	120			
Zinc			49.7	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27532**	5	Laboratory Control Sample				Run: ICP2-HE_150108A				01/08/15 21:18
Arsenic			279	mg/kg	1.8	83	72.3	106.4			
Cadmium			118	mg/kg	1.0	87	73	105.1			
Copper			254	mg/kg	1.1	92	77.5	109.6			
Lead			177	mg/kg	3.1	96	75.9	108.6			
Zinc			190	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120316-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150108A				01/08/15 22:43
Arsenic			718	mg/kg	1.9	94	75	125			
Cadmium			116	mg/kg	1.0	87	75	125			
Copper			1270	mg/kg	1.1	98	75	125			
Lead			509	mg/kg	3.3	89	75	125			
Zinc			1440	mg/kg	1.0		75	125			A
Lab ID:	**H14120316-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150108A				01/08/15 22:46
Arsenic			514	mg/kg	1.8		75	125			A
Cadmium			26.3	mg/kg	1.0	87	75	125			
Copper			1100	mg/kg	1.1		75	125			A
Lead			316	mg/kg	3.2		75	125			A
Zinc			1200	mg/kg	1.0		75	125			A
Lab ID:	**H14120316-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150108A				01/08/15 22:50
Arsenic			520	mg/kg	1.8		75	125	1.2	20	A
Cadmium			26.1	mg/kg	1.0	86	75	125	0.9	20	
Copper			1090	mg/kg	1.1		75	125	1.0	20	A
Lead			323	mg/kg	3.2		75	125	2.1	20	A
Zinc			1230	mg/kg	1.0		75	125	2.2	20	A
Method:	**SW6010B**										Batch: 27595
Lab ID:	**MB-27595**		Method Blank				Run: ICP2-HE_150108A				01/08/15 19:42
Zinc			0.3	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27595
Lab ID:	**LFB-27595**	Laboratory Fortified Blank				Run: ICP2-HE_150108A				01/08/15 19:46
Zinc		48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27595**	Laboratory Control Sample				Run: ICP2-HE_150108A				01/08/15 19:50
Zinc		180	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H14120307-007APDS**	Post Digestion/Distillation Spike				Run: ICP2-HE_150108A				01/08/15 20:30
Zinc		1600	mg/kg	1.0		75	125			A
Lab ID:	**H14120307-007AMS**	Sample Matrix Spike				Run: ICP2-HE_150108A				01/08/15 20:34
Zinc		1490	mg/kg	1.0		75	125			A
Lab ID:	**H14120307-007AMSD**	Sample Matrix Spike Duplicate				Run: ICP2-HE_150108A				01/08/15 20:37
Zinc		1390	mg/kg	1.0		75	125	6.7	20	A
Lab ID:	**H14120316-038APDS**	Post Digestion/Distillation Spike				Run: ICP2-HE_150108A				01/08/15 20:59
Zinc		334	mg/kg	1.0	86	75	125			
Lab ID:	**H14120316-038AMS**	Sample Matrix Spike				Run: ICP2-HE_150108A				01/08/15 21:03
Zinc		172	mg/kg	1.0	110	75	125			
Lab ID:	**H14120316-038AMSD**	Sample Matrix Spike Duplicate				Run: ICP2-HE_150108A				01/08/15 21:07
Zinc		173	mg/kg	1.0	113	75	125	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27626
Lab ID:	**MB-27626**	5	Method Blank				Run: ICP2-HE_150112C			01/12/15 17:47	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			1	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27626**	5	Laboratory Fortified Blank				Run: ICP2-HE_150112C			01/12/15 17:51	
Arsenic			47.3	mg/kg	1.0	95	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			47.3	mg/kg	1.0	92	80	120			
Zinc			48.8	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27626**	5	Laboratory Control Sample				Run: ICP2-HE_150112C			01/12/15 17:54	
Arsenic			282	mg/kg	1.8	82	72.3	106.4			
Cadmium			120	mg/kg	1.0	88	73	105.1			
Copper			241	mg/kg	1.1	86	77.5	109.6			
Lead			178	mg/kg	3.1	95	75.9	108.6			
Zinc			195	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120316-016APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150112C			01/12/15 18:13	
Arsenic			373	mg/kg	1.8	87	75	125			
Cadmium			113	mg/kg	1.0	86	75	125			
Copper			713	mg/kg	1.1	85	75	125			
Lead			383	mg/kg	3.3	82	75	125			
Zinc			653	mg/kg	1.0	88	75	125			
Lab ID:	**H14120316-016AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150112C			01/12/15 18:16	
Arsenic			185	mg/kg	1.8	71	75	125			S
Cadmium			22.9	mg/kg	1.0	83	75	125			
Copper			523	mg/kg	1.1		75	125			A
Lead			204	mg/kg	3.2	63	75	125			S
Zinc			463	mg/kg	1.0		75	125			A
- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recove is due to matrix interference.											
Lab ID:	**H14120316-016AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150112C			01/12/15 18:20	
Arsenic			200	mg/kg	1.8	101	75	125	7.5	20	
Cadmium			23.2	mg/kg	1.0	85	75	125	1.6	20	
Copper			578	mg/kg	1.1		75	125	10.0	20	A
Lead			222	mg/kg	3.2	98	75	125	8.4	20	
Zinc			490	mg/kg	1.0		75	125	5.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150106A		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							01/06/15 13:42	
Arsenic			0.0592	mg/L	0.0010	99	90	110			
Lead			0.0582	mg/L	0.0010	97	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							01/06/15 13:47	
Arsenic			7.90E-05	mg/L	0.0010						
Lead			0.000216	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							01/06/15 13:51	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Lead			0.000217	mg/L	0.0010		0	0			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							01/06/15 14:00	
Arsenic			0.0499	mg/L	0.0010	100	90	110			
Lead			0.0489	mg/L	0.0010	98	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							01/06/15 14:10	
Arsenic			1.13E-05	mg/L	0.0010						
Lead			-9.00E-07	mg/L	0.0010						
Method:	**SW6020**									Batch: 27533	
Lab ID:	**MB-27533**	2	Method Blank				Run: ICPMS204-B_150106A			01/06/15 16:19	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27533**	2	Laboratory Control Sample				Run: ICPMS204-B_150106A			01/06/15 16:24	
Arsenic			301	mg/kg	1.0	88	72.3	106.4			
Lead			180	mg/kg	1.0	96	75.9	108.6			
Lab ID:	**LFB-27533**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150106A			01/06/15 16:28	
Arsenic			49.2	mg/kg	1.0	98	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Lab ID:	**H14120316-036AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150106A			01/06/15 18:33	
Arsenic			1040	mg/kg	1.0		75	125			A
Lead			543	mg/kg	1.0		75	125			A
Lab ID:	**H14120316-036AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150106A			01/06/15 18:38	
Arsenic			1060	mg/kg	1.0		75	125	2.1	20	A
Lead			557	mg/kg	1.0		75	125	2.5	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150107A		
Lab ID:	**ICV STD**	4	Initial Calibration Verification Standard							01/07/15 10:55	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0308	mg/L	0.0010	103	90	110			
Copper			0.0604	mg/L	0.0010	101	90	110			
Lead			0.0593	mg/L	0.0010	99	90	110			
Lab ID:	**ICSA**	4	Interference Check Sample A							01/07/15 11:00	
Arsenic			7.50E-05	mg/L	0.0010						
Cadmium			0.000585	mg/L	0.0010						
Copper			0.000248	mg/L	0.0010						
Lead			0.000214	mg/L	0.0010						
Lab ID:	**ICSAB**	4	Interference Check Sample AB							01/07/15 11:04	
Arsenic			0.0103	mg/L	0.0010	103	70	130			
Cadmium			0.0100	mg/L	0.0010	100	70	130			
Copper			0.0205	mg/L	0.0010	103	70	130			
Lead			0.000212	mg/L	0.0010		0	0			
Lab ID:	**CCV**	4	Continuing Calibration Verification Standard							01/07/15 11:13	
Arsenic			0.0502	mg/L	0.0010	100	90	110			
Cadmium			0.0501	mg/L	0.0010	100	90	110			
Copper			0.0505	mg/L	0.0010	101	90	110			
Lead			0.0503	mg/L	0.0010	101	90	110			
Lab ID:	**CCB**	4	Continuing Calibration Blank							01/07/15 11:22	
Arsenic			-1.18E-05	mg/L	0.0010						
Cadmium			3.60E-06	mg/L	0.0010						
Copper			8.78E-05	mg/L	0.0010						
Lead			-5.30E-06	mg/L	0.0010						
Method:	**SW6020**										Batch: 27595
Lab ID:	**MB-27595**	4	Method Blank				Run: ICPMS204-B_150107A			01/07/15 12:23	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			0.8	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27595**	4	Laboratory Control Sample				Run: ICPMS204-B_150107A			01/07/15 12:27	
Arsenic			303	mg/kg	1.0	88	72.3	106.4			
Cadmium			123	mg/kg	1.0	90	73	105.1			
Copper			270	mg/kg	1.0	96	77.5	109.6			
Lead			184	mg/kg	1.0	98	75.9	108.6			
Lab ID:	**LFB-27595**	4	Laboratory Fortified Blank				Run: ICPMS204-B_150107A			01/07/15 12:32	
Arsenic			49.2	mg/kg	1.0	98	80	120			
Cadmium			25.3	mg/kg	1.0	101	80	120			
Copper			50.8	mg/kg	1.0	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27595
Lab ID:	**LFB-27595**	4	Laboratory Fortified Blank				Run: ICPMS204-B_150107A			01/07/15 12:32	
Lead			49.1	mg/kg	1.0	98	80	120			
Lab ID:	**H14120316-038AMS**	4	Sample Matrix Spike				Run: ICPMS204-B_150107A			01/07/15 16:13	
Arsenic			52.3	mg/kg	1.0	94	75	125			
Cadmium			22.7	mg/kg	1.0	91	75	125			
Copper			102	mg/kg	1.0	87	75	125			
Lead			61.8	mg/kg	1.0	92	75	125			
Lab ID:	**H14120316-038AMSD**	4	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150107A			01/07/15 16:17	
Arsenic			53.2	mg/kg	1.0	95	75	125	1.7	20	
Cadmium			23.1	mg/kg	1.0	93	75	125	1.5	20	
Copper			104	mg/kg	1.0	90	75	125	1.8	20	
Lead			63.4	mg/kg	1.0	95	75	125	2.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150108A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							01/08/15 18:33	
Arsenic			0.0594	mg/L	0.0010	99	90	110			
Cadmium			0.0306	mg/L	0.0010	102	90	110			
Lead			0.0581	mg/L	0.0010	97	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							01/08/15 18:38	
Arsenic			3.70E-05	mg/L	0.0010						
Cadmium			0.000604	mg/L	0.0010						
Lead			0.000212	mg/L	0.0010						
Lab ID:	**ICSAB**	3	Interference Check Sample AB							01/08/15 18:42	
Arsenic			0.0101	mg/L	0.0010	101	70	130			
Cadmium			0.00998	mg/L	0.0010	100	70	130			
Lead			0.000214	mg/L	0.0010		0	0			
Lab ID:	**CCV**	3	Continuing Calibration Verification Standard							01/08/15 18:51	
Arsenic			0.0496	mg/L	0.0010	99	90	110			
Cadmium			0.0501	mg/L	0.0010	100	90	110			
Lead			0.0493	mg/L	0.0010	99	90	110			
Lab ID:	**CCB**	3	Continuing Calibration Blank							01/08/15 19:00	
Arsenic			-1.91E-05	mg/L	0.0010						
Cadmium			3.10E-06	mg/L	0.0010						
Lead			3.00E-07	mg/L	0.0010						
Method:	**SW6020**									Batch: 27532	
Lab ID:	**MB-27532**	3	Method Blank				Run: ICPMS204-B_150108A			01/08/15 20:45	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27532**	3	Laboratory Control Sample				Run: ICPMS204-B_150108A			01/08/15 20:49	
Arsenic			314	mg/kg	1.0	93	72.3	106.4			
Cadmium			130	mg/kg	1.0	96	73	105.1			
Lead			192	mg/kg	1.0	105	75.9	108.6			
Lab ID:	**LFB-27532**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150108A			01/08/15 20:54	
Arsenic			48.3	mg/kg	1.0	97	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H14120316-018AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150108A			01/08/15 22:51	
Arsenic			531	mg/kg	1.0		75	125			A
Cadmium			29.5	mg/kg	1.0	96	75	125			
Lead			340	mg/kg	1.0		75	125			A
Lab ID:	**H14120316-018AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150108A			01/08/15 22:56	
Arsenic			533	mg/kg	1.0		75	125	0.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120316

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 27532
Lab ID: H14120316-018AMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150108A			01/08/15 22:56	
Cadmium		28.7	mg/kg	1.0	93	75	125	2.7	20	
Lead		340	mg/kg	1.0		75	125	0.3	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120316

Login completed by: Tracy L. Lorash

Date Received: 12/15/2014

Reviewed by: BL2000\rwilliams

Received by: tsp

Reviewed Date: 12/19/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.3°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Received sample bag labeled 3-119S-1218 collected on 12/9/14 @1121. We did not receive a sample bag labeled C-191S-1218, however the collection date and time on the bag labeled 3-119S matches the date and time on the COC for 3-191S.
Sample ID on COC is 3-145SE -ID on bags is 3-145 S/E. Logged in with ID from COC. TI 12/18/14

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120316

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-145SE-0006	803	12/09/14	Soil	A	B		1
3-145SE-0612	802	12/09/14	Soil	A	B		1
3-188-0006	847	12/09/14	Soil	A	B		1
3-188-0612	846	12/09/14	Soil	A	B		1
3-191-1824	1014	12/09/14	Soil	A	B		1
3-191-2430	1013	12/09/14	Soil	A	B		1
3-191-3036	1012	12/09/14	Soil	A	B		1
3-191S-0612	1122	12/09/14	Soil	A	B		1
3-191S-1218	1121	12/09/14	Soil	A	B		1
3-191S-1824	1120	12/09/14	Soil	A	B		1
3-192-1218	955	12/09/14	Soil	A	B		1
3-192-1218D	956	12/09/14	Soil	A	B		1
3-192-1824	954	12/09/14	Soil	A	B		1
3-192-2430	953	12/09/14	Soil	A	B		1
3-192S-0612	1102	12/09/14	Soil	A	B		1
3-192S-1218	1101	12/09/14	Soil	A	B		1
3-192S-1824	1100	12/09/14	Soil	A	B		1
3-210-0006	1437	12/09/14	Soil	A	B		1
3-210-0612	1436	12/09/14	Soil	A	B		1
3-211-0006	1327	12/09/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/15/14 1630

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 2.3 TB on Ice

Date/Time: 16:30
Tyler Parks 12-15-14

COC120914TP.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120316

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-211-0612	1326	12/09/14	Soil	A	B		1
3-212-1218	1156	12/09/14	Soil	A	B		1
3-212-1824	1154	12/09/14	Soil	A	B		1
3-212-1824D	1155	12/09/14	Soil	A	B		1
3-212-2430	1153	12/09/14	Soil	A	B		1
3-212S-0612	1302	12/09/14	Soil	A	B		1
3-212S-1218	1301	12/09/14	Soil	A	B		1
3-212S-1824	1300 ~~1227~~	12/09/14	Soil	A	B		1
3-214-0006	1408	12/09/14	Soil	A	B		1
3-214-0612	1407	12/09/14	Soil	A	B		1
3-230-0006	1508	12/09/14	Soil	A	B		1
3-230-0612	1507	12/09/14	Soil	A	B		1
3-231-0612	1526	12/09/14	Soil	A	B		1
3-231-1218	1525	12/09/14	Soil	A	B		1
3-231-1824	1524	12/09/14	Soil	A	B		1
3-232-1824	1224	12/09/14	Soil	A	B		1
3-232-2430	1223	12/09/14	Soil	A	B		1
3-232-3036	1222	12/09/14	Soil	A	B		1
3-252-0006	1557	12/09/14	Soil	A	B		1
3-252-0612	1556	12/09/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/15/14 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 2.5 TB w/ IC	16:30 12-15-14 [signature]

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120316

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-273-0006	1612	12/09/14	Soil	A	B		1
3-273-0612	1611	12/09/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1)	(1)	(2)	(2)
Date/Time: 12/15/14 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	2.3TB un Ice	16:70 Taylor Parker 12-15-14

ANALYTICAL SUMMARY REPORT

January 13, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120313

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 12 samples for MT DEQ-Federal Superfund on 12/15/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120313-001	3-149-3642	11/03/14 12:16	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120313-002	3-149-4248	11/03/14 12:15	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120313-003	3-156-1824	11/03/14 16:03	12/15/14	Soil	Same As Above
H14120313-004	3-156-2430	11/03/14 16:02	12/15/14	Soil	Same As Above
H14120313-005	3-159-2430	11/03/14 11:24	12/15/14	Soil	Same As Above
H14120313-006	3-159-3036	11/03/14 11:25	12/15/14	Soil	Same As Above
H14120313-007	3-161-0006	11/03/14 10:07	12/15/14	Soil	Same As Above
H14120313-008	3-161-0006d	11/03/14 10:08	12/15/14	Soil	Same As Above
H14120313-009	3-161-0612	11/03/14 10:06	12/15/14	Soil	Same As Above
H14120313-010	3-171-2430	11/03/14 15:00	12/15/14	Soil	Same As Above
H14120313-011	3-171-3036	11/03/14 14:59	12/15/14	Soil	Same As Above
H14120313-012	3-171-3642	11/03/14 14:58	12/15/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120313

Report Date: 01/13/15
Date Received: 12/15/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120313-001	3-149-3642	0	0	7.1	14	2	997	14	234
H14120313-002	3-149-4248	0	0	7.2	11	1	889	11	137
H14120313-003	3-156-1824	0	0	7.2	123	3	658	108	742
H14120313-004	3-156-2430	0	0	7.5	127	2	473	77	609
H14120313-005	3-159-2430	0	0	7.0	12	< 1	184	15	94
H14120313-006	3-159-3036	0	0	7.0	13	< 1	44	12	62
H14120313-007	3-161-0006	0	0	7.4	652	4	3190	443	1250
H14120313-008	3-161-0006d	0	0	7.5	673	4	3240	458	1280
H14120313-009	3-161-0612	0	0	7.4	2050	8	7870	947	2660
H14120313-010	3-171-2430	0	0	7.4	20	77	2950	21	15100
H14120313-011	3-171-3036	0	0	7.5	16	2	194	25	1140
H14120313-012	3-171-3642	0	0	7.6	10	< 1	77	21	528

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120313

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150107A		
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 09:52	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 10:31	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 11:08	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150105_1		Continuing Calibration Verification Standard							01/06/15 11:33	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150105_1		Continuing Calibration Verification Standard							01/06/15 11:34	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 11:35	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150105_1		Continuing Calibration Verification Standard							01/06/15 11:44	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_150105_1		Continuing Calibration Verification Standard							01/06/15 11:54	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 08:24	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 08:46	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 09:11	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150106_1		Initial Calibration Verification Standard							01/07/15 08:04	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150106_1		Initial Calibration Verification Standard							01/07/15 08:36	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27592
Lab ID: LCS-27592		Laboratory Control Sample				Run: SOIL PH METER_150107A			01/06/15 11:35	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14120313-010ADUP		Sample Duplicate				Run: SOIL PH METER_150107A			01/06/15 11:54	
pH, sat. paste		7.43	s.u.	0.10				0.3	30	
Lab ID: H14120313-012ADUP		Sample Duplicate				Run: SOIL PH METER_150107A			01/06/15 11:57	
pH, sat. paste		7.55	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120313

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150102A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/02/15 10:21	
Arsenic			0.792	mg/L	0.0085	99	90	110			
Cadmium			0.396	mg/L	0.0010	99	90	110			
Copper			0.801	mg/L	0.010	100	90	110			
Lead			0.794	mg/L	0.010	99	90	110			
Zinc			0.806	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/02/15 10:36	
Arsenic			0.00350	mg/L	0.0085		0	0			
Cadmium			0.00365	mg/L	0.0010		0	0			
Copper			0.00498	mg/L	0.010		0	0			
Lead			0.00669	mg/L	0.010		0	0			
Zinc			0.00261	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/02/15 10:40	
Arsenic			0.993	mg/L	0.0085	99	80	120			
Cadmium			0.906	mg/L	0.0010	91	80	120			
Copper			0.519	mg/L	0.010	104	80	120			
Lead			0.953	mg/L	0.010	95	80	120			
Zinc			0.996	mg/L	0.010	100	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/02/15 11:10	
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.59	mg/L	0.010	103	90	110			
Lead			2.39	mg/L	0.010	96	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			
Lab ID:	**CCB**	5	Continuing Calibration Blank							01/02/15 11:13	
Arsenic			0.000810	mg/L	0.0085						
Cadmium			0.000390	mg/L	0.0010						
Copper			0.000830	mg/L	0.010						
Lead			6.00E-05	mg/L	0.010						
Zinc			-0.000340	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120313

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27531	
Lab ID:	**MB-27531**	5	Method Blank				Run: ICP2-HE_150102A			01/02/15 16:37	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			1	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27531**	5	Laboratory Fortified Blank				Run: ICP2-HE_150102A			01/02/15 16:41	
Arsenic			47.0	mg/kg	1.0	94	80	120			
Cadmium			23.4	mg/kg	1.0	94	80	120			
Copper			50.0	mg/kg	1.0	100	80	120			
Lead			48.9	mg/kg	1.0	96	80	120			
Zinc			53.7	mg/kg	1.0	102	80	120			
Lab ID:	**LCS-27531**	5	Laboratory Control Sample				Run: ICP2-HE_150102A			01/02/15 16:52	
Arsenic			281	mg/kg	1.8	84	72.3	106.4			
Cadmium			118	mg/kg	1.0	88	73	105.1			
Copper			250	mg/kg	1.1	91	77.5	109.6			
Lead			180	mg/kg	3.1	98	75.9	108.6			
Zinc			195	mg/kg	1.0	92	74.2	109.9			
Lab ID:	**H14120313-012APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150102A			01/02/15 17:50	
Arsenic			222	mg/kg	1.8	84	75	125			
Cadmium			103	mg/kg	1.0	81	75	125			
Copper			294	mg/kg	1.1	86	75	125			
Lead			229	mg/kg	3.2	82	75	125			
Zinc			727	mg/kg	1.0	78	75	125			
Lab ID:	**H14120313-012AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150102A			01/02/15 17:54	
Arsenic			50.2	mg/kg	1.8	85	75	125			
Cadmium			21.3	mg/kg	1.0	85	75	125			
Copper			116	mg/kg	1.1	80	75	125			
Lead			66.0	mg/kg	3.1	89	75	125			
Zinc			566	mg/kg	1.0		75	125			A
Lab ID:	**H14120313-012AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150102A			01/02/15 17:58	
Arsenic			47.5	mg/kg	1.8	79	75	125	5.6	20	
Cadmium			21.0	mg/kg	1.0	83	75	125	1.6	20	
Copper			120	mg/kg	1.1	88	75	125	3.6	20	
Lead			67.5	mg/kg	3.1	92	75	125	2.1	20	
Zinc			555	mg/kg	1.0		75	125	1.9	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120313

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150105A		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							01/05/15 13:25	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Lead			0.0584	mg/L	0.0010	97	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							01/05/15 13:29	
Arsenic			7.30E-05	mg/L	0.0010						
Lead			0.000215	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							01/05/15 13:33	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Lead			0.000222	mg/L	0.0010		0	0			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							01/05/15 13:42	
Arsenic			0.0498	mg/L	0.0010	100	90	110			
Lead			0.0494	mg/L	0.0010	99	90	110			
Lab ID:	**CCB**	2	Continuing Calibration Blank							01/05/15 13:51	
Arsenic			-1.11E-05	mg/L	0.0010						
Lead			1.20E-06	mg/L	0.0010						
Method:	**SW6020**									Batch: 27531	
Lab ID:	**MB-27531**	2	Method Blank				Run: ICPMS204-B_150105A			01/05/15 23:31	
Arsenic			0.4	mg/kg	0.3						
Lead			0.3	mg/kg	0.2						
Lab ID:	**LCS-27531**	2	Laboratory Control Sample				Run: ICPMS204-B_150105A			01/05/15 23:35	
Arsenic			310	mg/kg	1.0	90	72.3	106.4			
Lead			184	mg/kg	1.0	98	75.9	108.6			
Lab ID:	**LFB-27531**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150105A			01/05/15 23:40	
Arsenic			50.0	mg/kg	1.0	99	80	120			
Lead			47.5	mg/kg	1.0	94	80	120			
Lab ID:	**H14120313-012APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150105A			01/06/15 00:38	
Arsenic			2410	mg/kg	1.0	98	75	125			
Lead			2440	mg/kg	1.0	98	75	125			
Lab ID:	**H14120313-012AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150105A			01/06/15 00:42	
Arsenic			59.0	mg/kg	1.0	100	75	125			
Lead			69.0	mg/kg	1.0	98	75	125			
Lab ID:	**H14120313-012AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150105A			01/06/15 00:47	
Arsenic			58.2	mg/kg	1.0	98	75	125	1.3	20	
Lead			68.9	mg/kg	1.0	98	75	125	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120313

Login completed by: Austin H. Nearpass

Reviewed by: BL2000\rwilliams

Reviewed Date: 12/19/2014

Date Received: 12/15/2014

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	2.1°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Temperature taken from samples because the Temperature Blank was burried. An 12/17/14

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

H1412 0313

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-149-3642	1216	11/3/14	Soil	A	B		1
3-149-4248	1215	11/3/14	Soil	A	B		1
3-156-1824	1603	11/3/14	Soil	A	B		1
3-156-2430	1602	11/3/14	Soil	A	B		1
3-159-2430	1124	11/3/14	Soil	A	B		1
3-159-3036	1125	11/3/14	Soil	A	B		1
3-161-0006	1007	11/3/14	Soil	A	B		1
3-161-0006d	1008	11/3/14	Soil	A	B		1
3-161-0612	1006	11/3/14	Soil	A	B		1
3-171-2430	1500	11/3/14	Soil	A	B		1
3-171-3036	1459	11/3/14	Soil	A	B		1
3-171-3642	1458	11/3/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/15/14 1630

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 2.1 ⊘ TB on ice nmd

Date/Time: 12/15/14 16:30

COC110314 pg 1additional samples.xls

ANALYTICAL SUMMARY REPORT

January 13, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120311

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 9 samples for MT DEQ-Federal Superfund on 12/15/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120311-001	3-175-1218	11/04/14 15:10	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120311-002	3-175-1824	11/04/14 15:08	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120311-003	3-176-1824	11/04/14 14:38	12/15/14	Soil	Same As Above
H14120311-004	3-176-2430	11/04/14 14:36	12/15/14	Soil	Same As Above
H14120311-005	3-185-5460	11/04/14 9:56	12/15/14	Soil	Same As Above
H14120311-006	3-205-1218	11/04/14 13:30	12/15/14	Soil	Same As Above
H14120311-007	3-065-1218	11/06/14 13:00	12/15/14	Soil	Same As Above
H14120311-008	3-065-1824	11/06/14 12:59	12/15/14	Soil	Same As Above
H14120311-009	3-065-2430	11/06/14 12:58	12/15/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120311

Report Date: 01/13/15
Date Received: 12/15/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120311-001	3-175-1218	0	0	7.3	633	4	3950	317	1260
H14120311-002	3-175-1824	0	0	7.0	1510	33	12500	917	8600
H14120311-003	3-176-1824	0	0	7.3	2980	28	23300	1330	4450
H14120311-004	3-176-2430	0	0	7.5	28	< 1	178	25	2620
H14120311-005	3-185-5460	0	0	6.9	107	7	1310	77	1040
H14120311-006	3-205-1218	0	0	7.6	34	4	638	27	1290
H14120311-007	3-065-1218	0	0	7.4	1400	10	9140	728	2850
H14120311-008	3-065-1824	0	0	7.5	21	< 1	73	16	252
H14120311-009	3-065-2430	0	0	7.5	14	< 1	64	21	115

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120311

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150107A		
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 09:52	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 10:31	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 11:08	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_150105_1		Continuing Calibration Verification Standard							01/06/15 11:33	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150105_1		Continuing Calibration Verification Standard							01/06/15 11:34	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 11:35	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 08:24	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 08:46	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 09:11	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150106_1		Initial Calibration Verification Standard							01/07/15 08:04	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150106_1		Initial Calibration Verification Standard							01/07/15 08:36	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27592
Lab ID: LCS-27592		Laboratory Control Sample				Run: SOIL PH METER_150107A			01/06/15 11:35	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14120311-009ADUP		Sample Duplicate				Run: SOIL PH METER_150107A			01/06/15 11:43	
pH, sat. paste		7.48	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120311

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_150102A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/02/15 10:21	
Arsenic			0.792	mg/L	0.0085	99	90	110			
Cadmium			0.396	mg/L	0.0010	99	90	110			
Copper			0.801	mg/L	0.010	100	90	110			
Lead			0.794	mg/L	0.010	99	90	110			
Zinc			0.806	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/02/15 10:36	
Arsenic			0.00350	mg/L	0.0085		0	0			
Cadmium			0.00365	mg/L	0.0010		0	0			
Copper			0.00498	mg/L	0.010		0	0			
Lead			0.00669	mg/L	0.010		0	0			
Zinc			0.00261	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/02/15 10:40	
Arsenic			0.993	mg/L	0.0085	99	80	120			
Cadmium			0.906	mg/L	0.0010	91	80	120			
Copper			0.519	mg/L	0.010	104	80	120			
Lead			0.953	mg/L	0.010	95	80	120			
Zinc			0.996	mg/L	0.010	100	80	120			
Lab ID:	**CCV**	5	Continuing Calibration Verification Standard							01/02/15 11:10	
Arsenic			2.44	mg/L	0.0085	98	90	110			
Cadmium			2.42	mg/L	0.0010	97	90	110			
Copper			2.59	mg/L	0.010	103	90	110			
Lead			2.39	mg/L	0.010	96	90	110			
Zinc			2.45	mg/L	0.010	98	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120311

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27530
Lab ID:	**MB-27530**	5	Method Blank				Run: ICP2-HE_150102A				01/02/15 14:43
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			0.7	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27530**	5	Laboratory Fortified Blank				Run: ICP2-HE_150102A				01/02/15 14:47
Arsenic			46.9	mg/kg	1.0	94	80	120			
Cadmium			23.5	mg/kg	1.0	94	80	120			
Copper			49.8	mg/kg	1.0	100	80	120			
Lead			47.2	mg/kg	1.0	93	80	120			
Zinc			51.0	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-27530**	5	Laboratory Control Sample				Run: ICP2-HE_150102A				01/02/15 14:51
Arsenic			270	mg/kg	1.8	79	72.3	106.4			
Cadmium			114	mg/kg	1.0	84	73	105.1			
Copper			245	mg/kg	1.1	88	77.5	109.6			
Lead			177	mg/kg	3.2	95	75.9	108.6			
Zinc			187	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120311-009APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150102A				01/02/15 16:26
Arsenic			234	mg/kg	1.9	87	75	125			
Cadmium			107	mg/kg	1.0	83	75	125			
Copper			291	mg/kg	1.1	88	75	125			
Lead			246	mg/kg	3.3	86	75	125			
Zinc			336	mg/kg	1.0	86	75	125			
Lab ID:	**H14120311-009AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150102A				01/02/15 16:30
Arsenic			52.0	mg/kg	1.8	82	75	125			
Cadmium			21.0	mg/kg	1.0	83	75	125			
Copper			109	mg/kg	1.1	90	75	125			
Lead			68.8	mg/kg	3.2	90	75	125			
Zinc			159	mg/kg	1.0	90	75	125			
Lab ID:	**H14120311-009AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150102A				01/02/15 16:33
Arsenic			53.6	mg/kg	1.8	85	75	125	3.2	20	
Cadmium			21.6	mg/kg	1.0	86	75	125	3.0	20	
Copper			113	mg/kg	1.1	97	75	125	3.1	20	
Lead			73.6	mg/kg	3.2	99	75	125	6.8	20	
Zinc			163	mg/kg	1.0	97	75	125	2.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120311

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150105A		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							01/05/15 13:25	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Lead			0.0584	mg/L	0.0010	97	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							01/05/15 13:29	
Arsenic			7.30E-05	mg/L	0.0010						
Lead			0.000215	mg/L	0.0010						
Lab ID:	**ICSAB**	2	Interference Check Sample AB							01/05/15 13:33	
Arsenic			0.0105	mg/L	0.0010	105	70	130			
Lead			0.000222	mg/L	0.0010		0	0			
Lab ID:	**CCV**	2	Continuing Calibration Verification Standard							01/05/15 13:42	
Arsenic			0.0498	mg/L	0.0010	100	90	110			
Lead			0.0494	mg/L	0.0010	99	90	110			
Method:	**SW6020**										Batch: 27530
Lab ID:	**MB-27530**	2	Method Blank				Run: ICPMS204-B_150105A			01/06/15 08:41	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27530**	2	Laboratory Control Sample				Run: ICPMS204-B_150105A			01/06/15 08:45	
Arsenic			302	mg/kg	1.0	88	72.3	106.4			
Lead			178	mg/kg	1.0	95	75.9	108.6			
Lab ID:	**LFB-27530**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150105A			01/06/15 08:50	
Arsenic			51.3	mg/kg	1.0	103	80	120			
Lead			48.8	mg/kg	1.0	98	80	120			
Lab ID:	**H14120311-009APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150105A			01/06/15 09:13	
Arsenic			2450	mg/kg	1.0	97	75	125			
Lead			2430	mg/kg	1.0	97	75	125			
Lab ID:	**H14120311-009AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150105A			01/06/15 09:16	
Arsenic			60.3	mg/kg	1.0	94	75	125			
Lead			63.9	mg/kg	1.0	87	75	125			
Lab ID:	**H14120311-009AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150105A			01/06/15 09:21	
Arsenic			59.5	mg/kg	1.0	92	75	125	1.4	20	
Lead			64.4	mg/kg	1.0	88	75	125	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120311

Login completed by: Austin H. Nearpass

Date Received: 12/15/2014

Reviewed by: BL2000\rwilliams

Received by: AHN

Reviewed Date: 12/18/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	2.1°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Temperature taken from sample because Temperature Blank was burried. An 12/17/14

Chain of Custody Record

Chain of Custody No.:

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

H1412031l

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler:

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-175-1218	1510	11/4/14	Soil	A	B		1
3-175-1824	1506	11/4/14	Soil	A	B		1
3-176-1824	1438	11/4/14	Soil	A	B		1
3-176-2430	1436	11/4/14	Soil	A	B		1
3-185-5460	0956	11/4/14	Soil	A	B		1
3-205-1218	1330	11/4/14	Soil	A	B		1
3-065-1218	1300	11/6/14	Soil	A	B		1
3-065-1824	1259	11/6/14	Soil	A	B		1
3-065-2430	1258	11/6/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/15/14 1630

Received By (sign): (1)
Date/Time:

Relinquished By (sign): (2)
Date/Time:

Received By (sign): (2)
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 2d-48 once hand

Date/Time: 12/15/14 16:30

COC1104-0614 pg 1additional samples.xls

ANALYTICAL SUMMARY REPORT

January 13, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120307

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 7 samples for MT DEQ-Federal Superfund on 12/15/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120307-001	3-281-2430	11/17/14 14:58	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120307-002	3-281-3036	11/17/14 14:57	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120307-003	3-300-4248	11/18/14 9:00	12/15/14	Soil	Same As Above
H14120307-004	3-124-3642	11/21/14 9:41	12/15/14	Soil	Same As Above
H14120307-005	3-124-4248	11/21/14 9:40	12/15/14	Soil	Same As Above
H14120307-006	3-287-2430	11/21/14 8:13	12/15/14	Soil	Same As Above
H14120307-007	3-287-3036	11/21/14 8:12	12/15/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120307

Report Date: 01/13/15
Date Received: 12/15/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120307-001	3-281-2430	0	0	7.0	6	1	1530	6	412
H14120307-002	3-281-3036	0	0	7.1	6	1	743	7	283
H14120307-003	3-300-4248	0	0	7.2	5	19	124	12	820
H14120307-004	3-124-3642	0	0	7.4	13	< 1	78	16	82
H14120307-005	3-124-4248	0	0	7.8	3	< 1	22	8	39
H14120307-006	3-287-2430	0	0	7.5	15	< 1	41	14	101
H14120307-007	3-287-3036	0	0	7.2	149	5	1030	114	1340

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120307

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150107A		
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 09:52	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 10:31	
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV1_1_150105_1		Continuing Calibration Verification Standard							01/06/15 11:07	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 11:08	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150105_1		Continuing Calibration Verification Standard							01/06/15 11:18	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 11:35	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 08:24	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 08:46	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard							01/06/15 09:11	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150106_1		Initial Calibration Verification Standard							01/07/15 08:04	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150106_1		Initial Calibration Verification Standard							01/07/15 08:36	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27591
Lab ID: LCS-27591		Laboratory Control Sample				Run: SOIL PH METER_150107A			01/06/15 11:09	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14120307-007ADUP		Sample Duplicate				Run: SOIL PH METER_150107A			01/06/15 11:25	
pH, sat. paste		7.25	s.u.	0.10				0.4	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120307

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_150108A	
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							01/08/15 14:57	
Copper			0.792	mg/L	0.010	99	90	110			
Zinc			0.782	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							01/08/15 15:12	
Copper			-0.00438	mg/L	0.010		0	0			
Zinc			0.000880	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	2	Interference Check Sample AB							01/08/15 15:16	
Copper			0.506	mg/L	0.010	101	80	120			
Zinc			0.967	mg/L	0.010	97	80	120			
Lab ID:	**ICSA**	2	Interference Check Sample A							01/08/15 19:27	
Copper			-5.00E-05	mg/L	0.010		0	0			
Zinc			0.00363	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	2	Interference Check Sample AB							01/08/15 19:31	
Copper			0.491	mg/L	0.010	98	80	120			
Zinc			0.963	mg/L	0.010	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120307

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27595
Lab ID:	**MB-27595**	2	Method Blank				Run: ICP2-HE_150108A			01/08/15 19:42	
Copper			ND	mg/kg	0.2						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27595**	2	Laboratory Fortified Blank				Run: ICP2-HE_150108A			01/08/15 19:46	
Copper			48.2	mg/kg	1.0	96	80	120			
Zinc			48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27595**	2	Laboratory Control Sample				Run: ICP2-HE_150108A			01/08/15 19:50	
Copper			243	mg/kg	1.1	87	77.5	109.6			
Zinc			180	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H14120307-007APDS**	2	Post Digestion/Distillation Spike				Run: ICP2-HE_150108A			01/08/15 20:30	
Copper			1280	mg/kg	1.1		75	125			A
Zinc			1600	mg/kg	1.0		75	125			A
Lab ID:	**H14120307-007AMS**	2	Sample Matrix Spike				Run: ICP2-HE_150108A			01/08/15 20:34	
Copper			1170	mg/kg	1.1		75	125			A
Zinc			1490	mg/kg	1.0		75	125			A
Lab ID:	**H14120307-007AMSD**	2	Sample Matrix Spike Duplicate				Run: ICP2-HE_150108A			01/08/15 20:37	
Copper			1140	mg/kg	1.1		75	125	3.3	20	A
Zinc			1390	mg/kg	1.0		75	125	6.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/13/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120307

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_150107A		
Lab ID:	**ICV STD**	4	Initial Calibration Verification Standard							01/07/15 10:55	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0308	mg/L	0.0010	103	90	110			
Copper			0.0604	mg/L	0.0010	101	90	110			
Lead			0.0593	mg/L	0.0010	99	90	110			
Method:	**SW6020**									Batch: 27595	
Lab ID:	**MB-27595**	4	Method Blank				Run: ICPMS204-B_150107A			01/07/15 12:23	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			0.8	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27595**	4	Laboratory Control Sample				Run: ICPMS204-B_150107A			01/07/15 12:27	
Arsenic			303	mg/kg	1.0	88	72.3	106.4			
Cadmium			123	mg/kg	1.0	90	73	105.1			
Copper			270	mg/kg	1.0	96	77.5	109.6			
Lead			184	mg/kg	1.0	98	75.9	108.6			
Lab ID:	**LFB-27595**	4	Laboratory Fortified Blank				Run: ICPMS204-B_150107A			01/07/15 12:32	
Arsenic			49.2	mg/kg	1.0	98	80	120			
Cadmium			25.3	mg/kg	1.0	101	80	120			
Copper			50.8	mg/kg	1.0	100	80	120			
Lead			49.1	mg/kg	1.0	98	80	120			
Lab ID:	**H14120307-007AMS**	4	Sample Matrix Spike				Run: ICPMS204-B_150107A			01/07/15 13:31	
Arsenic			212	mg/kg	1.0	128	75	125			S
Cadmium			31.5	mg/kg	1.0	109	75	125			
Copper			1260	mg/kg	1.0		75	125			A
Lead			178	mg/kg	1.0	131	75	125			S
Lab ID:	**H14120307-007AMSD**	4	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150107A			01/07/15 13:35	
Arsenic			202	mg/kg	1.0	107	75	125	5.0	20	
Cadmium			28.7	mg/kg	1.0	97	75	125	9.3	20	
Copper			1170	mg/kg	1.0		75	125	7.1	20	A
Lead			164	mg/kg	1.0	101	75	125	8.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120307

Login completed by: Austin H. Nearpass

Reviewed by: BL2000\rwilliams

Reviewed Date: 12/18/2014

Date Received: 12/15/2014

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	Comments °C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 2.5 °C, Cooler 2 at 1.5 °C. an 12/17/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler:

H14120307

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-281-2430	1458	11/17/14	Soil	A	B		1
3-281-3036	1457	11/17/14	Soil	A	B		1
3-300-4248	900	11/18/14	Soil	A	B		1
3-124-3642	941	11/21/14	Soil	A	B		1
3-124-4248	940	11/21/14	Soil	A	B		1
3-287-2430	813	11/21/14	Soil	A	B		1
3-287-3036	812	11/21/14	Soil	A	B		1
							1
							1
							1
							1
							1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1)	(1)	(2)	(2)
Date/Time: 12/15/14 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	C1 = 2.5 C2 = 1.5 >10 on ice	12/15/14 16:30

ANALYTICAL SUMMARY REPORT

January 12, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120297

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 52 samples for MT DEQ-Federal Superfund on 12/15/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120297-001	3-293-1218	12/10/14 15:05	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120297-002	3-293-1218D	12/10/14 15:06	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120297-003	3-293-1824	12/10/14 15:04	12/15/14	Soil	Same As Above
H14120297-004	3-293-2430	12/10/14 15:03	12/15/14	Soil	Same As Above
H14120297-005	3-298-0006	12/10/14 13:57	12/15/14	Soil	Same As Above
H14120297-006	3-298-0612	12/10/14 13:56	12/15/14	Soil	Same As Above
H14120297-007	3-299-2430	12/10/14 10:53	12/15/14	Soil	Same As Above
H14120297-008	3-299-3036	12/10/14 10:52	12/15/14	Soil	Same As Above
H14120297-009	3-299-3642	12/10/14 10:51	12/15/14	Soil	Same As Above
H14120297-010	3-299-4248	12/10/14 10:50	12/15/14	Soil	Same As Above
H14120297-011	3-301-4248	12/10/14 8:10	12/15/14	Soil	Same As Above
H14120297-012	3-301-4854	12/10/14 8:36	12/15/14	Soil	Same As Above
H14120297-013	3-301-5460	12/10/14 8:35	12/15/14	Soil	Same As Above
H14120297-014	3-310-1824	12/10/14 15:24	12/15/14	Soil	Same As Above
H14120297-015	3-310-2430	12/10/14 15:23	12/15/14	Soil	Same As Above
H14120297-016	3-310-3036	12/10/14 15:22	12/15/14	Soil	Same As Above
H14120297-017	3-311-2430	12/10/14 13:33	12/15/14	Soil	Same As Above
H14120297-018	3-311-3036	12/10/14 13:32	12/15/14	Soil	Same As Above
H14120297-019	3-311-3642	12/10/14 13:31	12/15/14	Soil	Same As Above
H14120297-020	3-312-2430	12/10/14 11:13	12/15/14	Soil	Same As Above
H14120297-021	3-312-3036	12/10/14 11:12	12/15/14	Soil	Same As Above
H14120297-022	3-312-3642	12/10/14 11:11	12/15/14	Soil	Same As Above
H14120297-023	3-313-3036	12/10/14 10:22	12/15/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120297-024	3-313-3642	12/10/14 10:21	12/15/14	Soil	Same As Above
H14120297-025	3-313-4248	12/10/14 10:20	12/15/14	Soil	Same As Above
H14120297-026	3-314-3642	12/10/14 8:51	12/15/14	Soil	Same As Above
H14120297-027	3-314-4248	12/10/14 8:50	12/15/14	Soil	Same As Above
H14120297-028	3-322-1218	12/10/14 16:00	12/15/14	Soil	Same As Above
H14120297-029	3-322-1824	12/10/14 15:59	12/15/14	Soil	Same As Above
H14120297-030	3-322-2430	12/10/14 15:58	12/15/14	Soil	Same As Above
H14120297-031	3-324-1218	12/10/14 15:40	12/15/14	Soil	Same As Above
H14120297-032	3-324-1824	12/10/14 15:39	12/15/14	Soil	Same As Above
H14120297-033	3-324-2430	12/10/14 15:38	12/15/14	Soil	Same As Above
H14120297-034	3-325-0612	12/10/14 13:16	12/15/14	Soil	Same As Above
H14120297-035	3-325-1218	12/10/14 13:15	12/15/14	Soil	Same As Above
H14120297-036	3-325-1824	12/10/14 13:14	12/15/14	Soil	Same As Above
H14120297-037	3-326-1218	12/10/14 9:35	12/15/14	Soil	Same As Above
H14120297-038	3-326-1824	12/10/14 9:34	12/15/14	Soil	Same As Above
H14120297-039	3-326-2430	12/10/14 9:33	12/15/14	Soil	Same As Above
H14120297-040	3-327-1824	12/10/14 11:44	12/15/14	Soil	Same As Above
H14120297-041	3-327-2430	12/10/14 11:43	12/15/14	Soil	Same As Above
H14120297-042	3-327-3036	12/10/14 11:42	12/15/14	Soil	Same As Above
H14120297-043	3-328-2430	12/10/14 10:03	12/15/14	Soil	Same As Above
H14120297-044	3-328-3036	12/10/14 10:02	12/15/14	Soil	Same As Above
H14120297-045	3-328-3642	12/10/14 10:01	12/15/14	Soil	Same As Above
H14120297-046	3-340-2430	12/10/14 12:43	12/15/14	Soil	Same As Above
H14120297-047	3-340-3036	12/10/14 12:42	12/15/14	Soil	Same As Above
H14120297-048	3-340-3642	12/10/14 12:41	12/15/14	Soil	Same As Above
H14120297-049	3-341-3642	12/10/14 12:01	12/15/14	Soil	Same As Above
H14120297-050	3-341-4248	12/10/14 12:00	12/15/14	Soil	Same As Above
H14120297-051	3-350-3642	12/10/14 12:21	12/15/14	Soil	Same As Above
H14120297-052	3-350-4248	12/10/14 12:20	12/15/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120297

Report Date: 01/12/15
Date Received: 12/15/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120297-001	3-293-1218	0	0	8.0	100	9	4130	67	3070
H14120297-002	3-293-1218D	0	0	7.9	906	17	15800	462	5310
H14120297-003	3-293-1824	0	0	7.8	14	< 1	237	19	169
H14120297-004	3-293-2430	0	0	7.5	8	< 1	65	17	99
H14120297-005	3-298-0006	0	0	7.6	481	6	2030	365	1960
H14120297-006	3-298-0612	0	0	7.9	289	4	1870	254	1380
H14120297-007	3-299-2430	0	0	7.1	544	7	3510	354	2500
H14120297-008	3-299-3036	0	0	7.5	298	3	239	325	658
H14120297-009	3-299-3642	0	0	7.0	73	3	1500	63	1090
H14120297-010	3-299-4248	0	0	7.3	15	2	1560	16	807
H14120297-011	3-301-4248	0	0	7.6	1540	20	13500	1560	5370
H14120297-012	3-301-4854	0	0	7.5	15	< 1	95	17	84
H14120297-013	3-301-5460	0	0	7.3	12	< 1	48	12	113
H14120297-014	3-310-1824	0	0	7.5	382	4	2720	478	1380
H14120297-015	3-310-2430	0	0	7.2	197	3	2300	827	1180
H14120297-016	3-310-3036	0	0	6.9	5	< 1	40	19	84
H14120297-017	3-311-2430	0	0	7.7	17	11	1180	14	2760
H14120297-018	3-311-3036	0	0	7.5	8	< 1	26	13	81
H14120297-019	3-311-3642	0	0	6.9	5	< 1	28	15	67
H14120297-020	3-312-2430	0	0	5.6	24	3	769	26	1020
H14120297-021	3-312-3036	0	0	6.0	4	< 1	28	12	55
H14120297-022	3-312-3642	0	0	6.7	5	< 1	35	16	69
H14120297-023	3-313-3036	0	0	7.2	6	11	21300	20	3560
H14120297-024	3-313-3642	0	0	6.9	4	< 1	81	9	250
H14120297-025	3-313-4248	0	0	7.5	5	< 1	31	17	68
H14120297-026	3-314-3642	0	0	7.3	317	5	2240	271	1660
H14120297-027	3-314-4248	0	0	7.2	1770	30	12400	749	7710
H14120297-028	3-322-1218	0	0	7.0	637	7	4390	459	1950
H14120297-029	3-322-1824	0	0	6.8	15	< 1	112	34	130
H14120297-030	3-322-2430	0	0	6.9	209	3	1460	640	933
H14120297-031	3-324-1218	0	0	7.4	1990	13	15800	870	3900
H14120297-032	3-324-1824	0	0	7.1	105	2	767	67	1150
H14120297-033	3-324-2430	0	0	7.0	7	< 1	29	13	62
H14120297-034	3-325-0612	0	0	7.4	2620	18	21800	1070	3830
H14120297-035	3-325-1218	0	0	7.2	156	< 1	1390	62	361
H14120297-036	3-325-1824	0	0	7.2	30	< 1	269	20	85
H14120297-037	3-326-1218	0	0	7.5	102	3	809	87	878
H14120297-038	3-326-1824	0	0	7.0	125	4	820	118	1070
H14120297-039	3-326-2430	0	0	6.8	131	5	873	111	1470
H14120297-040	3-327-1824	0	0	7.0	2720	18	20900	978	4060

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120297

Report Date: 01/12/15
Date Received: 12/15/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120297-041	3-327-2430	0	0	7.1	78	< 1	566	89	288
H14120297-042	3-327-3036	0	0	6.9	5	< 1	34	11	56
H14120297-043	3-328-2430	0	0	7.3	542	12	8520	1670	3590
H14120297-044	3-328-3036	0	0	7.5	8	< 1	57	17	104
H14120297-045	3-328-3642	0	0	7.7	4	< 1	25	11	78
H14120297-046	3-340-2430	0	0	6.2	325	9	1860	156	2950
H14120297-047	3-340-3036	0	0	6.9	6	< 1	186	11	252
H14120297-048	3-340-3642	0	0	7.3	3	< 1	21	8	83
H14120297-049	3-341-3642	0	0	7.6	13	1	4580	11	710
H14120297-050	3-341-4248	0	0	7.9	45	2	3330	49	517
H14120297-051	3-350-3642	0	0	7.2	287	5	2360	173	1780
H14120297-052	3-350-4248	0	0	7.4	440	6	2990	377	1900

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120297

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150107A		
Lab ID: CCV_1_150105_1		Continuing Calibration Verification Standard								01/06/15 09:50
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150105_1		Continuing Calibration Verification Standard								01/06/15 09:51
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard								01/06/15 09:52
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150105_1		Continuing Calibration Verification Standard								01/06/15 10:09
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150105_1		Continuing Calibration Verification Standard								01/06/15 10:30
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150105_1		Continuing Calibration Verification Standard								01/06/15 10:30
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard								01/06/15 10:31
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150105_1		Continuing Calibration Verification Standard								01/06/15 10:44
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_150105_1		Continuing Calibration Verification Standard								01/06/15 11:06
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_150105_1		Continuing Calibration Verification Standard								01/06/15 11:07
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard								01/06/15 11:08
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_150105_1		Continuing Calibration Verification Standard								01/06/15 11:18
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard								01/06/15 11:35
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard								01/06/15 08:24
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard								01/06/15 08:46
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150105_1		Initial Calibration Verification Standard								01/06/15 09:11
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_150106_1		Initial Calibration Verification Standard								01/07/15 08:04
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120297

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_150107A	
Lab ID: ICV_1_150106_1		Initial Calibration Verification Standard							01/07/15 08:36	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 27589	
Lab ID: LCS-27589		Laboratory Control Sample				Run: SOIL PH METER_150107A			01/06/15 09:53	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14120297-010ADUP		Sample Duplicate				Run: SOIL PH METER_150107A			01/06/15 10:08	
pH, sat. paste		7.19	s.u.	0.10				1.5	30	
Lab ID: H14120297-020ADUP		Sample Duplicate				Run: SOIL PH METER_150107A			01/06/15 10:18	
pH, sat. paste		5.58	s.u.	0.10				0.0	30	
Method: ASAM10-3.2									Batch: 27590	
Lab ID: LCS-27590		Laboratory Control Sample				Run: SOIL PH METER_150107A			01/06/15 10:33	
pH, sat. paste		7.60	s.u.	0.10	102	95	105			
Lab ID: H14120297-030ADUP		Sample Duplicate				Run: SOIL PH METER_150107A			01/06/15 10:44	
pH, sat. paste		6.95	s.u.	0.10				0.4	30	
Lab ID: H14120297-040ADUP		Sample Duplicate				Run: SOIL PH METER_150107A			01/06/15 10:52	
pH, sat. paste		7.00	s.u.	0.10				0.3	30	
Method: ASAM10-3.2									Batch: 27591	
Lab ID: LCS-27591		Laboratory Control Sample				Run: SOIL PH METER_150107A			01/06/15 11:09	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14120297-050ADUP		Sample Duplicate				Run: SOIL PH METER_150107A			01/06/15 11:17	
pH, sat. paste		7.90	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120297

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141231A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/31/14 10:31	
Arsenic			0.842	mg/L	0.0085	105	90	110			
Cadmium			0.412	mg/L	0.0010	103	90	110			
Copper			0.817	mg/L	0.010	102	90	110			
Lead			0.840	mg/L	0.010	105	90	110			
Zinc			0.835	mg/L	0.010	104	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/31/14 10:46	
Arsenic			0.00268	mg/L	0.0085		0	0			
Cadmium			-0.00167	mg/L	0.0010		0	0			
Copper			0.00555	mg/L	0.010		0	0			
Lead			-0.00582	mg/L	0.010		0	0			
Zinc			0.00280	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/31/14 10:50	
Arsenic			1.02	mg/L	0.0085	102	80	120			
Cadmium			0.935	mg/L	0.0010	94	80	120			
Copper			0.517	mg/L	0.010	103	80	120			
Lead			0.974	mg/L	0.010	97	80	120			
Zinc			1.02	mg/L	0.010	102	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_150102A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/02/15 10:21	
Arsenic			0.792	mg/L	0.0085	99	90	110			
Cadmium			0.396	mg/L	0.0010	99	90	110			
Copper			0.801	mg/L	0.010	100	90	110			
Lead			0.794	mg/L	0.010	99	90	110			
Zinc			0.806	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/02/15 10:36	
Arsenic			0.00350	mg/L	0.0085		0	0			
Cadmium			0.00365	mg/L	0.0010		0	0			
Copper			0.00498	mg/L	0.010		0	0			
Lead			0.00669	mg/L	0.010		0	0			
Zinc			0.00261	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/02/15 10:40	
Arsenic			0.993	mg/L	0.0085	99	80	120			
Cadmium			0.906	mg/L	0.0010	91	80	120			
Copper			0.519	mg/L	0.010	104	80	120			
Lead			0.953	mg/L	0.010	95	80	120			
Zinc			0.996	mg/L	0.010	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120297

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27527
Lab ID:	**MB-27527**	5	Method Blank				Run: ICP2-HE_141231A				12/31/14 15:18
Arsenic			ND	mg/kg	0.4						
Cadmium			0.03	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27527**	5	Laboratory Fortified Blank				Run: ICP2-HE_141231A				12/31/14 15:22
Arsenic			47.3	mg/kg	1.0	95	80	120			
Cadmium			23.5	mg/kg	1.0	94	80	120			
Copper			49.9	mg/kg	1.0	99	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			50.2	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27527**	5	Laboratory Control Sample				Run: ICP2-HE_141231A				12/31/14 15:33
Arsenic			292	mg/kg	1.8	87	72.3	106.4			
Cadmium			122	mg/kg	1.0	91	73	105.1			
Copper			251	mg/kg	1.1	92	77.5	109.6			
Lead			179	mg/kg	3.1	98	75.9	108.6			
Zinc			204	mg/kg	1.0	97	74.2	109.9			
Lab ID:	**H14120297-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141231A				12/31/14 17:01
Arsenic			230	mg/kg	1.8	87	75	125			
Cadmium			110	mg/kg	1.0	86	75	125			
Copper			259	mg/kg	1.1	91	75	125			
Lead			241	mg/kg	3.3	86	75	125			
Zinc			303	mg/kg	1.0	87	75	125			
Lab ID:	**H14120297-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141231A				12/31/14 17:04
Arsenic			53.4	mg/kg	1.8	95	75	125			
Cadmium			22.8	mg/kg	1.0	91	75	125			
Copper			72.4	mg/kg	1.1	92	75	125			
Lead			67.7	mg/kg	3.2	94	75	125			
Zinc			131	mg/kg	1.0	100	75	125			
Lab ID:	**H14120297-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141231A				12/31/14 17:08
Arsenic			53.4	mg/kg	1.8	96	75	125	0.1	20	
Cadmium			22.9	mg/kg	1.0	92	75	125	0.3	20	
Copper			74.9	mg/kg	1.1	97	75	125	3.4	20	
Lead			65.0	mg/kg	3.2	89	75	125	4.1	20	
Zinc			132	mg/kg	1.0	103	75	125	1.0	20	
Method:	**SW6010B**										Batch: 27528
Lab ID:	**MB-27528**	5	Method Blank				Run: ICP2-HE_141231A				12/31/14 17:12
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120297

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27528	
Lab ID:	**MB-27528**	5	Method Blank				Run: ICP2-HE_141231A			12/31/14 17:12	
Lead			ND	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27528**	5	Laboratory Fortified Blank				Run: ICP2-HE_141231A			12/31/14 17:15	
Arsenic			47.8	mg/kg	1.0	96	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			49.9	mg/kg	1.0	100	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Zinc			53.2	mg/kg	1.0	103	80	120			
Lab ID:	**LCS-27528**	5	Laboratory Control Sample				Run: ICP2-HE_141231A			12/31/14 17:19	
Arsenic			274	mg/kg	1.8	81	72.3	106.4			
Cadmium			116	mg/kg	1.0	86	73	105.1			
Copper			246	mg/kg	1.1	90	77.5	109.6			
Lead			177	mg/kg	3.1	96	75.9	108.6			
Zinc			187	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H14120297-037APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141231A			12/31/14 19:17	
Arsenic			333	mg/kg	1.8	92	75	125			
Cadmium			111	mg/kg	1.0	86	75	125			
Copper			1040	mg/kg	1.1	93	75	125			
Lead			313	mg/kg	3.2	90	75	125			
Zinc			1120	mg/kg	1.0	98	75	125			
Lab ID:	**H14120297-037AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141231A			12/31/14 19:21	
Arsenic			148	mg/kg	1.8	94	75	125			
Cadmium			24.5	mg/kg	1.0	90	75	125			
Copper			870	mg/kg	1.1		75	125			A
Lead			134	mg/kg	3.1	98	75	125			
Zinc			931	mg/kg	1.0		75	125			A
Lab ID:	**H14120297-037AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141231A			12/31/14 19:24	
Arsenic			152	mg/kg	1.7	102	75	125	2.4	20	
Cadmium			24.2	mg/kg	1.0	89	75	125	1.3	20	
Copper			860	mg/kg	1.1		75	125	1.1	20	A
Lead			133	mg/kg	3.1	95	75	125	1.2	20	
Zinc			930	mg/kg	1.0		75	125	0.2	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120297

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27529
Lab ID:	**MB-27529**	5	Method Blank				Run: ICP2-HE_150102A			01/02/15 12:35	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27529**	5	Laboratory Fortified Blank				Run: ICP2-HE_150102A			01/02/15 12:46	
Arsenic			46.9	mg/kg	1.0	94	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			48.9	mg/kg	1.0	98	80	120			
Lead			48.3	mg/kg	1.0	97	80	120			
Zinc			49.0	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27529**	5	Laboratory Control Sample				Run: ICP2-HE_150102A			01/02/15 12:50	
Arsenic			251	mg/kg	1.7	76	72.3	106.4			
Cadmium			110	mg/kg	1.0	83	73	105.1			
Copper			247	mg/kg	1.1	91	77.5	109.6			
Lead			162	mg/kg	3.1	89	75.9	108.6			
Zinc			175	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H14120297-052APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150102A			01/02/15 13:59	
Arsenic			675	mg/kg	1.8	91	75	125			
Cadmium			121	mg/kg	1.0	90	75	125			
Copper			3170	mg/kg	1.1		75	125			A
Lead			596	mg/kg	3.3	85	75	125			
Zinc			2170	mg/kg	1.0		75	125			A
Lab ID:	**H14120297-052AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150102A			01/02/15 14:02	
Arsenic			494	mg/kg	1.8		75	125			A
Cadmium			28.8	mg/kg	1.0	91	75	125			
Copper			2910	mg/kg	1.1		75	125			A
Lead			421	mg/kg	3.2		75	125			A
Zinc			1980	mg/kg	1.0		75	125			A
Lab ID:	**H14120297-052AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150102A			01/02/15 14:40	
Arsenic			513	mg/kg	1.8		75	125	3.9	20	A
Cadmium			29.5	mg/kg	1.0	94	75	125	2.5	20	
Copper			3010	mg/kg	1.1		75	125	3.5	20	A
Lead			445	mg/kg	3.2		75	125	5.6	20	A
Zinc			2070	mg/kg	1.0		75	125	4.3	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120297

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150105A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							01/05/15 13:25	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0308	mg/L	0.0010	103	90	110			
Lead			0.0584	mg/L	0.0010	97	90	110			
Method:	**SW6020**									Batch: 27527	
Lab ID:	**MB-27527**	3	Method Blank				Run: ICPMS204-B_150105A			01/05/15 18:31	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			0.3	mg/kg	0.2						
Lab ID:	**LCS-27527**	3	Laboratory Control Sample				Run: ICPMS204-B_150105A			01/05/15 18:36	
Arsenic			313	mg/kg	1.0	91	72.3	106.4			
Cadmium			124	mg/kg	1.0	90	73	105.1			
Lead			190	mg/kg	1.0	101	75.9	108.6			
Lab ID:	**LFB-27527**	3	Laboratory Fortified Blank				Run: ICPMS204-B_150105A			01/05/15 18:40	
Arsenic			50.4	mg/kg	1.0	101	80	120			
Cadmium			25.4	mg/kg	1.0	102	80	120			
Lead			49.9	mg/kg	1.0	99	80	120			
Lab ID:	**H14120297-018APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_150105A			01/05/15 19:48	
Arsenic			2410	mg/kg	1.0	96	75	125			
Cadmium			1180	mg/kg	1.0	95	75	125			
Lead			2440	mg/kg	1.0	98	75	125			
Lab ID:	**H14120297-018AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_150105A			01/05/15 19:52	
Arsenic			54.6	mg/kg	1.0	94	75	125			
Cadmium			23.2	mg/kg	1.0	92	75	125			
Lead			60.1	mg/kg	1.0	93	75	125			
Lab ID:	**H14120297-018AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150105A			01/05/15 19:56	
Arsenic			55.5	mg/kg	1.0	96	75	125	1.6	20	
Cadmium			23.3	mg/kg	1.0	93	75	125	0.8	20	
Lead			60.7	mg/kg	1.0	95	75	125	1.1	20	
Method:	**SW6020**									Batch: 27528	
Lab ID:	**MB-27528**	2	Method Blank				Run: ICPMS204-B_150105A			01/05/15 20:05	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LFB-27528**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150105A			01/05/15 20:10	
Arsenic			48.4	mg/kg	1.0	97	80	120			
Lead			47.4	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27528**	2	Laboratory Control Sample				Run: ICPMS204-B_150105A			01/05/15 20:14	
Arsenic			302	mg/kg	1.0	88	72.3	106.4			
Lead			184	mg/kg	1.0	99	75.9	108.6			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120297

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 27528	
Lab ID:	**LCS-27528**	2	Laboratory Control Sample				Run: ICPMS204-B_150105A			01/05/15 20:14	
Lab ID:	**H14120297-037APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150105A			01/05/15 21:39	
Arsenic			2500	mg/kg	1.0	98	75	125			
Lead			2500	mg/kg	1.0	98	75	125			
Lab ID:	**H14120297-037AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150105A			01/05/15 21:43	
Arsenic			165	mg/kg	1.0	102	75	125			
Lead			145	mg/kg	1.0	94	75	125			
Lab ID:	**H14120297-037AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150105A			01/05/15 21:48	
Arsenic			170	mg/kg	1.0	112	75	125	2.7	20	
Lead			150	mg/kg	1.0	105	75	125	3.4	20	
Method:	**SW6020**									Batch: 27529	
Lab ID:	**MB-27529**	2	Method Blank				Run: ICPMS204-B_150105A			01/05/15 21:57	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27529**	2	Laboratory Control Sample				Run: ICPMS204-B_150105A			01/05/15 22:01	
Arsenic			289	mg/kg	1.0	84	72.3	106.4			
Lead			173	mg/kg	1.0	92	75.9	108.6			
Lab ID:	**LFB-27529**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150105A			01/05/15 22:06	
Arsenic			46.6	mg/kg	1.0	93	80	120			
Lead			45.4	mg/kg	1.0	91	80	120			
Lab ID:	**H14120297-052APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150105A			01/05/15 23:04	
Arsenic			2990	mg/kg	1.0	100	75	125			
Lead			2780	mg/kg	1.0	95	75	125			
Lab ID:	**H14120297-052AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150105A			01/05/15 23:08	
Arsenic			536	mg/kg	1.0		75	125			A
Lead			437	mg/kg	1.0		75	125			A
Lab ID:	**H14120297-052AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150105A			01/05/15 23:13	
Arsenic			550	mg/kg	1.0		75	125	2.6	20	A
Lead			459	mg/kg	1.0		75	125	5.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14120297

Login completed by: Tracy L. Lorash
Date Received: 12/15/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 12/19/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☐	No ☑	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample ID on COC has a dash between 313 and last four numbers -ID on bags do not. Logged in with ID from COC.
Sample ID on COC has a dash between 328 and last four numbers only -ID on bags do not and splits the last four numbers with a dash. Logged in with ID from COC.
Sample 3-350-4248 was received with a hole in the bag. TI 12/15/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120297

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-293-1218	1505	12/10/14	Soil	A	B		1
3-293-1218D	1506	12/10/14	Soil	A	B		1
3-293-1824	1504	12/10/14	Soil	A	B		1
3-293-2430	1503	12/10/14	Soil	A	B		1
3-298-0006	1357	12/10/14	Soil	A	B		1
3-298-0612	1356	12/10/14	Soil	A	B		1
3-299-2430	1053	12/10/14	Soil	A	B		1
3-299-3036	1052	12/10/14	Soil	A	B		1
3-299-3642	1051	12/10/14	Soil	A	B		1
3-299-4248	1050	12/10/14	Soil	A	B		1
3-301-4248	810	12/10/14	Soil	A	B		1
3-301-4854	836	12/10/14	Soil	A	B		1
3-301-5460	835	12/10/14	Soil	A	B		1
3-310-1824	1524	12/10/14	Soil	A	B		1
3-310-2430	1523	12/10/14	Soil	A	B		1
3-310-3036	1522	12/10/14	Soil	A	B		1
3-311-2430	1333	12/10/14	Soil	A	B		1
3-311-3036	1332	12/10/14	Soil	A	B		1
3-311-3642	1331	12/10/14	Soil	A	B		1
3-312-2430	1113	12/10/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/15/14 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 1:2.5 TB 02:1.5 ONice Hand	12/15/14 16:30

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120297

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-312-3036	1112	12/10/14	Soil	A	B		1
3-312-3642	1111	12/10/14	Soil	A	B		1
3-313-3036	1022	12/10/14	Soil	A	B		1
3-313-3642	1021	12/10/14	Soil	A	B		1
3-313-4248	1020	12/10/14	Soil	A	B		1
3-314-3642	851	12/10/14	Soil	A	B		1
3-314-4248	850	12/10/14	Soil	A	B		1
3-322-1218	1600	12/10/14	Soil	A	B		1
3-322-1824	1559	12/10/14	Soil	A	B		1
3-322-2430	1558	12/10/14	Soil	A	B		1
3-324-1218	1540	12/10/14	Soil	A	B		1
3-324-1824	1539	12/10/14	Soil	A	B		1
3-324-2430	1538	12/10/14	Soil	A	B		1
3-325-0612	1316	12/10/14	Soil	A	B		1
3-325-1218	1315	12/10/14	Soil	A	B		1
3-325-1824	1314	12/10/14	Soil	A	B		1
3-326-1218	935	12/10/14	Soil	A	B		1
3-326-1824	934	12/10/14	Soil	A	B		1
3-326-2430	933	12/10/14	Soil	A	B		1
3-327-1824	1144	12/10/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/15/14 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] Cl: 2.5 TB C2: 1.5 on ice hand	12/15/14 16:30

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120297

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-327-2430	1143	12/10/14	Soil	A	B		1
3-327-3036	1142	12/10/14	Soil	A	B		1
3-328-2430	1003	12/10/14	Soil	A	B		1
3-328-3036	1002	12/10/14	Soil	A	B		1
3-328-3642	1001	12/10/14	Soil	A	B		1
3-340-2430	1243	12/10/14	Soil	A	B		1
3-340-3036	1242	12/10/14	Soil	A	B		1
3-340-3642	1241	12/10/14	Soil	A	B		1
3-341-3642	1201	12/10/14	Soil	A	B		1
3-341-4248	1200	12/10/14	Soil	A	B		1
3-350-3642	1221	12/10/14	Soil	A	B		1
3-350-4248	1220	12/10/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/15/14 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] Cl=2.5°C TB 12.5 on ice hmd	12/15/14 16:30

COC Blank.xls

ANALYTICAL SUMMARY REPORT

January 12, 2015

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120291

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 46 samples for MT DEQ-Federal Superfund on 12/15/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120291-001	3-292-0006	12/11/14 7:58	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120291-002	3-292-0612	12/11/14 7:57	12/15/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120291-003	3-309-0006	12/11/14 8:17	12/15/14	Soil	Same As Above
H14120291-004	3-309-0612	12/11/14 8:16	12/15/14	Soil	Same As Above
H14120291-005	3-321-0006	12/11/14 8:32	12/15/14	Soil	Same As Above
H14120291-006	3-321-0612	12/11/14 8:31	12/15/14	Soil	Same As Above
H14120291-007	3-336-0612	12/11/14 9:36	12/15/14	Soil	Same As Above
H14120291-008	3-336-1218	12/11/14 9:35	12/15/14	Soil	Same As Above
H14120291-009	3-336-1824	12/11/14 9:34	12/15/14	Soil	Same As Above
H14120291-010	3-348-1218	12/11/14 10:40	12/15/14	Soil	Same As Above
H14120291-011	3-348-1824	12/11/14 10:39	12/15/14	Soil	Same As Above
H14120291-012	3-348-2430	12/11/14 10:38	12/15/14	Soil	Same As Above
H14120291-013	3-360-1218	12/11/14 11:00	12/15/14	Soil	Same As Above
H14120291-014	3-360-1824	12/11/14 10:59	12/15/14	Soil	Same As Above
H14120291-015	3-360-2430	12/11/14 10:58	12/15/14	Soil	Same As Above
H14120291-016	3-369-1218	12/11/14 11:30	12/15/14	Soil	Same As Above
H14120291-017	3-369-1824	12/11/14 11:29	12/15/14	Soil	Same As Above
H14120291-018	3-369-2430	12/11/14 11:28	12/15/14	Soil	Same As Above
H14120291-019	3-373-3642	12/11/14 11:51	12/15/14	Soil	Same As Above
H14120291-020	3-373-4248	12/11/14 11:50	12/15/14	Soil	Same As Above
H14120291-021	3-379-2430	12/11/14 12:08	12/15/14	Soil	Same As Above
H14120291-022	3-379-3036	12/11/14 12:07	12/15/14	Soil	Same As Above
H14120291-023	3-379-3642	12/11/14 12:06	12/15/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120291-024	3-387-3642	12/11/14 12:26	12/15/14	Soil	Same As Above
H14120291-025	3-387-4248	12/11/14 12:25	12/15/14	Soil	Same As Above
H14120291-026	3-396-1218	12/11/14 16:05	12/15/14	Soil	Same As Above
H14120291-027	3-396-1824	12/11/14 16:04	12/15/14	Soil	Same As Above
H14120291-028	3-396-2430	12/11/14 16:03	12/15/14	Soil	Same As Above
H14120291-029	3-397-0612	12/11/14 13:06	12/15/14	Soil	Same As Above
H14120291-030	3-397-1218	12/11/14 13:05	12/15/14	Soil	Same As Above
H14120291-031	3-397-1824	12/11/14 13:04	12/15/14	Soil	Same As Above
H14120291-032	3-398-1218	12/11/14 13:36	12/15/14	Soil	Same As Above
H14120291-033	3-398-1824	12/11/14 13:34	12/15/14	Soil	Same As Above
H14120291-034	3-398-1824D	12/11/14 13:35	12/15/14	Soil	Same As Above
H14120291-035	3-398-2430	12/11/14 13:33	12/15/14	Soil	Same As Above
H14120291-036	3-400-3036	12/11/14 13:47	12/15/14	Soil	Same As Above
H14120291-037	3-400-3642	12/11/14 13:46	12/15/14	Soil	Same As Above
H14120291-038	3-400-4248	12/11/14 13:45	12/15/14	Soil	Same As Above
H14120291-039	3-402-4854	12/11/14 15:46	12/15/14	Soil	Same As Above
H14120291-040	3-402-5460	12/11/14 15:45	12/15/14	Soil	Same As Above
H14120291-041	3-403-4854	12/11/14 15:06	12/15/14	Soil	Same As Above
H14120291-042	3-403-5460	12/11/14 15:05	12/15/14	Soil	Same As Above
H14120291-043	3-404-4854	12/11/14 14:41	12/15/14	Soil	Same As Above
H14120291-044	3-404-5460	12/11/14 14:40	12/15/14	Soil	Same As Above
H14120291-045	3-405-0006	12/11/14 14:15	12/15/14	Soil	Same As Above
H14120291-046	3-405-0612	12/11/14 14:14	12/15/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120291

Report Date: 01/12/15
Date Received: 12/15/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120291-001	3-292-0006	0	0	7.9	303	5	1260	283	1420
H14120291-002	3-292-0612	0	0	7.8	19	< 1	125	24	129
H14120291-003	3-309-0006	0	0	7.7	138	4	760	212	1020
H14120291-004	3-309-0612	0	0	7.9	131	2	710	134	668
H14120291-005	3-321-0006	0	0	7.7	139	3	1060	262	1030
H14120291-006	3-321-0612	0	0	7.8	42	< 1	174	26	157
H14120291-007	3-336-0612	0	0	7.7	351	5	2040	346	1580
H14120291-008	3-336-1218	0	0	7.7	14	< 1	77	19	91
H14120291-009	3-336-1824	0	0	7.5	8	< 1	51	16	82
H14120291-010	3-348-1218	0	0	7.8	423	6	2750	289	1860
H14120291-011	3-348-1824	0	0	7.7	23	< 1	90	16	110
H14120291-012	3-348-2430	0	0	7.6	8	< 1	42	13	73
H14120291-013	3-360-1218	0	0	7.5	379	6	3150	348	2070
H14120291-014	3-360-1824	0	0	7.7	15	< 1	101	17	531
H14120291-015	3-360-2430	0	0	7.7	6	< 1	43	13	88
H14120291-016	3-369-1218	0	0	7.6	6	23	17100	11	4560
H14120291-017	3-369-1824	0	0	7.7	6	< 1	99	13	2060
H14120291-018	3-369-2430	0	0	7.2	8	< 1	86	27	134
H14120291-019	3-373-3642	0	0	7.3	446	5	5060	370	1840
H14120291-020	3-373-4248	0	0	7.4	226	5	2830	276	2040
H14120291-021	3-379-2430	0	0	6.9	2	4	842	8	837
H14120291-022	3-379-3036	0	0	7.2	2	< 1	24	6	410
H14120291-023	3-379-3642	0	0	6.8	3	< 1	17	6	48
H14120291-024	3-387-3642	0	0	6.7	581	5	3270	395	2280
H14120291-025	3-387-4248	0	0	7.1	137	< 1	4160	86	1330
H14120291-026	3-396-1218	0	0	6.5	1020	11	2910	420	1710
H14120291-027	3-396-1824	0	0	6.7	15	< 1	60	19	247
H14120291-028	3-396-2430	0	0	6.8	5	< 1	26	13	68
H14120291-029	3-397-0612	0	0	7.4	1650	6	2070	1190	2320
H14120291-030	3-397-1218	0	0	7.6	25	1	648	47	699
H14120291-031	3-397-1824	0	0	7.2	8	< 1	63	14	155
H14120291-032	3-398-1218	0	0	6.7	1190	3	1940	1300	1600
H14120291-033	3-398-1824	0	0	7.4	12	9	577	26	2930
H14120291-034	3-398-1824D	0	0	7.2	5	4	267	22	1780
H14120291-035	3-398-2430	0	0	6.7	8	< 1	178	18	278
H14120291-036	3-400-3036	0	0	7.0	523	12	1830	167	4220
H14120291-037	3-400-3642	0	0	6.6	190	3	1430	169	1260
H14120291-038	3-400-4248	0	0	6.7	121	6	1850	198	2240
H14120291-039	3-402-4854	0	0	7.0	791	6	5800	888	3800
H14120291-040	3-402-5460	0	0	7.1	446	4	2960	439	2100

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120291

Report Date: 01/12/15
Date Received: 12/15/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120291-041	3-403-4854	0	0	7.8	699	6	10000	654	2410
H14120291-042	3-403-5460	0	0	7.7	558	7	6690	326	2140
H14120291-043	3-404-4854	0	0	6.6	181	9	3420	266	4030
H14120291-044	3-404-5460	0	0	7.3	162	13	3050	167	2060
H14120291-045	3-405-0006	0	0	7.6	114	2	778	112	708
H14120291-046	3-405-0612	0	0	7.5	87	2	652	97	635

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120291

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_150102A		
Lab ID: CCV_1_141230_1		Continuing Calibration Verification Standard							12/31/14 09:47	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141230_1		Continuing Calibration Verification Standard							12/31/14 09:47	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141230_1		Initial Calibration Verification Standard							12/31/14 09:48	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141230_1		Continuing Calibration Verification Standard							12/31/14 10:00	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141230_1		Continuing Calibration Verification Standard							12/31/14 10:19	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141230_1		Continuing Calibration Verification Standard							12/31/14 10:20	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141230_1		Initial Calibration Verification Standard							12/31/14 10:21	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141230_1		Continuing Calibration Verification Standard							12/31/14 10:31	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141230_1		Continuing Calibration Verification Standard							12/31/14 10:40	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 27512
Lab ID: LCS-27512		Laboratory Control Sample				Run: SOIL PH METER_150102A			12/31/14 09:49	
pH, sat. paste		7.68	s.u.	0.10	103	95	105			
Lab ID: H14120291-010ADUP		Sample Duplicate				Run: SOIL PH METER_150102A			12/31/14 10:00	
pH, sat. paste		7.78	s.u.	0.10				0.1	30	
Lab ID: H14120291-020ADUP		Sample Duplicate				Run: SOIL PH METER_150102A			12/31/14 10:09	
pH, sat. paste		7.43	s.u.	0.10				0.4	30	
Method: ASAM10-3.2										Batch: 27513
Lab ID: LCS-27513		Laboratory Control Sample				Run: SOIL PH METER_150102A			12/31/14 10:22	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H14120291-030ADUP		Sample Duplicate				Run: SOIL PH METER_150102A			12/31/14 10:30	
pH, sat. paste		7.57	s.u.	0.10				0.0	30	
Lab ID: H14120291-040ADUP		Sample Duplicate				Run: SOIL PH METER_150102A			12/31/14 10:40	
pH, sat. paste		7.07	s.u.	0.10				0.0	30	
Lab ID: H14120291-046ADUP		Sample Duplicate				Run: SOIL PH METER_150102A			12/31/14 10:46	
pH, sat. paste		7.55	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120291

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141231A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/31/14 10:31	
Arsenic			0.842	mg/L	0.0085	105	90	110			
Cadmium			0.412	mg/L	0.0010	103	90	110			
Copper			0.817	mg/L	0.010	102	90	110			
Lead			0.840	mg/L	0.010	105	90	110			
Zinc			0.835	mg/L	0.010	104	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/31/14 10:46	
Arsenic			0.00268	mg/L	0.0085		0	0			
Cadmium			-0.00167	mg/L	0.0010		0	0			
Copper			0.00555	mg/L	0.010		0	0			
Lead			-0.00582	mg/L	0.010		0	0			
Zinc			0.00280	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/31/14 10:50	
Arsenic			1.02	mg/L	0.0085	102	80	120			
Cadmium			0.935	mg/L	0.0010	94	80	120			
Copper			0.517	mg/L	0.010	103	80	120			
Lead			0.974	mg/L	0.010	97	80	120			
Zinc			1.02	mg/L	0.010	102	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_150102A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							01/02/15 10:21	
Arsenic			0.792	mg/L	0.0085	99	90	110			
Cadmium			0.396	mg/L	0.0010	99	90	110			
Copper			0.801	mg/L	0.010	100	90	110			
Lead			0.794	mg/L	0.010	99	90	110			
Zinc			0.806	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							01/02/15 10:36	
Arsenic			0.00350	mg/L	0.0085		0	0			
Cadmium			0.00365	mg/L	0.0010		0	0			
Copper			0.00498	mg/L	0.010		0	0			
Lead			0.00669	mg/L	0.010		0	0			
Zinc			0.00261	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							01/02/15 10:40	
Arsenic			0.993	mg/L	0.0085	99	80	120			
Cadmium			0.906	mg/L	0.0010	91	80	120			
Copper			0.519	mg/L	0.010	104	80	120			
Lead			0.953	mg/L	0.010	95	80	120			
Zinc			0.996	mg/L	0.010	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120291

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27509
Lab ID:	**MB-27509**	5	Method Blank				Run: ICP2-HE_141230A				12/30/14 16:24
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27509**	5	Laboratory Fortified Blank				Run: ICP2-HE_141230A				12/30/14 16:28
Arsenic			47.4	mg/kg	1.0	95	80	120			
Cadmium			23.3	mg/kg	1.0	93	80	120			
Copper			50.6	mg/kg	1.0	100	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			48.1	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27509**	5	Laboratory Control Sample				Run: ICP2-HE_141230A				12/30/14 16:32
Arsenic			282	mg/kg	1.8	81	72.3	106.4			
Cadmium			119	mg/kg	1.0	86	73	105.1			
Copper			258	mg/kg	1.1	91	77.5	109.6			
Lead			183	mg/kg	3.2	97	75.9	108.6			
Zinc			190	mg/kg	1.0	88	74.2	109.9			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120291

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27525
Lab ID:	**MB-27525**	5	Method Blank				Run: ICP2-HE_141231A			12/31/14 11:05	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.5	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			9	mg/kg	0.09						
Lab ID:	**LFB-27525**	5	Laboratory Fortified Blank				Run: ICP2-HE_141231A			12/31/14 11:09	
Arsenic			48.3	mg/kg	1.0	97	80	120			
Cadmium			24.2	mg/kg	1.0	97	80	120			
Copper			49.9	mg/kg	1.0	99	80	120			
Lead			48.9	mg/kg	1.0	98	80	120			
Zinc			49.3	mg/kg	1.0	81	80	120			
Lab ID:	**LCS-27525**	5	Laboratory Control Sample				Run: ICP2-HE_141231A			12/31/14 11:13	
Arsenic			300	mg/kg	1.8	87	72.3	106.4			
Cadmium			125	mg/kg	1.0	92	73	105.1			
Copper			260	mg/kg	1.1	93	77.5	109.6			
Lead			189	mg/kg	3.2	101	75.9	108.6			
Zinc			201	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H14120291-029APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141231A			12/31/14 12:59	
Arsenic			1850	mg/kg	1.9		75	125			A
Cadmium			121	mg/kg	1.0	89	75	125			
Copper			2320	mg/kg	1.1		75	125			A
Lead			1380	mg/kg	3.3		75	125			A
Zinc			2500	mg/kg	1.0		75	125			A
Lab ID:	**H14120291-029AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141231A			12/31/14 13:02	
Arsenic			1650	mg/kg	1.8		75	125			A
Cadmium			29.1	mg/kg	1.0	91	75	125			
Copper			2160	mg/kg	1.1		75	125			A
Lead			1220	mg/kg	3.2		75	125			A
Zinc			2320	mg/kg	1.0		75	125			A
Lab ID:	**H14120291-029AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141231A			12/31/14 13:06	
Arsenic			1660	mg/kg	1.8		75	125	0.4	20	A
Cadmium			28.7	mg/kg	1.0	90	75	125	1.2	20	
Copper			2110	mg/kg	1.1		75	125	2.2	20	A
Lead			1200	mg/kg	3.2		75	125	1.2	20	A
Zinc			2330	mg/kg	1.0		75	125	0.2	20	A
Method:	**SW6010B**										Batch: 27526
Lab ID:	**MB-27526**	5	Method Blank				Run: ICP2-HE_141231A			12/31/14 13:09	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.6	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120291

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27526
Lab ID:	**MB-27526**	5	Method Blank				Run: ICP2-HE_141231A			12/31/14 13:09	
Lead			0.7	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27526**	5	Laboratory Fortified Blank				Run: ICP2-HE_141231A			12/31/14 13:13	
Arsenic			48.9	mg/kg	1.0	98	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			50.7	mg/kg	1.0	100	80	120			
Lead			49.4	mg/kg	1.0	97	80	120			
Zinc			50.9	mg/kg	1.0	101	80	120			
Lab ID:	**LCS-27526**	5	Laboratory Control Sample				Run: ICP2-HE_141231A			12/31/14 13:17	
Arsenic			270	mg/kg	1.8	80	72.3	106.4			
Cadmium			113	mg/kg	1.0	84	73	105.1			
Copper			241	mg/kg	1.1	88	77.5	109.6			
Lead			166	mg/kg	3.1	90	75.9	108.6			
Zinc			186	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14120291-046APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141231A			12/31/14 15:07	
Arsenic			328	mg/kg	1.9	94	75	125			
Cadmium			120	mg/kg	1.0	92	75	125			
Copper			908	mg/kg	1.1	100	75	125			
Lead			333	mg/kg	3.3	92	75	125			
Zinc			887	mg/kg	1.0	98	75	125			
Lab ID:	**H14120291-046AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141231A			12/31/14 15:11	
Arsenic			136	mg/kg	1.8	99	75	125			
Cadmium			25.3	mg/kg	1.0	93	75	125			
Copper			709	mg/kg	1.1		75	125			A
Lead			143	mg/kg	3.2	94	75	125			
Zinc			667	mg/kg	1.0		75	125			A
Lab ID:	**H14120291-046AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141231A			12/31/14 15:14	
Arsenic			135	mg/kg	1.8	96	75	125	0.7	20	
Cadmium			25.3	mg/kg	1.0	93	75	125	0.1	20	
Copper			699	mg/kg	1.1		75	125	1.4	20	A
Lead			139	mg/kg	3.2	84	75	125	3.2	20	
Zinc			665	mg/kg	1.0		75	125	0.3	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120291

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27509
Lab ID:	**H14120291-012APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_150102A				01/02/15 12:24
Arsenic			231	mg/kg	1.9	84	75	125			
Cadmium			110	mg/kg	1.0	83	75	125			
Copper			267	mg/kg	1.2	85	75	125			
Lead			238	mg/kg	3.4	83	75	125			
Zinc			300	mg/kg	1.0	85	75	125			
Lab ID:	**H14120291-012AMS**	5	Sample Matrix Spike				Run: ICP2-HE_150102A				01/02/15 12:27
Arsenic			52.3	mg/kg	1.8	89	75	125			
Cadmium			22.2	mg/kg	1.0	89	75	125			
Copper			86.4	mg/kg	1.1	89	75	125			
Lead			58.5	mg/kg	3.2	81	75	125			
Zinc			120	mg/kg	1.0	95	75	125			
Lab ID:	**H14120291-012AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_150102A				01/02/15 12:31
Arsenic			51.3	mg/kg	1.8	87	75	125	2.0	20	
Cadmium			21.3	mg/kg	1.0	85	75	125	4.1	20	
Copper			87.7	mg/kg	1.1	92	75	125	1.5	20	
Lead			59.9	mg/kg	3.2	84	75	125	2.4	20	
Zinc			114	mg/kg	1.0	83	75	125	5.2	20	
Method:	**SW6010B**										Batch: 27560
Lab ID:	**MB-27560**	5	Method Blank				Run: ICP2-HE_150102A				01/02/15 11:17
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27560**	5	Laboratory Fortified Blank				Run: ICP2-HE_150102A				01/02/15 11:21
Arsenic			47.7	mg/kg	1.0	95	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			49.5	mg/kg	1.0	99	80	120			
Lead			49.1	mg/kg	1.0	98	80	120			
Zinc			49.3	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27560**	5	Laboratory Control Sample				Run: ICP2-HE_150102A				01/02/15 11:25
Arsenic			278	mg/kg	1.8	82	72.3	106.4			
Cadmium			116	mg/kg	1.0	86	73	105.1			
Copper			266	mg/kg	1.1	96	77.5	109.6			
Lead			174	mg/kg	3.1	94	75.9	108.6			
Zinc			190	mg/kg	1.0	90	74.2	109.9			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120291

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_150105A	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							01/05/15 13:25	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Lead			0.0584	mg/L	0.0010	97	90	110			
Method:	**SW6020**									Batch: 27525	
Lab ID:	**MB-27525**	2	Method Blank				Run: ICPMS204-B_150105A			01/05/15 15:11	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27525**	2	Laboratory Control Sample				Run: ICPMS204-B_150105A			01/05/15 15:16	
Arsenic			308	mg/kg	1.0	90	72.3	106.4			
Lead			190	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27525**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150105A			01/05/15 15:20	
Arsenic			50.2	mg/kg	1.0	100	80	120			
Lead			49.9	mg/kg	1.0	100	80	120			
Lab ID:	**H14120291-029APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150105A			01/05/15 16:53	
Arsenic			4100	mg/kg	1.0	97	75	125			
Lead			3340	mg/kg	1.0	89	75	125			
Lab ID:	**H14120291-029AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150105A			01/05/15 17:07	
Arsenic			1780	mg/kg	1.0		75	125			A
Lead			1200	mg/kg	1.0		75	125			A
Lab ID:	**H14120291-029AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150105A			01/05/15 17:11	
Arsenic			1760	mg/kg	1.0		75	125	0.9	20	A
Lead			1170	mg/kg	1.0		75	125	2.3	20	A
Method:	**SW6020**									Batch: 27526	
Lab ID:	**MB-27526**	2	Method Blank				Run: ICPMS204-B_150105A			01/05/15 17:29	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27526**	2	Laboratory Control Sample				Run: ICPMS204-B_150105A			01/05/15 17:34	
Arsenic			299	mg/kg	1.0	87	72.3	106.4			
Lead			178	mg/kg	1.0	95	75.9	108.6			
Lab ID:	**LFB-27526**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150105A			01/05/15 17:38	
Arsenic			50.4	mg/kg	1.0	101	80	120			
Lead			48.9	mg/kg	1.0	98	80	120			
Lab ID:	**H14120291-046APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150105A			01/05/15 18:05	
Arsenic			2530	mg/kg	1.0	98	75	125			
Lead			2530	mg/kg	1.0	98	75	125			
Lab ID:	**H14120291-046AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150105A			01/05/15 18:09	
Arsenic			145	mg/kg	1.0	103	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 01/12/15

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120291

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27526
Lab ID:	**H14120291-046AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150105A				01/05/15 18:09
Lead			141	mg/kg	1.0	92	75	125			
Lab ID:	**H14120291-046AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150105A				01/05/15 18:13
Arsenic			147	mg/kg	1.0	105	75	125	1.1	20	
Lead			139	mg/kg	1.0	88	75	125	1.2	20	
Method:	**SW6020**										Batch: 27560
Lab ID:	**MB-27560**	2	Method Blank				Run: ICPMS204-B_150105A				01/05/15 13:56
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27560**	2	Laboratory Control Sample				Run: ICPMS204-B_150105A				01/05/15 14:00
Arsenic			321	mg/kg	1.0	94	72.3	106.4			
Lead			200	mg/kg	1.0	107	75.9	108.6			
Lab ID:	**LFB-27560**	2	Laboratory Fortified Blank				Run: ICPMS204-B_150105A				01/05/15 14:05
Arsenic			49.3	mg/kg	1.0	99	80	120			
Lead			49.2	mg/kg	1.0	99	80	120			
Lab ID:	**H14120291-012APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_150105A				01/05/15 14:45
Arsenic			2430	mg/kg	1.0	97	75	125			
Lead			2460	mg/kg	1.0	98	75	125			
Lab ID:	**H14120291-012AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_150105A				01/05/15 14:49
Arsenic			54.4	mg/kg	1.0	93	75	125			
Lead			59.5	mg/kg	1.0	94	75	125			
Lab ID:	**H14120291-012AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_150105A				01/05/15 14:53
Arsenic			55.9	mg/kg	1.0	97	75	125	2.8	20	
Lead			62.6	mg/kg	1.0	100	75	125	5.1	20	
Method:	**SW6020**										Analytical Run: ICPMS204-B_150106A
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard								01/06/15 13:42
Arsenic			0.0592	mg/L	0.0010	99	90	110			
Lead			0.0582	mg/L	0.0010	97	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120291

Login completed by: Tracy L. Lorash

Reviewed by: BL2000\rwilliams

Reviewed Date: 12/18/2014

Date Received: 12/15/2014

Received by: AHN

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.7°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120291

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-292-0006	758	12/11/14	Soil	A	B		1
3-292-0612	757	12/11/14	Soil	A	B		1
3-309-0006	817	12/11/14	Soil	A	B		1
3-309-0612	816	12/11/14	Soil	A	B		1
3-321-0006	832	12/11/14	Soil	A	B		1
3-321-0612	831	12/11/14	Soil	A	B		1
3-336-0612	936	12/11/14	Soil	A	B		1
3-336-1218	935	12/11/14	Soil	A	B		1
3-336-1824	934	12/11/14	Soil	A	B		1
3-348-1218	1040	12/11/14	Soil	A	B		1
3-348-1824	1039	12/11/14	Soil	A	B		1
3-348-2430	1038	12/11/14	Soil	A	B		1
3-360-1218	1100	12/11/14	Soil	A	B		1
3-360-1824	1059	12/11/14	Soil	A	B		1
3-360-2430	1058	12/11/14	Soil	A	B		1
3-369-1218	1130	12/11/14	Soil	A	B		1
3-369-1824	1129	12/11/14	Soil	A	B		1
3-369-2430	1128	12/11/14	Soil	A	B		1
3-373-3642	1151	12/11/14	Soil	A	B		1
3-373-4248	1150	12/11/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1) 12/15/14 1630	(2)	(2)
Date/Time: 12/15/14 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 2.7 TB on ice hand	12/15/14 16:30

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H1412029 1

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-379-2430	1208	12/11/14	Soil	A	B		1
3-379-3036	1207	12/11/14	Soil	A	B		1
3-379-3642	1206	12/11/14	Soil	A	B		1
3-387-3642	1226	12/11/14	Soil	A	B		1
3-387-4248	1225	12/11/14	Soil	A	B		1
3-396-1218	1605	12/11/14	Soil	A	B		1
3-396-1824	1604	12/11/14	Soil	A	B		1
3-396-2430	1603	12/11/14	Soil	A	B		1
3-397-0612	1306	12/11/14	Soil	A	B		1
3-397-1218	1305	12/11/14	Soil	A	B		1
3-397-1824	1304	12/11/14	Soil	A	B		1
3-398-1218	1336	12/11/14	Soil	A	B		1
3-398-1824	1334	12/11/14	Soil	A	B		1
3-398-1824D	1335	12/11/14	Soil	A	B		1
3-398-2430	1333	12/11/14	Soil	A	B		1
3-400-3036	1347	12/11/14	Soil	A	B		1
3-400-3642	1346	12/11/14	Soil	A	B		1
3-400-4248	1345	12/11/14	Soil	A	B		1
3-402-4854	1546	12/11/14	Soil	A	B		1
3-402-5460	1545	12/11/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/15/14 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 207 TB on ice hand	12/15/14 16:30

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H1412029 1

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-403-4854	1506	12/11/14	Soil	A	B		1
3-403-5460	1505	12/11/14	Soil	A	B		1
3-404-4854	1441	12/11/14	Soil	A	B		1
3-404-5460	1440	12/11/14	Soil	A	B		1
3-405-0006	1415	12/11/14	Soil	A	B		1
3-405-0612	1414	12/11/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/15/14 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 27TB on ice hand	12/15/14 16:30

ANALYTICAL SUMMARY REPORT

December 31, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120242

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 68 samples for MT DEQ-Federal Superfund on 12/12/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120242-001	3-105-1218	12/04/14 15:45	12/12/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120242-002	3-105-1824	12/04/14 15:44	12/12/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120242-003	3-113-3036	12/04/14 15:02	12/12/14	Soil	Same As Above
H14120242-004	3-113-3642	12/04/14 15:01	12/12/14	Soil	Same As Above
H14120242-005	3-113-4248	12/04/14 15:00	12/12/14	Soil	Same As Above
H14120242-006	3-119-0006	12/04/14 8:43	12/12/14	Soil	Same As Above
H14120242-007	3-119-0612	12/04/14 8:42	12/12/14	Soil	Same As Above
H14120242-008	3-119-1218	12/04/14 8:40	12/12/14	Soil	Same As Above
H14120242-009	3-119-1218D	12/04/14 8:41	12/12/14	Soil	Same As Above
H14120242-010	3-120-0612	12/04/14 8:16	12/12/14	Soil	Same As Above
H14120242-011	3-120-1218	12/04/14 8:15	12/12/14	Soil	Same As Above
H14120242-012	3-120-1824	12/04/14 8:14	12/12/14	Soil	Same As Above
H14120242-013	3-121-1218	12/04/14 14:15	12/12/14	Soil	Same As Above
H14120242-014	3-121-1824	12/04/14 14:14	12/12/14	Soil	Same As Above
H14120242-015	3-121-2430	12/04/14 14:13	12/12/14	Soil	Same As Above
H14120242-016	3-122-4854	12/04/14 14:46	12/12/14	Soil	Same As Above
H14120242-017	3-122-5460	12/04/14 14:45	12/12/14	Soil	Same As Above
H14120242-018	3-128-0612	12/04/14 9:36	12/12/14	Soil	Same As Above
H14120242-019	3-128-1218	12/04/14 9:35	12/12/14	Soil	Same As Above
H14120242-020	3-128-1824	12/04/14 9:34	12/12/14	Soil	Same As Above
H14120242-021	3-129-0612	12/04/14 9:06	12/12/14	Soil	Same As Above
H14120242-022	3-129-1218	12/04/14 9:05	12/12/14	Soil	Same As Above
H14120242-023	3-129-1824	12/04/14 9:04	12/12/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120242-024	3-130-0612	12/04/14 13:46	12/12/14	Soil	Same As Above
H14120242-025	3-130-1218	12/04/14 13:45	12/12/14	Soil	Same As Above
H14120242-026	3-130-1824	12/04/14 13:44	12/12/14	Soil	Same As Above
H14120242-027	3-135-0006	12/05/14 7:57	12/12/14	Soil	Same As Above
H14120242-028	3-135-0612	12/05/14 7:56	12/12/14	Soil	Same As Above
H14120242-029	3-135-1218	12/05/14 7:55	12/12/14	Soil	Same As Above
H14120242-030	3-137-0612	12/05/14 8:16	12/12/14	Soil	Same As Above
H14120242-031	3-137-1218	12/05/14 8:15	12/12/14	Soil	Same As Above
H14120242-032	3-137-1824	12/05/14 8:14	12/12/14	Soil	Same As Above
H14120242-033	3-139-1824	12/04/14 16:14	12/12/14	Soil	Same As Above
H14120242-034	3-139-2430	12/04/14 16:13	12/12/14	Soil	Same As Above
H14120242-035	3-139-3036	12/04/14 16:12	12/12/14	Soil	Same As Above
H14120242-036	3-140-3036	12/04/14 12:12	12/12/14	Soil	Same As Above
H14120242-037	3-140-3642	12/04/14 12:11	12/12/14	Soil	Same As Above
H14120242-038	3-140-4248	12/04/14 12:10	12/12/14	Soil	Same As Above
H14120242-039	3-141-3036	12/04/14 11:42	12/12/14	Soil	Same As Above
H14120242-040	3-141-3642	12/04/14 11:41	12/12/14	Soil	Same As Above
H14120242-041	3-141-4248	12/04/14 11:40	12/12/14	Soil	Same As Above
H14120242-042	3-142-4248	12/04/14 12:50	12/12/14	Soil	Same As Above
H14120242-043	3-142-4854	12/04/14 13:20	12/12/14	Soil	Same As Above
H14120242-044	3-144-3642	12/04/14 10:46	12/12/14	Soil	Same As Above
H14120242-045	3-144-4248	12/04/14 10:45	12/12/14	Soil	Same As Above
H14120242-046	3-146-0612	12/05/14 8:43	12/12/14	Soil	Same As Above
H14120242-047	3-146-1218	12/05/14 8:42	12/12/14	Soil	Same As Above
H14120242-048	3-146-1824	12/05/14 8:41	12/12/14	Soil	Same As Above
H14120242-049	3-150-4854	12/04/14 10:11	12/12/14	Soil	Same As Above
H14120242-050	3-150-5460	12/04/14 10:10	12/12/14	Soil	Same As Above
H14120242-051	3-150-6066	12/04/14 10:31	12/12/14	Soil	Same As Above
H14120242-052	3-151-1824	12/04/14 11:24	12/12/14	Soil	Same As Above
H14120242-053	3-151-2430	12/04/14 11:23	12/12/14	Soil	Same As Above
H14120242-054	3-151-3036	12/04/14 11:22	12/12/14	Soil	Same As Above
H14120242-055	3-155-1218	12/05/14 9:57	12/12/14	Soil	Same As Above
H14120242-056	3-155-1824	12/05/14 9:26	12/12/14	Soil	Same As Above
H14120242-057	3-155-1824d	12/05/14 9:25	12/12/14	Soil	Same As Above
H14120242-058	3-155-2430	12/05/14 9:23	12/12/14	Soil	Same As Above
H14120242-059	3-170-4248	12/05/14 9:40	12/12/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120242-060	3-170-4854	12/05/14 9:56	12/12/14	Soil	Same As Above
H14120242-061	3-170-5460	12/05/14 9:55	12/12/14	Soil	Same As Above
H14120242-062	3-182-4854	12/05/14 11:19	12/12/14	Soil	Same As Above
H14120242-063	3-182-5460	12/05/14 11:18	12/12/14	Soil	Same As Above
H14120242-064	3-184-2430	12/05/14 10:13	12/12/14	Soil	Same As Above
H14120242-065	3-184-3036	12/05/14 10:12	12/12/14	Soil	Same As Above
H14120242-066	3-184-3642	12/05/14 10:11	12/12/14	Soil	Same As Above
H14120242-067	3-200-4854	12/05/14 11:01	12/12/14	Soil	Same As Above
H14120242-068	3-200-5460	12/05/14 11:00	12/12/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120242

Report Date: 12/31/14
Date Received: 12/12/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120242-001	3-105-1218	0	0	7.4	155	3	1120	132	1170
H14120242-002	3-105-1824	0	0	7.5	204	5	1290	143	1400
H14120242-003	3-113-3036	0	0	6.9	5	7	2610	18	750
H14120242-004	3-113-3642	0	0	6.6	8	3	384	19	3790
H14120242-005	3-113-4248	0	0	7.4	7	1	2070	13	368
H14120242-006	3-119-0006	0	0	7.4	586	13	8370	502	4450
H14120242-007	3-119-0612	0	0	7.5	31	2	479	33	830
H14120242-008	3-119-1218	0	0	7.5	5	< 1	31	14	144
H14120242-009	3-119-1218D	0	0	7.3	6	< 1	52	16	153
H14120242-010	3-120-0612	0	0	7.1	1240	11	8150	707	3190
H14120242-011	3-120-1218	0	0	7.6	41	< 1	190	30	186
H14120242-012	3-120-1824	0	0	7.5	10	< 1	55	14	84
H14120242-013	3-121-1218	0	0	7.3	103	9	2030	62	3550
H14120242-014	3-121-1824	0	0	7.4	6	< 1	31	13	125
H14120242-015	3-121-2430	0	0	6.8	7	< 1	38	14	140
H14120242-016	3-122-4854	0	0	6.9	13	8	4660	8	657
H14120242-017	3-122-5460	0	0	6.6	21	< 1	3070	22	351
H14120242-018	3-128-0612	0	0	7.2	1220	15	9460	726	3980
H14120242-019	3-128-1218	0	0	7.6	29	< 1	151	31	183
H14120242-020	3-128-1824	0	0	7.8	31	< 1	377	57	259
H14120242-021	3-129-0612	0	0	7.0	2640	16	27200	1060	3990
H14120242-022	3-129-1218	0	0	6.7	14	1	173	16	567
H14120242-023	3-129-1824	0	0	6.8	8	< 1	87	7	126
H14120242-024	3-130-0612	0	0	7.1	1760	7	11200	936	3090
H14120242-025	3-130-1218	0	0	6.4	12	< 1	55	18	98
H14120242-026	3-130-1824	0	0	6.6	6	< 1	25	11	57
H14120242-027	3-135-0006	0	0	7.9	771	4	3230	449	1490
H14120242-028	3-135-0612	0	0	7.6	16	< 1	66	19	104
H14120242-029	3-135-1218	0	0	7.6	9	< 1	45	17	167
H14120242-030	3-137-0612	0	0	7.3	2670	9	2600	1010	2560
H14120242-031	3-137-1218	0	0	7.6	33	8	3190	63	1140
H14120242-032	3-137-1824	0	0	7.2	9	< 1	74	20	119
H14120242-033	3-139-1824	0	0	7.4	25	10	1200	32	2610
H14120242-034	3-139-2430	0	0	6.9	14	< 1	61	26	189
H14120242-035	3-139-3036	0	0	6.6	13	< 1	50	19	96
H14120242-036	3-140-3036	0	0	6.9	6	< 1	76	12	550
H14120242-037	3-140-3642	0	0	7.3	3	5	921	9	416
H14120242-038	3-140-4248	0	0	7.1	3	1	1620	9	231
H14120242-039	3-141-3036	0	0	7.0	5	< 1	3870	16	211
H14120242-040	3-141-3642	0	0	7.2	6	< 1	1270	16	132

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120242

Report Date: 12/31/14
Date Received: 12/12/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120242-041	3-141-4248	0	0	7.5	6	< 1	1420	17	164
H14120242-042	3-142-4248	0	0	6.7	266	7	2680	331	4820
H14120242-043	3-142-4854	0	0	7.2	228	6	2190	305	2820
H14120242-044	3-144-3642	0	0	7.9	13	1	2780	23	244
H14120242-045	3-144-4248	0	0	7.9	10	< 1	3670	11	211
H14120242-046	3-146-0612	0	0	7.6	88	22	10300	343	5310
H14120242-047	3-146-1218	0	0	7.5	5	< 1	108	19	208
H14120242-048	3-146-1824	0	0	7.1	8	< 1	439	14	229
H14120242-049	3-150-4854	0	0	7.3	8	1	4220	11	369
H14120242-050	3-150-5460	0	0	7.6	21	< 1	4390	23	320
H14120242-051	3-150-6066	0	0	7.6	5	< 1	1970	12	244
H14120242-052	3-151-1824	0	0	7.6	31	7	8560	49	1610
H14120242-053	3-151-2430	0	0	7.0	45	< 1	117	32	155
H14120242-054	3-151-3036	0	0	6.9	13	< 1	59	16	82
H14120242-055	3-155-1218	0	0	7.5	22	19	3180	25	2920
H14120242-056	3-155-1824	0	0	7.4	22	< 1	157	28	210
H14120242-057	3-155-1824d	0	0	7.4	9	< 1	81	22	155
H14120242-058	3-155-2430	0	0	7.4	4	< 1	91	13	184
H14120242-059	3-170-4248	0	0	5.9	4	< 1	43	11	643
H14120242-060	3-170-4854	0	0	7.0	5	< 1	156	10	299
H14120242-061	3-170-5460	0	0	7.4	19	1	638	16	299
H14120242-062	3-182-4854	0	0	7.5	8	1	4470	10	314
H14120242-063	3-182-5460	0	0	7.6	5	< 1	2410	7	222
H14120242-064	3-184-2430	0	0	4.5	10	< 1	3730	53	345
H14120242-065	3-184-3036	0	0	4.7	3	< 1	1310	8	200
H14120242-066	3-184-3642	0	0	5.2	5	< 1	1250	9	190
H14120242-067	3-200-4854	0	0	7.7	634	12	4620	563	3930
H14120242-068	3-200-5460	0	0	7.7	550	12	4270	395	3510

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141229A		
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard								12/24/14 08:04
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard								12/24/14 08:33
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard								12/24/14 09:06
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_141223_1		Continuing Calibration Verification Standard								12/24/14 09:35
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141223_1		Continuing Calibration Verification Standard								12/24/14 09:37
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard								12/24/14 09:37
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141223_1		Continuing Calibration Verification Standard								12/24/14 09:51
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141223_1		Continuing Calibration Verification Standard								12/24/14 10:10
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141223_1		Continuing Calibration Verification Standard								12/24/14 10:11
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard								12/24/14 10:12
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141223_1		Continuing Calibration Verification Standard								12/24/14 10:24
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141223_1		Continuing Calibration Verification Standard								12/24/14 10:39
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141223_1		Continuing Calibration Verification Standard								12/24/14 10:40
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard								12/24/14 10:41
pH, sat. paste		10.0	s.u.	0.10	101	99	101			
Lab ID: CCV_3_141223_1		Continuing Calibration Verification Standard								12/24/14 10:56
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141223_1		Continuing Calibration Verification Standard								12/24/14 11:07
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 27475
Lab ID: LCS-27475		Laboratory Control Sample				Run: SOIL PH METER_141229A				12/24/14 09:38
pH, sat. paste		7.73	s.u.	0.10	103	95	105			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27475
Lab ID: LCS-27475		Laboratory Control Sample				Run: SOIL PH METER_141229A			12/24/14 09:38	
Lab ID: H14120242-010ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 09:50	
pH, sat. paste		7.07	s.u.	0.10				0.1	30	
Lab ID: H14120242-020ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 10:04	
pH, sat. paste		7.80	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27476
Lab ID: LCS-27476		Laboratory Control Sample				Run: SOIL PH METER_141229A			12/24/14 10:13	
pH, sat. paste		7.67	s.u.	0.10	103	95	105			
Lab ID: H14120242-030ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 10:23	
pH, sat. paste		7.28	s.u.	0.10				0.0	30	
Lab ID: H14120242-040ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 10:35	
pH, sat. paste		7.21	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27477
Lab ID: LCS-27477		Laboratory Control Sample				Run: SOIL PH METER_141229A			12/24/14 10:42	
pH, sat. paste		7.70	s.u.	0.10	103	95	105			
Lab ID: H14120242-050ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 10:55	
pH, sat. paste		7.69	s.u.	0.10				0.7	30	
Lab ID: H14120242-060ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 11:06	
pH, sat. paste		7.09	s.u.	0.10				1.6	30	
Lab ID: H14120242-068ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 11:16	
pH, sat. paste		7.61	s.u.	0.10				0.9	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141229B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/29/14 09:51	
Arsenic			0.819	mg/L	0.0085	102	90	110			
Cadmium			0.404	mg/L	0.0010	101	90	110			
Copper			0.782	mg/L	0.010	98	90	110			
Lead			0.793	mg/L	0.010	99	90	110			
Zinc			0.822	mg/L	0.010	103	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/29/14 10:06	
Arsenic			-0.00440	mg/L	0.0085		0	0			
Cadmium			-0.00301	mg/L	0.0010		0	0			
Copper			0.000500	mg/L	0.010		0	0			
Lead			-0.0312	mg/L	0.010		0	0			
Zinc			-0.00328	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/29/14 10:10	
Arsenic			1.01	mg/L	0.0085	101	80	120			
Cadmium			0.927	mg/L	0.0010	93	80	120			
Copper			0.504	mg/L	0.010	101	80	120			
Lead			0.898	mg/L	0.010	90	80	120			
Zinc			1.00	mg/L	0.010	100	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141230A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/30/14 10:22	
Arsenic			0.781	mg/L	0.0085	98	90	110			
Cadmium			0.392	mg/L	0.0010	98	90	110			
Copper			0.787	mg/L	0.010	98	90	110			
Lead			0.803	mg/L	0.010	100	90	110			
Zinc			0.794	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/30/14 10:37	
Arsenic			0.00503	mg/L	0.0085		0	0			
Cadmium			-0.00172	mg/L	0.0010		0	0			
Copper			-0.00248	mg/L	0.010		0	0			
Lead			-0.0367	mg/L	0.010		0	0			
Zinc			-0.00122	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/30/14 10:41	
Arsenic			0.975	mg/L	0.0085	98	80	120			
Cadmium			0.891	mg/L	0.0010	89	80	120			
Copper			0.502	mg/L	0.010	100	80	120			
Lead			0.858	mg/L	0.010	86	80	120			
Zinc			0.971	mg/L	0.010	97	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_141229A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/30/14 01:41	
Arsenic			0.0606	mg/L	0.0050	101	90	110			
Cadmium			0.0310	mg/L	0.0010	103	90	110			
Copper			0.0632	mg/L	0.010	105	90	110			
Lead			0.0587	mg/L	0.010	98	90	110			
Zinc			0.0627	mg/L	0.010	104	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/30/14 01:46	
Arsenic			4.70E-05	mg/L	0.0050						
Cadmium			0.000431	mg/L	0.0010						
Copper			0.000285	mg/L	0.010						
Lead			0.000213	mg/L	0.010						
Zinc			0.00100	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/30/14 01:50	
Arsenic			0.0106	mg/L	0.0050	106	70	130			
Cadmium			0.00950	mg/L	0.0010	95	70	130			
Copper			0.0211	mg/L	0.010	105	70	130			
Lead			0.000202	mg/L	0.010		0	0			
Zinc			0.0113	mg/L	0.010	113	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27493	
Lab ID:	**MB-27493**	5	Method Blank				Run: ICP2-HE_141229B			12/29/14 16:07	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			1	mg/kg	0.6						
Zinc			0.6	mg/kg	0.09						
Lab ID:	**LFB-27493**	5	Laboratory Fortified Blank				Run: ICP2-HE_141229B			12/29/14 16:11	
Arsenic			49.8	mg/kg	1.0	100	80	120			
Cadmium			25.0	mg/kg	1.0	100	80	120			
Copper			50.0	mg/kg	1.0	100	80	120			
Lead			50.5	mg/kg	1.0	98	80	120			
Zinc			52.4	mg/kg	1.0	104	80	120			
Lab ID:	**LCS-27493**	5	Laboratory Control Sample				Run: ICP2-HE_141229B			12/29/14 16:15	
Arsenic			306	mg/kg	1.9	89	72.3	106.4			
Cadmium			129	mg/kg	1.0	94	73	105.1			
Copper			273	mg/kg	1.1	98	77.5	109.6			
Lead			196	mg/kg	3.3	104	75.9	108.6			
Zinc			212	mg/kg	1.0	99	74.2	109.9			
Lab ID:	**H14120242-030APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141229B			12/29/14 17:39	
Arsenic			3070	mg/kg	1.9		75	125			A
Cadmium			132	mg/kg	1.0	95	75	125			
Copper			2870	mg/kg	1.1		75	125			A
Lead			1290	mg/kg	3.3	109	75	125			
Zinc			2950	mg/kg	1.0		75	125			A
Lab ID:	**H14120242-030AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141229B			12/29/14 17:43	
Arsenic			2780	mg/kg	1.8		75	125			A
Cadmium			32.5	mg/kg	1.0	93	75	125			
Copper			2620	mg/kg	1.1		75	125			A
Lead			1080	mg/kg	3.2		75	125			A
Zinc			2660	mg/kg	1.0		75	125			A
Lab ID:	**H14120242-030AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141229B			12/29/14 18:20	
Arsenic			2600	mg/kg	1.8		75	125	6.5	20	A
Cadmium			29.8	mg/kg	1.0	83	75	125	8.8	20	
Copper			2650	mg/kg	1.1		75	125	0.9	20	A
Lead			1030	mg/kg	3.2		75	125	4.7	20	A
Zinc			2460	mg/kg	1.0		75	125	7.9	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27507	
Lab ID:	**MB-27507**	5	Method Blank				Run: ICP2-HE_141230A			12/30/14 11:46	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27507**	5	Laboratory Fortified Blank				Run: ICP2-HE_141230A			12/30/14 11:49	
Arsenic			47.8	mg/kg	1.0	96	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			49.1	mg/kg	1.0	98	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Zinc			49.2	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27507**	5	Laboratory Control Sample				Run: ICP2-HE_141230A			12/30/14 11:53	
Arsenic			283	mg/kg	1.7	87	72.3	106.4			
Cadmium			120	mg/kg	1.0	93	73	105.1			
Copper			246	mg/kg	1.0	93	77.5	109.6			
Lead			181	mg/kg	3.0	103	75.9	108.6			
Zinc			192	mg/kg	1.0	95	74.2	109.9			
Lab ID:	**H14120242-049APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141230A			12/30/14 13:32	
Arsenic			232	mg/kg	1.7	94	75	125			
Cadmium			109	mg/kg	1.0	89	75	125			
Copper			4450	mg/kg	1.1		75	125			A
Lead			232	mg/kg	3.1	92	75	125			
Zinc			596	mg/kg	1.0	94	75	125			
Lab ID:	**H14120242-049AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141230A			12/30/14 13:36	
Arsenic			48.9	mg/kg	1.7	89	75	125			
Cadmium			22.0	mg/kg	1.0	90	75	125			
Copper			4040	mg/kg	1.0		75	125			A
Lead			59.5	mg/kg	3.0	103	75	125			
Zinc			395	mg/kg	1.0		75	125			A
Lab ID:	**H14120242-049AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141230A			12/30/14 13:39	
Arsenic			49.5	mg/kg	1.7	91	75	125	1.2	20	
Cadmium			21.7	mg/kg	1.0	89	75	125	1.8	20	
Copper			3950	mg/kg	1.0		75	125	2.2	20	A
Lead			55.2	mg/kg	2.9	94	75	125	7.6	20	
Zinc			378	mg/kg	1.0		75	125	4.3	20	A
Method:	**SW6010B**									Batch: 27508	
Lab ID:	**MB-27508**	5	Method Blank				Run: ICP2-HE_141230A			12/30/14 13:43	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27508
Lab ID:	**MB-27508**	5	Method Blank				Run: ICP2-HE_141230A			12/30/14 13:43	
Lead			ND	mg/kg	0.6						
Zinc			0.9	mg/kg	0.09						
Lab ID:	**LFB-27508**	5	Laboratory Fortified Blank				Run: ICP2-HE_141230A			12/30/14 13:47	
Arsenic			48.2	mg/kg	1.0	96	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			
Copper			49.9	mg/kg	1.0	99	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			49.3	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27508**	5	Laboratory Control Sample				Run: ICP2-HE_141230A			12/30/14 13:50	
Arsenic			300	mg/kg	1.9	85	72.3	106.4			
Cadmium			126	mg/kg	1.0	89	73	105.1			
Copper			265	mg/kg	1.1	92	77.5	109.6			
Lead			193	mg/kg	3.3	100	75.9	108.6			
Zinc			201	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120241-028AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141230A			12/30/14 14:05	
Arsenic			416	mg/kg	1.8		75	125			A
Cadmium			30.4	mg/kg	1.0	86	75	125			
Copper			2360	mg/kg	1.1		75	125			A
Lead			450	mg/kg	3.2		75	125			A
Zinc			1560	mg/kg	1.0		75	125			A
Lab ID:	**H14120242-068APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141230A			12/30/14 16:14	
Arsenic			786	mg/kg	1.8	95	75	125			
Cadmium			126	mg/kg	1.0	92	75	125			
Copper			4540	mg/kg	1.1		75	125			A
Lead			617	mg/kg	3.2	90	75	125			
Zinc			3710	mg/kg	1.0		75	125			A
Lab ID:	**H14120242-068AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141230A			12/30/14 16:17	
Arsenic			614	mg/kg	1.7		75	125			A
Cadmium			35.4	mg/kg	1.0	97	75	125			
Copper			4270	mg/kg	1.1		75	125			A
Lead			470	mg/kg	3.1		75	125			A
Zinc			3820	mg/kg	1.0		75	125			A
Lab ID:	**H14120242-068AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141230A			12/30/14 16:21	
Arsenic			620	mg/kg	1.7		75	125	1.0	20	A
Cadmium			34.3	mg/kg	1.0	93	75	125	2.9	20	
Copper			4410	mg/kg	1.1		75	125	3.3	20	A
Lead			484	mg/kg	3.1		75	125	2.9	20	A
Zinc			3860	mg/kg	1.0		75	125	1.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141229A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/29/14 11:05	
Arsenic			0.0598	mg/L	0.0010	100	90	110			
Cadmium			0.0299	mg/L	0.0010	100	90	110			
Copper			0.0616	mg/L	0.0010	103	90	110			
Lead			0.0576	mg/L	0.0010	96	90	110			
Zinc			0.0602	mg/L	0.0010	100	90	110			
Method:	**SW6020**										Batch: 27492
Lab ID:	**MB-27492**	5	Method Blank				Run: ICPMS204-B_141229A			12/29/14 15:21	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			5	mg/kg	4						
Lab ID:	**LCS-27492**	5	Laboratory Control Sample				Run: ICPMS204-B_141229A			12/29/14 15:25	
Arsenic			322	mg/kg	1.0	94	72.3	106.4			
Cadmium			116	mg/kg	1.0	85	73	105.1			
Copper			292	mg/kg	1.0	104	77.5	109.6			
Lead			190	mg/kg	1.0	101	75.9	108.6			
Zinc			223	mg/kg	3.8	103	74.2	109.9			
Lab ID:	**LFB-27492**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141229A			12/29/14 15:30	
Arsenic			48.4	mg/kg	1.0	97	80	120			
Cadmium			22.7	mg/kg	1.0	91	80	120			
Copper			50.8	mg/kg	1.0	102	80	120			
Lead			47.9	mg/kg	1.0	96	80	120			
Zinc			55.6	mg/kg	3.5	102	80	120			
Lab ID:	**H14120166-014AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141229A			12/29/14 16:05	
Arsenic			75.6	mg/kg	1.0	114	75	125			
Cadmium			24.3	mg/kg	1.0	93	75	125			
Copper			688	mg/kg	1.0		75	125			A
Lead			67.5	mg/kg	1.0	100	75	125			
Zinc			202	mg/kg	3.6	139	75	125			S
Lab ID:	**H14120166-014AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141229A			12/29/14 16:10	
Arsenic			71.2	mg/kg	1.0	106	75	125	6.0	20	
Cadmium			23.6	mg/kg	1.0	91	75	125	3.0	20	
Copper			623	mg/kg	1.0		75	125	9.9	20	A
Lead			64.5	mg/kg	1.0	94	75	125	4.6	20	
Zinc			189	mg/kg	3.6	113	75	125	6.8	20	
Lab ID:	**H14120242-013APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141229A			12/29/14 17:45	
Arsenic			2570	mg/kg	1.0	101	75	125			
Cadmium			1130	mg/kg	1.0	91	75	125			
Copper			4070	mg/kg	1.0	83	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27492
Lab ID:	**H14120242-013APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141229A			12/29/14 17:45	
Lead			2540	mg/kg	1.0	101	75	125			
Zinc			5550	mg/kg	3.4	82	75	125			
Lab ID:	**H14120242-013AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141229A			12/29/14 17:49	
Arsenic			148	mg/kg	1.0	91	75	125			
Cadmium			29.5	mg/kg	1.0	85	75	125			
Copper			1950	mg/kg	1.0		75	125			A
Lead			106	mg/kg	1.0	90	75	125			
Zinc			3390	mg/kg	3.4		75	125			A
Lab ID:	**H14120242-013AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141229A			12/29/14 17:54	
Arsenic			151	mg/kg	1.0	97	75	125	2.2	20	
Cadmium			29.7	mg/kg	1.0	85	75	125	0.6	20	
Copper			2050	mg/kg	1.0		75	125	5.0	20	A
Lead			107	mg/kg	1.0	90	75	125	0.7	20	
Zinc			3520	mg/kg	3.4		75	125	3.7	20	A
Method:	**SW6020**										Batch: 27493
Lab ID:	**MB-27493**	2	Method Blank				Run: ICPMS204-B_141229A			12/29/14 22:39	
Arsenic			0.8	mg/kg	0.3						
Lead			0.6	mg/kg	0.2						
Lab ID:	**LFB-27493**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141229A			12/29/14 22:48	
Arsenic			50.2	mg/kg	1.0	99	80	120			
Lead			49.0	mg/kg	1.0	97	80	120			
Lab ID:	**H14120242-030APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141229A			12/30/14 00:33	
Arsenic			5090	mg/kg	1.0	91	75	125			
Lead			3130	mg/kg	1.0	86	75	125			
Lab ID:	**H14120242-030AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141229A			12/30/14 00:37	
Arsenic			2870	mg/kg	1.0		75	125			A
Lead			1000	mg/kg	1.0		75	125			A
Lab ID:	**H14120242-030AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141229A			12/30/14 00:41	
Arsenic			2890	mg/kg	1.0		75	125	0.8	20	A
Lead			1050	mg/kg	1.0		75	125	4.4	20	A
Lab ID:	**LCS-27493**	2	Laboratory Control Sample				Run: ICPMS204-B_141229A			12/30/14 10:03	
Arsenic			337	mg/kg	1.0	98	72.3	106.4			
Lead			201	mg/kg	1.0	107	75.9	108.6			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141230B	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/30/14 13:47	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Lead			0.0583	mg/L	0.0010	97	90	110			
Method:	**SW6020**									Batch: 27507	
Lab ID:	**MB-27507**	2	Method Blank				Run: ICPMS204-B_141230B			12/30/14 14:19	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27507**	2	Laboratory Control Sample				Run: ICPMS204-B_141230B			12/30/14 14:23	
Arsenic			304	mg/kg	1.0	94	72.3	106.4			
Lead			185	mg/kg	1.0	105	75.9	108.6			
Lab ID:	**LFB-27507**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141230B			12/30/14 14:28	
Arsenic			48.6	mg/kg	1.0	97	80	120			
Lead			47.2	mg/kg	1.0	94	80	120			
Lab ID:	**H14120242-049APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141230B			12/30/14 16:40	
Arsenic			2190	mg/kg	1.0	93	75	125			
Lead			2160	mg/kg	1.0	92	75	125			
Lab ID:	**H14120242-049AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141230B			12/30/14 16:44	
Arsenic			49.6	mg/kg	1.0	89	75	125			
Lead			54.6	mg/kg	1.0	93	75	125			
Lab ID:	**H14120242-049AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141230B			12/30/14 16:49	
Arsenic			49.9	mg/kg	1.0	90	75	125	0.4	20	
Lead			52.3	mg/kg	1.0	89	75	125	4.2	20	
Method:	**SW6020**									Batch: 27508	
Lab ID:	**MB-27508**	2	Method Blank				Run: ICPMS204-B_141230B			12/30/14 16:58	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27508**	2	Laboratory Control Sample				Run: ICPMS204-B_141230B			12/30/14 17:02	
Arsenic			318	mg/kg	1.0	90	72.3	106.4			
Lead			194	mg/kg	1.0	101	75.9	108.6			
Lab ID:	**LFB-27508**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141230B			12/30/14 17:07	
Arsenic			47.6	mg/kg	1.0	95	80	120			
Lead			46.8	mg/kg	1.0	94	80	120			
Lab ID:	**H14120241-028AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141230B			12/30/14 17:38	
Arsenic			410	mg/kg	1.0		75	125			A
Lead			426	mg/kg	1.0		75	125			A
Lab ID:	**H14120241-028AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141230B			12/30/14 17:43	
Arsenic			420	mg/kg	1.0		75	125	2.4	20	A
Lead			447	mg/kg	1.0		75	125	4.8	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120242

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27508
Lab ID:	**H14120241-028AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141230B			12/30/14 17:43	
Lab ID:	**H14120242-068APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141230B			12/30/14 19:50	
Arsenic			2770	mg/kg	1.0	93	75	125			
Lead			2520	mg/kg	1.0	89	75	125			
Lab ID:	**H14120242-068AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141230B			12/30/14 19:54	
Arsenic			572	mg/kg	1.0		75	125			A
Lead			415	mg/kg	1.0		75	125			A
Lab ID:	**H14120242-068AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141230B			12/30/14 19:58	
Arsenic			632	mg/kg	1.0		75	125	10	20	A
Lead			461	mg/kg	1.0		75	125	10	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14120242

Login completed by: Tracy L. Lorash
Date Received: 12/12/2014
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 12/18/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection time on COC for sample #56 is 0926 - sample bag has time of 0925. Logged in with time from COC.
Collection time on COC for sample #57 is 0925 - sample bag has time of 0926. Logged in with time from COC.
Received sample bag labeled 3-119-1824 collected on 12/4/14 @ 0839 that is not on the COC. Per Karin, we are not to analyze.
Cooler 1 was received at 6.2°C, Cooler 2 at 5.5°C. Samples were received on wet ice. TI 12/15/14

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120242

SAMPLE ID C1	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-105-1218	1545	12/4/14	Soil	A	B		1
3-105-1824	1544	12/4/14	Soil	A	B		1
3-113-3036	1502	12/4/14	Soil	A	B		1
3-113-3642	1501	12/4/14	Soil	A	B		1
3-113-4248	1500	12/4/14	Soil	A	B		1
3-119-0006	843	12/4/14	Soil	A	B		1
3-119-0612	842	12/4/14	Soil	A	B		1
3-119-1218	840	12/4/14	Soil	A	B		1
3-119-1218D	841	12/4/14	Soil	A	B		1
3-120-0612	816	12/4/14	Soil	A	B		1
3-120-1218	815	12/4/14	Soil	A	B		1
3-120-1824	814	12/4/14	Soil	A	B		1
3-121-1218	1415	12/4/14	Soil	A	B		1
3-121-1824	1414	12/4/14	Soil	A	B		1
3-121-2430	1413	12/4/14	Soil	A	B		1
3-122-4854	1446	12/4/14	Soil	A	B		1
3-122-5460	1445	12/4/14	Soil	A	B		1
3-128-0612	936	12/4/14	Soil	A	B		1
3-128-1218	935	12/4/14	Soil	A	B		1
3-128-1824	934	12/4/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/12/14 0930

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 5.3
C2 = 5.5 } on ice TB Hand del.

Date/Time: 12/12/14 9:30

COC120414 120514 EL pg 1-3.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120242

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-129-0612	906	12/4/14	Soil	A	B		1
3-129-1218	905	12/4/14	Soil	A	B		1
3-129-1824	904	12/4/14	Soil	A	B		1
3-130-0612	1346	12/4/14	Soil	A	B		1
3-130-1218	1345	12/4/14	Soil	A	B		1
3-130-1824	1344	12/4/14	Soil	A	B		1
3-135-0006	757	12/5/14	Soil	A	B		1
3-135-0612	756	12/5/14	Soil	A	B		1
3-135-1218	755	12/5/14	Soil	A	B		1
3-137-0612	816	12/5/14	Soil	A	B		1
3-137-1218	815	12/5/14	Soil	A	B		1
3-137-1824	814	12/5/14	Soil	A	B		1
3-139-1824	1614	12/4/14	Soil	A	B		1
3-139-2430	1613	12/4/14	Soil	A	B		1
3-139-3036	1612	12/4/14	Soil	A	B		1
3-140-3036	~~1442~~ 1212	12/4/14	Soil	A	B		1
3-140-3642	~~1441~~ 1211	12/4/14	Soil	A	B		1
3-140-4248	~~1440~~ 1210	12/4/14	Soil	A	B		1
3-141-3036	1142	12/4/14	Soil	A	B		1
3-141-3642	1141	12/4/14	Soil	A	B		1

C1
C2

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/12/14 ~~1230~~ 0930	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature]	C1 = 6.3 C2 5.5 } on ice TB Hand del 12/12/14 9:30

COC120414 120514 EL pg 1-3.xls

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120242

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-141-4248	1140	12/4/14	Soil	A	B		1
3-142-4248	1250	12/4/14	Soil	A	B		1
3-142-4854	1320	12/4/14	Soil	A	B		1
3-144-3642	1046	12/4/14	Soil	A	B		1
3-144-4248	1045	12/4/14	Soil	A	B		1
3-146-0612	843	12/5/14	Soil	A	B		1
3-146-1218	842	12/5/14	Soil	A	B		1
3-146-1824	841	12/5/14	Soil	A	B		1
3-150-4854	1011	12/4/14	Soil	A	B		1
3-150-5460	1010	12/4/14	Soil	A	B		1
3-150-6066	1031	12/4/14	Soil	A	B		1
3-151-1824	1124	12/4/14	Soil	A	B		1
3-151-2430	1123	12/4/14	Soil	A	B		1
3-151-3036	1122	12/4/14	Soil	A	B		1
3-155-1218	957	12/5/14	Soil	A	B		1
3-155-1824	926	12/5/14	Soil	A	B		1
3-155-1824d	925	12/5/14	Soil	A	B		1
3-155-2430	923	12/5/14	Soil	A	B		1
3-170-4248	940	12/5/14	Soil	A	B		1
3-170-4854	956	12/5/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) Erin M Bond	(1)	(2)	(2)
Date/Time: 12/12/14 0930	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	Kacey Donald	C1 = 5.3 C2 = 5.5 } on ice TB Hand del 12/12/14 9:30

COC120414 120514 EL pg 1-3.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120242

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-170-5460	955	12/5/14	Soil	A	B		1
3-182-4854	1119	12/5/14	Soil	A	B		1
3-182-5460	1118	12/5/14	Soil	A	B		1
3-184-2430	1013	12/5/14	Soil	A	B		1
3-184-3036	1012	12/5/14	Soil	A	B		1
3-184-3642	1011	12/5/14	Soil	A	B		1
3-200-4854	1101	12/5/14	Soil	A	B		1
3-200-5460	1100	12/5/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/12/14 0930

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

Date/Time:
C1 = 5.3
C2 = 5.5 } TB on ice hand del
12/12/14 9:30

COC120414 120514 EL pg 1-3.xls

ANALYTICAL SUMMARY REPORT

December 31, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120241

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 53 samples for MT DEQ-Federal Superfund on 12/12/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120241-001	3-110-1218	12/08/14 11:15	12/12/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120241-002	3-110-1824	12/08/14 11:14	12/12/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120241-003	3-110-2430	12/08/14 11:13	12/12/14	Soil	Same As Above
H14120241-004	3-110E-0006	12/08/14 11:38	12/12/14	Soil	Same As Above
H14120241-005	3-110E-0612	12/08/14 11:37	12/12/14	Soil	Same As Above
H14120241-006	3-136-2430	12/08/14 12:33	12/12/14	Soil	Same As Above
H14120241-007	3-136-3036	12/08/14 12:32	12/12/14	Soil	Same As Above
H14120241-008	3-136-3642	12/08/14 12:31	12/12/14	Soil	Same As Above
H14120241-009	3-136S-1218	12/08/14 13:26	12/12/14	Soil	Same As Above
H14120241-010	3-136S-1824	12/08/14 13:25	12/12/14	Soil	Same As Above
H14120241-011	3-136S-2430	12/08/14 13:49	12/12/14	Soil	Same As Above
H14120241-012	3-136S2-0006	12/08/14 14:35	12/12/14	Soil	Same As Above
H14120241-013	3-136S2-0612	12/08/14 14:34	12/12/14	Soil	Same As Above
H14120241-014	3-136S2-1218	12/08/14 14:33	12/12/14	Soil	Same As Above
H14120241-015	3-136SE-0006	12/08/14 14:15	12/12/14	Soil	Same As Above
H14120241-016	3-136SE-0612	12/08/14 14:14	12/12/14	Soil	Same As Above
H14120241-017	3-136SE-1218	12/08/14 14:13	12/12/14	Soil	Same As Above
H14120241-018	3-137S-0006	12/08/14 12:07	12/12/14	Soil	Same As Above
H14120241-019	3-137S-0612	12/08/14 12:06	12/12/14	Soil	Same As Above
H14120241-020	3-137S-1218	12/08/14 12:05	12/12/14	Soil	Same As Above
H14120241-021	3-137S2-0006	12/08/14 14:48	12/12/14	Soil	Same As Above
H14120241-022	3-137S2-0612	12/08/14 14:47	12/12/14	Soil	Same As Above
H14120241-023	3-137S2-1218	12/08/14 14:46	12/12/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120241-024	3-145-1218	12/08/14 15:25	12/12/14	Soil	Same As Above
H14120241-025	3-145-1218D	12/08/14 15:26	12/12/14	Soil	Same As Above
H14120241-026	3-145-1824	12/08/14 15:24	12/12/14	Soil	Same As Above
H14120241-027	3-145-2430	12/08/14 15:23	12/12/14	Soil	Same As Above
H14120241-028	3-145E-0006	12/08/14 16:13	12/12/14	Soil	Same As Above
H14120241-029	3-145E-0612	12/08/14 16:12	12/12/14	Soil	Same As Above
H14120241-030	3-145S-1824	12/08/14 15:50	12/12/14	Soil	Same As Above
H14120241-031	3-145S-2430	12/08/14 15:58	12/12/14	Soil	Same As Above
H14120241-032	3-145S-3036	12/08/14 15:57	12/12/14	Soil	Same As Above
H14120241-033	3-165-1218	12/08/14 9:45	12/12/14	Soil	Same As Above
H14120241-034	3-165-1824	12/08/14 9:44	12/12/14	Soil	Same As Above
H14120241-035	3-165-2430	12/08/14 9:43	12/12/14	Soil	Same As Above
H14120241-036	3-166-0612	12/08/14 9:17	12/12/14	Soil	Same As Above
H14120241-037	3-166-1218	12/08/14 9:15	12/12/14	Soil	Same As Above
H14120241-038	3-166-1218D	12/08/14 9:16	12/12/14	Soil	Same As Above
H14120241-039	3-166-1824	12/08/14 9:14	12/12/14	Soil	Same As Above
H14120241-040	3-166S-0006	12/08/14 10:38	12/12/14	Soil	Same As Above
H14120241-041	3-166S-0612	12/08/14 10:37	12/12/14	Soil	Same As Above
H14120241-042	3-166S-1218	12/08/14 10:36	12/12/14	Soil	Same As Above
H14120241-043	3-166S-1824	12/08/14 10:35	12/12/14	Soil	Same As Above
H14120241-044	3-168-1824	12/08/14 8:54	12/12/14	Soil	Same As Above
H14120241-045	3-168-2430	12/08/14 8:53	12/12/14	Soil	Same As Above
H14120241-046	3-168-3036	12/08/14 8:52	12/12/14	Soil	Same As Above
H14120241-047	3-169-3036	12/08/14 8:02	12/12/14	Soil	Same As Above
H14120241-048	3-169-3642	12/08/14 8:01	12/12/14	Soil	Same As Above
H14120241-049	3-169-4248	12/08/14 8:00	12/12/14	Soil	Same As Above
H14120241-050	3-177-1824	12/08/14 8:25	12/12/14	Soil	Same As Above
H14120241-051	3-177-1824D	12/08/14 8:26	12/12/14	Soil	Same As Above
H14120241-052	3-177-2430	12/08/14 8:24	12/12/14	Soil	Same As Above
H14120241-053	3-177-3036	12/08/14 8:23	12/12/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

ANALYTICAL SUMMARY REPORT

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120241

Report Date: 12/31/14
Date Received: 12/12/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120241-001	3-110-1218	0	0	7.2	671	15	17000	857	3900
H14120241-002	3-110-1824	0	0	7.5	16	3	242	24	1390
H14120241-003	3-110-2430	0	0	7.1	16	< 1	106	18	147
H14120241-004	3-110E-0006	0	0	8.2	82	2	625	88	372
H14120241-005	3-110E-0612	0	0	8.2	31	< 1	77	17	81
H14120241-006	3-136-2430	0	0	7.8	1910	12	13300	1410	3650
H14120241-007	3-136-3036	0	0	7.2	16	< 1	129	24	215
H14120241-008	3-136-3642	0	0	6.9	9	< 1	46	17	88
H14120241-009	3-136S-1218	0	0	7.8	21	< 1	133	25	112
H14120241-010	3-136S-1824	0	0	7.6	10	< 1	35	15	73
H14120241-011	3-136S-2430	0	0	7.8	3	< 1	22	10	47
H14120241-012	3-136S2-0006	0	0	7.9	782	10	5330	669	2560
H14120241-013	3-136S2-0612	0	0	7.8	32	< 1	190	31	138
H14120241-014	3-136S2-1218	0	0	8.0	13	< 1	45	15	74
H14120241-015	3-136SE-0006	0	0	8.2	658	14	3570	485	3060
H14120241-016	3-136SE-0612	0	0	7.8	16	< 1	67	16	84
H14120241-017	3-136SE-1218	0	0	7.8	7	< 1	43	9	46
H14120241-018	3-137S-0006	0	0	7.8	976	11	4810	497	3250
H14120241-019	3-137S-0612	0	0	7.8	114	2	1040	117	611
H14120241-020	3-137S-1218	0	0	7.8	14	< 1	103	21	112
H14120241-021	3-137S2-0006	0	0	8.7	111	2	660	89	416
H14120241-022	3-137S2-0612	0	0	8.4	45	< 1	75	15	83
H14120241-023	3-137S2-1218	0	0	8.3	21	< 1	45	14	79
H14120241-024	3-145-1218	0	0	7.8	2010	17	17100	1970	4080
H14120241-025	3-145-1218D	0	0	7.5	834	9	6870	574	2260
H14120241-026	3-145-1824	0	0	6.6	33	< 1	166	29	160
H14120241-027	3-145-2430	0	0	6.9	9	< 1	51	14	82
H14120241-028	3-145E-0006	0	0	7.7	382	9	2300	414	1590
H14120241-029	3-145E-0612	0	0	7.8	32	< 1	138	16	75
H14120241-030	3-145S-1824	0	0	7.7	2490	20	21600	1230	3990
H14120241-031	3-145S-2430	0	0	7.4	29	< 1	174	28	109
H14120241-032	3-145S-3036	0	0	7.6	59	< 1	417	52	162
H14120241-033	3-165-1218	0	0	7.7	901	12	6580	587	3440
H14120241-034	3-165-1824	0	0	8.2	20	< 1	90	19	106
H14120241-035	3-165-2430	0	0	7.9	6	< 1	37	10	62
H14120241-036	3-166-0612	0	0	7.8	2420	17	16700	1620	3980
H14120241-037	3-166-1218	0	0	7.8	53	2	485	32	744
H14120241-038	3-166-1218D	0	0	7.8	47	< 1	307	24	707
H14120241-039	3-166-1824	0	0	7.3	21	< 1	57	21	131
H14120241-040	3-166S-0006	0	0	7.7	1000	5	1310	565	1570

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120241

Report Date: 12/31/14
Date Received: 12/12/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120241-041	3-166S-0612	0	0	7.7	66	10	1350	150	2870
H14120241-042	3-166S-1218	0	0	7.8	12	< 1	100	12	790
H14120241-043	3-166S-1824	0	0	7.4	18	2	338	21	982
H14120241-044	3-168-1824	0	0	7.3	20	10	352	28	1920
H14120241-045	3-168-2430	0	0	7.3	5	2	179	9	650
H14120241-046	3-168-3036	0	0	7.4	12	3	310	17	817
H14120241-047	3-169-3036	0	0	6.4	26	6	196	32	1630
H14120241-048	3-169-3642	0	0	7.2	18	3	215	24	1060
H14120241-049	3-169-4248	0	0	7.3	12	2	64	15	696
H14120241-050	3-177-1824	0	0	7.6	10	15	1200	8	5250
H14120241-051	3-177-1824D	0	0	7.6	7	11	3550	11	4450
H14120241-052	3-177-2430	0	0	7.4	5	< 1	37	12	161
H14120241-053	3-177-3036	0	0	7.6	7	< 1	86	9	105

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141229A		
Lab ID: CCV_1_141223_1		Continuing Calibration Verification Standard							12/24/14 08:02	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141223_1		Continuing Calibration Verification Standard							12/24/14 08:03	
pH, sat. paste		3.99	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard							12/24/14 08:04	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141223_1		Continuing Calibration Verification Standard							12/24/14 08:17	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141223_1		Continuing Calibration Verification Standard							12/24/14 08:32	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141223_1		Continuing Calibration Verification Standard							12/24/14 08:33	
pH, sat. paste		3.99	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard							12/24/14 08:33	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141223_1		Continuing Calibration Verification Standard							12/24/14 08:47	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141223_1		Continuing Calibration Verification Standard							12/24/14 09:04	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141223_1		Continuing Calibration Verification Standard							12/24/14 09:05	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard							12/24/14 09:06	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141223_1		Continuing Calibration Verification Standard							12/24/14 09:20	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard							12/24/14 09:37	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard							12/24/14 10:12	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141223_1		Initial Calibration Verification Standard							12/24/14 10:41	
pH, sat. paste		10.0	s.u.	0.10	101	99	101			
Method: ASAM10-3.2										Batch: 27472
Lab ID: LCS-27472		Laboratory Control Sample				Run: SOIL PH METER_141229A			12/24/14 08:05	
pH, sat. paste		7.67	s.u.	0.10	103	95	105			
Lab ID: H14120241-010ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 08:16	
pH, sat. paste		7.58	s.u.	0.10				0.5	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27472
Lab ID: H14120241-010ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 08:16	
Lab ID: H14120241-020ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 08:27	
pH, sat. paste		7.85	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27473
Lab ID: LCS-27473		Laboratory Control Sample				Run: SOIL PH METER_141229A			12/24/14 08:34	
pH, sat. paste		7.75	s.u.	0.10	104	95	105			
Lab ID: H14120241-030ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 08:46	
pH, sat. paste		7.66	s.u.	0.10				0.1	30	
Lab ID: H14120241-040ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 08:58	
pH, sat. paste		7.73	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27474
Lab ID: LCS-27474		Laboratory Control Sample				Run: SOIL PH METER_141229A			12/24/14 09:07	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H14120241-050ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 09:19	
pH, sat. paste		7.60	s.u.	0.10				0.7	30	
Lab ID: H14120241-053ADUP		Sample Duplicate				Run: SOIL PH METER_141229A			12/24/14 09:23	
pH, sat. paste		7.58	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141224B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/24/14 09:45	
Arsenic			0.792	mg/L	0.0085	99	90	110			
Cadmium			0.386	mg/L	0.0010	97	90	110			
Copper			0.785	mg/L	0.010	98	90	110			
Lead			0.792	mg/L	0.010	99	90	110			
Zinc			0.792	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/24/14 10:00	
Arsenic			0.000410	mg/L	0.0085		0	0			
Cadmium			0.00119	mg/L	0.0010		0	0			
Copper			0.00150	mg/L	0.010		0	0			
Lead			-0.0324	mg/L	0.010		0	0			
Zinc			0.00117	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/24/14 10:04	
Arsenic			0.958	mg/L	0.0085	96	80	120			
Cadmium			0.874	mg/L	0.0010	87	80	120			
Copper			0.498	mg/L	0.010	100	80	120			
Lead			0.859	mg/L	0.010	86	80	120			
Zinc			0.958	mg/L	0.010	96	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141229B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/29/14 09:51	
Arsenic			0.819	mg/L	0.0085	102	90	110			
Cadmium			0.404	mg/L	0.0010	101	90	110			
Copper			0.782	mg/L	0.010	98	90	110			
Lead			0.793	mg/L	0.010	99	90	110			
Zinc			0.822	mg/L	0.010	103	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/29/14 10:06	
Arsenic			-0.00440	mg/L	0.0085		0	0			
Cadmium			-0.00301	mg/L	0.0010		0	0			
Copper			0.000500	mg/L	0.010		0	0			
Lead			-0.0312	mg/L	0.010		0	0			
Zinc			-0.00328	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/29/14 10:10	
Arsenic			1.01	mg/L	0.0085	101	80	120			
Cadmium			0.927	mg/L	0.0010	93	80	120			
Copper			0.504	mg/L	0.010	101	80	120			
Lead			0.898	mg/L	0.010	90	80	120			
Zinc			1.00	mg/L	0.010	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141230A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/30/14 10:22	
Arsenic			0.781	mg/L	0.0085	98	90	110			
Cadmium			0.392	mg/L	0.0010	98	90	110			
Copper			0.787	mg/L	0.010	98	90	110			
Lead			0.803	mg/L	0.010	100	90	110			
Zinc			0.794	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/30/14 10:37	
Arsenic			0.00503	mg/L	0.0085		0	0			
Cadmium			-0.00172	mg/L	0.0010		0	0			
Copper			-0.00248	mg/L	0.010		0	0			
Lead			-0.0367	mg/L	0.010		0	0			
Zinc			-0.00122	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/30/14 10:41	
Arsenic			0.975	mg/L	0.0085	98	80	120			
Cadmium			0.891	mg/L	0.0010	89	80	120			
Copper			0.502	mg/L	0.010	100	80	120			
Lead			0.858	mg/L	0.010	86	80	120			
Zinc			0.971	mg/L	0.010	97	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_141229A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/30/14 01:41	
Arsenic			0.0606	mg/L	0.0050	101	90	110			
Cadmium			0.0310	mg/L	0.0010	103	90	110			
Copper			0.0632	mg/L	0.010	105	90	110			
Lead			0.0587	mg/L	0.010	98	90	110			
Zinc			0.0627	mg/L	0.010	104	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/30/14 01:46	
Arsenic			4.70E-05	mg/L	0.0050						
Cadmium			0.000431	mg/L	0.0010						
Copper			0.000285	mg/L	0.010						
Lead			0.000213	mg/L	0.010						
Zinc			0.00100	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/30/14 01:50	
Arsenic			0.0106	mg/L	0.0050	106	70	130			
Cadmium			0.00950	mg/L	0.0010	95	70	130			
Copper			0.0211	mg/L	0.010	105	70	130			
Lead			0.000202	mg/L	0.010		0	0			
Zinc			0.0113	mg/L	0.010	113	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27451
Lab ID:	**MB-27451**	5	Method Blank				Run: ICP2-HE_141224B			12/24/14 16:56	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LFB-27451**	5	Laboratory Fortified Blank				Run: ICP2-HE_141224B			12/24/14 16:59	
Arsenic			46.4	mg/kg	1.0	93	80	120			
Cadmium			23.0	mg/kg	1.0	92	80	120			
Copper			49.6	mg/kg	1.0	98	80	120			
Lead			46.0	mg/kg	1.0	92	80	120			
Zinc			47.3	mg/kg	1.0	93	80	120			
Lab ID:	**LCS-27451**	5	Laboratory Control Sample				Run: ICP2-HE_141224B			12/24/14 17:03	
Arsenic			280	mg/kg	1.9	78	72.3	106.4			
Cadmium			118	mg/kg	1.0	83	73	105.1			
Copper			260	mg/kg	1.1	89	77.5	109.6			
Lead			175	mg/kg	3.3	90	75.9	108.6			
Zinc			189	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H14120241-015AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141224B			12/24/14 18:50	
Arsenic			684	mg/kg	1.9		75	125			A
Cadmium			36.0	mg/kg	1.0	84	75	125			
Copper			3510	mg/kg	1.1		75	125			A
Lead			508	mg/kg	3.3		75	125			A
Zinc			2980	mg/kg	1.0		75	125			A
Lab ID:	**H14120241-015AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141224B			12/24/14 18:54	
Arsenic			718	mg/kg	1.9		75	125	4.8	20	A
Cadmium			37.6	mg/kg	1.0	91	75	125	4.5	20	
Copper			3500	mg/kg	1.1		75	125	0.2	20	A
Lead			532	mg/kg	3.3		75	125	4.7	20	A
Zinc			3150	mg/kg	1.0		75	125	5.5	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27452
Lab ID:	**MB-27452**	5	Method Blank				Run: ICP2-HE_141229B				12/29/14 14:16
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			1.0	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27452**	5	Laboratory Fortified Blank				Run: ICP2-HE_141229B				12/29/14 14:20
Arsenic			48.4	mg/kg	1.0	97	80	120			
Cadmium			24.3	mg/kg	1.0	97	80	120			
Copper			48.9	mg/kg	1.0	98	80	120			
Lead			49.4	mg/kg	1.0	97	80	120			
Zinc			51.7	mg/kg	1.0	100	80	120			
Lab ID:	**LCS-27452**	5	Laboratory Control Sample				Run: ICP2-HE_141229B				12/29/14 14:24
Arsenic			271	mg/kg	1.7	79	72.3	106.4			
Cadmium			112	mg/kg	1.0	82	73	105.1			
Copper			250	mg/kg	1.0	89	77.5	109.6			
Lead			175	mg/kg	3.0	93	75.9	108.6			
Zinc			183	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H14120241-035AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141229B				12/29/14 16:00
Arsenic			52.7	mg/kg	1.8	96	75	125			
Cadmium			22.5	mg/kg	1.0	91	75	125			
Copper			85.0	mg/kg	1.1	98	75	125			
Lead			59.3	mg/kg	3.2	83	75	125			
Zinc			113	mg/kg	1.0	103	75	125			
Lab ID:	**H14120241-035AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141229B				12/29/14 16:04
Arsenic			51.3	mg/kg	1.8	93	75	125	2.7	20	
Cadmium			22.2	mg/kg	1.0	90	75	125	1.6	20	
Copper			84.0	mg/kg	1.1	96	75	125	1.2	20	
Lead			70.1	mg/kg	3.2	104	75	125	17	20	
Zinc			115	mg/kg	1.0	107	75	125	1.6	20	
Method:	**SW6010B**										Batch: 27491
Lab ID:	**MB-27491**	5	Method Blank				Run: ICP2-HE_141229B				12/29/14 11:52
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27491**	5	Laboratory Fortified Blank				Run: ICP2-HE_141229B				12/29/14 11:56
Arsenic			50.0	mg/kg	1.0	100	80	120			
Cadmium			24.6	mg/kg	1.0	98	80	120			
Copper			49.3	mg/kg	1.0	98	80	120			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27491
Lab ID:	**LFB-27491**	5	Laboratory Fortified Blank				Run: ICP2-HE_141229B				12/29/14 11:56
Lead			48.9	mg/kg	1.0	98	80	120			
Zinc			51.1	mg/kg	1.0	101	80	120			
Lab ID:	**LCS-27491**	5	Laboratory Control Sample				Run: ICP2-HE_141229B				12/29/14 12:00
Arsenic			302	mg/kg	1.7	92	72.3	106.4			
Cadmium			128	mg/kg	1.0	98	73	105.1			
Copper			256	mg/kg	1.0	96	77.5	109.6			
Lead			188	mg/kg	3.0	106	75.9	108.6			
Zinc			205	mg/kg	1.0	101	74.2	109.9			
Lab ID:	**H14120241-053AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141229B				12/29/14 13:35
Arsenic			59.7	mg/kg	1.9	95	75	125			
Cadmium			24.9	mg/kg	1.0	94	75	125			
Copper			132	mg/kg	1.2	97	75	125			
Lead			61.2	mg/kg	3.4	92	75	125			
Zinc			154	mg/kg	1.0	101	75	125			
Lab ID:	**H14120241-053AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141229B				12/29/14 14:13
Arsenic			51.5	mg/kg	1.9	81	75	125	15	20	
Cadmium			23.0	mg/kg	1.0	88	75	125	8.0	20	
Copper			127	mg/kg	1.1	89	75	125	4.1	20	
Lead			61.7	mg/kg	3.3	95	75	125	0.8	20	
Zinc			141	mg/kg	1.0	78	75	125	8.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27508
Lab ID:	**MB-27508**	5	Method Blank				Run: ICP2-HE_141230A				12/30/14 13:43
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.9	mg/kg	0.09						
Lab ID:	**LFB-27508**	5	Laboratory Fortified Blank				Run: ICP2-HE_141230A				12/30/14 13:47
Arsenic			48.2	mg/kg	1.0	96	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			
Copper			49.9	mg/kg	1.0	99	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			49.3	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27508**	5	Laboratory Control Sample				Run: ICP2-HE_141230A				12/30/14 13:50
Arsenic			300	mg/kg	1.9	85	72.3	106.4			
Cadmium			126	mg/kg	1.0	89	73	105.1			
Copper			265	mg/kg	1.1	92	77.5	109.6			
Lead			193	mg/kg	3.3	100	75.9	108.6			
Zinc			201	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120241-028AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141230A				12/30/14 14:05
Arsenic			416	mg/kg	1.8		75	125			A
Cadmium			30.4	mg/kg	1.0	86	75	125			
Copper			2360	mg/kg	1.1		75	125			A
Lead			450	mg/kg	3.2		75	125			A
Zinc			1560	mg/kg	1.0		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141229A	
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/29/14 11:05	
Arsenic			0.0598	mg/L	0.0010	100	90	110			
Cadmium			0.0299	mg/L	0.0010	100	90	110			
Copper			0.0616	mg/L	0.0010	103	90	110			
Lead			0.0576	mg/L	0.0010	96	90	110			
Zinc			0.0602	mg/L	0.0010	100	90	110			
Method:	**SW6020**										Batch: 27451
Lab ID:	**MB-27451**	3	Method Blank				Run: ICPMS204-B_141229A			12/29/14 18:03	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27451**	3	Laboratory Control Sample				Run: ICPMS204-B_141229A			12/29/14 18:08	
Arsenic			324	mg/kg	1.0	94	72.3	106.4			
Cadmium			118	mg/kg	1.0	86	73	105.1			
Lead			196	mg/kg	1.0	105	75.9	108.6			
Lab ID:	**LFB-27451**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141229A			12/29/14 18:12	
Arsenic			50.1	mg/kg	1.0	100	80	120			
Cadmium			23.3	mg/kg	1.0	93	80	120			
Lead			49.6	mg/kg	1.0	99	80	120			
Lab ID:	**H14120241-015AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141229A			12/29/14 19:43	
Arsenic			710	mg/kg	1.0		75	125			A
Cadmium			35.2	mg/kg	1.0	84	75	125			
Lead			524	mg/kg	1.0		75	125			A
Lab ID:	**H14120241-015AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141229A			12/29/14 19:47	
Arsenic			752	mg/kg	1.0		75	125	5.7	20	A
Cadmium			35.5	mg/kg	1.0	85	75	125	0.9	20	
Lead			535	mg/kg	1.0		75	125	2.2	20	A
Method:	**SW6020**										Batch: 27452
Lab ID:	**MB-27452**	2	Method Blank				Run: ICPMS204-B_141229A			12/29/14 19:56	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27452**	2	Laboratory Control Sample				Run: ICPMS204-B_141229A			12/29/14 20:01	
Arsenic			313	mg/kg	1.0	91	72.3	106.4			
Lead			195	mg/kg	1.0	104	75.9	108.6			
Lab ID:	**LFB-27452**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141229A			12/29/14 20:05	
Arsenic			50.7	mg/kg	1.0	101	80	120			
Lead			49.9	mg/kg	1.0	100	80	120			
Lab ID:	**H14120241-035AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141229A			12/29/14 22:16	
Arsenic			57.1	mg/kg	1.0	102	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120241

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27452
Lab ID:	**H14120241-035AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141229A			12/29/14 22:16	
Lead			59.1	mg/kg	1.0	99	75	125			
Lab ID:	**H14120241-035AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141229A			12/29/14 22:21	
Arsenic			56.0	mg/kg	1.0	100	75	125	2.0	20	
Lead			59.3	mg/kg	1.0	99	75	125	0.3	20	
Method:	**SW6020**										Batch: 27491
Lab ID:	**MB-27491**	5	Method Blank				Run: ICPMS204-B_141229A			12/29/14 12:38	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			0.8	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			4	mg/kg	4						
Lab ID:	**LCS-27491**	5	Laboratory Control Sample				Run: ICPMS204-B_141229A			12/29/14 12:42	
Arsenic			322	mg/kg	1.0	94	72.3	106.4			
Cadmium			121	mg/kg	1.0	88	73	105.1			
Copper			294	mg/kg	1.0	105	77.5	109.6			
Lead			194	mg/kg	1.0	104	75.9	108.6			
Zinc			221	mg/kg	3.3	102	74.2	109.9			
Lab ID:	**LFB-27491**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141229A			12/29/14 12:47	
Arsenic			50.0	mg/kg	1.0	100	80	120			
Cadmium			23.0	mg/kg	1.0	92	80	120			
Copper			52.5	mg/kg	1.0	103	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Zinc			55.0	mg/kg	3.5	102	80	120			
Lab ID:	**H14120241-053AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141229A			12/29/14 14:58	
Arsenic			58.9	mg/kg	1.0	98	75	125			
Cadmium			24.3	mg/kg	1.0	91	75	125			
Copper			143	mg/kg	1.0	106	75	125			
Lead			60.8	mg/kg	1.0	98	75	125			
Zinc			161	mg/kg	3.7	106	75	125			
Lab ID:	**H14120241-053AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141229A			12/29/14 15:02	
Arsenic			58.6	mg/kg	1.0	100	75	125	0.4	20	
Cadmium			23.3	mg/kg	1.0	89	75	125	4.1	20	
Copper			136	mg/kg	1.0	95	75	125	5.0	20	
Lead			59.7	mg/kg	1.0	98	75	125	1.8	20	
Zinc			157	mg/kg	3.7	100	75	125	2.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120241

Login completed by: Tracy L. Lorash

Date Received: 12/12/2014

Reviewed by: BL2000\rwilliams

Received by: TLL

Reviewed Date: 12/17/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample ID on bags have S/E in the ID for all three 136 samples -ID on COC does not. Logged in with ID from COC. Cooler 1 was received at 6.2°C, Cooler 2 at 5.5°C. Samples were received on wet ice. TI 12/15/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H1412024 1

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-110-1218	1115	12/8/14	Soil	A	B		1
3-110-1824	1114	12/8/14	Soil	A	B		1
3-110-2430	1113	12/8/14	Soil	A	B		1
3-110E-0006	1138	12/8/14	Soil	A	B		1
3-110E-0612	1137	12/8/14	Soil	A	B		1
3-136-2430	1233	12/8/14	Soil	A	B		1
3-136-3036	1232	12/8/14	Soil	A	B		1
3-136-3642	1231	12/8/14	Soil	A	B		1
3-136S-1218	1326	12/8/14	Soil	A	B		1
3-136S-1824	1325	12/8/14	Soil	A	B		1
3-136S-2430	1349	12/8/14	Soil	A	B		1
3-136S2-0006	1435	12/8/14	Soil	A	B		1
3-136S2-0612	1434	12/8/14	Soil	A	B		1
3-136S2-1218	1433	12/8/14	Soil	A	B		1
3-136SE-0006	1415	12/8/14	Soil	A	B		1
3-136SE-0612	1414	12/8/14	Soil	A	B		1
3-136SE-1218	1413	12/8/14	Soil	A	B		1
3-137S-0006	1207	12/8/14	Soil	A	B		1
3-137S-0612	1206	12/8/14	Soil	A	B		1
3-137S-1218	1205	12/8/14	Soil	A	B		1

G2

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/12/14 0930	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature]	C1 = 6.2 C2 = 5.5 } on ice TB hand del 12/12/14 9:30

COC Blank.xls

Page 1 of 2

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120241

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-137S2-0006	1448	12/8/14	Soil	A	B		1
3-137S2-0612	1447	12/8/14	Soil	A	B		1
3-137S2-1218	1446	12/8/14	Soil	A	B		1
3-145-1218	1525	12/8/14	Soil	A	B		1
3-145-1218D	1526	12/8/14	Soil	A	B		1
3-145-1824	1524	12/8/14	Soil	A	B		1
3-145-2430	1523	12/8/14	Soil	A	B		1
3-145E-0006	1613	12/8/14	Soil	A	B		1
3-145E-0612	1612	12/8/14	Soil	A	B		1
3-145S-1824	1550	12/8/14	Soil	A	B		1
3-145S-2430	1558	12/8/14	Soil	A	B		1
3-145S-3036	1557	12/8/14	Soil	A	B		1
3-165-1218	945	12/8/14	Soil	A	B		1
3-165-1824	944	12/8/14	Soil	A	B		1
3-165-2430	943	12/8/14	Soil	A	B		1
3-166-0612	917	12/8/14	Soil	A	B		1
3-166-1218	915	12/8/14	Soil	A	B		1
3-166-1218D	916	12/8/14	Soil	A	B		1
3-166-1824	914	12/8/14	Soil	A	B		1
3-166S-0006	1038	12/8/14	Soil	A	B		1

C2

C1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/12/14 0930

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 6.2
C2 = 5.5 } on ice TB hand del

Date/Time: 12/12/14 9:30

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120241

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-166S-0612	1037	12/8/14	Soil	A	B		1
3-166S-1218	1036	12/8/14	Soil	A	B		1
3-166S-1824	1035	12/8/14	Soil	A	B		1
3-168-1824	854	12/8/14	Soil	A	B		1
3-168-2430	853	12/8/14	Soil	A	B		1
3-168-3036	852	12/8/14	Soil	A	B		1
3-169-3036	802	12/8/14	Soil	A	B		1
3-169-3642	801	12/8/14	Soil	A	B		1
3-169-4248	800	12/8/14	Soil	A	B		1
3-177-1824	825	12/8/14	Soil	A	B		1
3-177-1824D	826	12/8/14	Soil	A	B		1
3-177-2430	824	12/8/14	Soil	A	B		1
3-177-3036	823	12/8/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/12/14 0930	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature]	C1 = 6.2 C2 = 5.5 Y TB on ice hand del. 12/12/14 9:30

COC Blank.xls

ANALYTICAL SUMMARY REPORT

December 24, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120167

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 46 samples for MT DEQ-Federal Superfund on 12/8/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120167-001	3-058-1824	12/02/14 8:59	12/08/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120167-002	3-058-2430	12/02/14 8:58	12/08/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120167-003	3-058-3036	12/02/14 8:57	12/08/14	Soil	Same As Above
H14120167-004	3-058-3642	12/02/14 8:56	12/08/14	Soil	Same As Above
H14120167-005	3-058E-0006	12/02/14 9:58	12/08/14	Soil	Same As Above
H14120167-006	3-058E-0612	12/02/14 9:57	12/08/14	Soil	Same As Above
H14120167-007	3-066-3036	12/02/14 10:07	12/08/14	Soil	Same As Above
H14120167-008	3-066-3642	12/02/14 10:06	12/08/14	Soil	Same As Above
H14120167-009	3-066-4248	12/02/14 10:05	12/08/14	Soil	Same As Above
H14120167-010	3-067-3642	12/02/14 8:41	12/08/14	Soil	Same As Above
H14120167-011	3-067-4248	12/02/14 8:40	12/08/14	Soil	Same As Above
H14120167-012	3-075-3642	12/02/14 10:41	12/08/14	Soil	Same As Above
H14120167-013	3-075-4248	12/02/14 10:40	12/08/14	Soil	Same As Above
H14120167-014	3-078-1218	12/02/14 8:20	12/08/14	Soil	Same As Above
H14120167-015	3-078-1824	12/02/14 8:19	12/08/14	Soil	Same As Above
H14120167-016	3-078-2430	12/02/14 8:18	12/08/14	Soil	Same As Above
H14120167-017	3-079-1824	12/02/14 7:50	12/08/14	Soil	Same As Above
H14120167-018	3-079-2430	12/02/14 7:48	12/08/14	Soil	Same As Above
H14120167-019	3-079-3036	12/02/14 7:47	12/08/14	Soil	Same As Above
H14120167-020	3-083-3642	12/02/14 15:56	12/08/14	Soil	Same As Above
H14120167-021	3-083-4248	12/02/14 15:55	12/08/14	Soil	Same As Above
H14120167-022	3-084-1824	12/02/14 11:19	12/08/14	Soil	Same As Above
H14120167-023	3-084-2430	12/02/14 11:18	12/08/14	Soil	Same As Above
H14120167-024	3-084-3036	12/02/14 11:17	12/08/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120167-025	3-085-3642	12/02/14 12:51	12/08/14	Soil	Same As Above
H14120167-026	3-085-4248	12/02/14 12:50	12/08/14	Soil	Same As Above
H14120167-027	3-086-1824	12/02/14 13:19	12/08/14	Soil	Same As Above
H14120167-028	3-086-2430	12/02/14 13:18	12/08/14	Soil	Same As Above
H14120167-029	3-086-3036	12/02/14 13:17	12/08/14	Soil	Same As Above
H14120167-030	3-092-3642	12/02/14 11:36	12/08/14	Soil	Same As Above
H14120167-031	3-092-4248	12/02/14 11:35	12/08/14	Soil	Same As Above
H14120167-032	3-092E-0006	12/02/14 15:42	12/08/14	Soil	Same As Above
H14120167-033	3-092E-0612	12/02/14 15:41	12/08/14	Soil	Same As Above
H14120167-034	3-093-4854	12/02/14 12:04	12/08/14	Soil	Same As Above
H14120167-035	3-093-5460	12/02/14 12:05	12/08/14	Soil	Same As Above
H14120167-036	3-094-6066	12/02/14 14:09	12/08/14	Soil	Same As Above
H14120167-037	3-094-6672	12/02/14 14:10	12/08/14	Soil	Same As Above
H14120167-038	3-101-1824	12/02/14 15:19	12/08/14	Soil	Same As Above
H14120167-039	3-101-2430	12/02/14 15:18	12/08/14	Soil	Same As Above
H14120167-040	3-101-3035	12/02/14 15:17	12/08/14	Soil	Same As Above
H14120167-041	3-102-1824	12/02/14 15:04	12/08/14	Soil	Same As Above
H14120167-042	3-102-2430	12/02/14 15:03	12/08/14	Soil	Same As Above
H14120167-043	3-102-3036	12/02/14 15:02	12/08/14	Soil	Same As Above
H14120167-044	3-103-2430	12/02/14 14:33	12/08/14	Soil	Same As Above
H14120167-045	3-103-3036	12/02/14 14:32	12/08/14	Soil	Same As Above
H14120167-046	3-103-3642	12/02/14 14:31	12/08/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120167

Report Date: 12/24/14
Date Received: 12/08/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120167-001	3-058-1824	0	0	6.9	9	3	3660	19	750
H14120167-002	3-058-2430	0	0	7.1	6	< 1	1330	10	199
H14120167-003	3-058-3036	0	0	7.0	10	< 1	1700	10	319
H14120167-004	3-058-3642	0	0	7.5	8	1	2440	12	396
H14120167-005	3-058E-0006	0	0	8.2	109	2	833	76	515
H14120167-006	3-058E-0612	0	0	8.3	59	1	338	47	280
H14120167-007	3-066-3036	0	0	6.6	35	4	339	73	664
H14120167-008	3-066-3642	0	0	7.6	44	< 1	818	55	618
H14120167-009	3-066-4248	0	0	7.5	347	4	5700	160	1830
H14120167-010	3-067-3642	0	0	7.0	202	10	3400	189	2100
H14120167-011	3-067-4248	0	0	7.3	357	10	4750	339	2680
H14120167-012	3-075-3642	0	0	7.3	8	2	6190	14	397
H14120167-013	3-075-4248	0	0	7.3	43	< 1	12700	26	408
H14120167-014	3-078-1218	0	0	7.1	2410	10	15100	1120	2660
H14120167-015	3-078-1824	0	0	6.3	120	5	1690	79	1470
H14120167-016	3-078-2430	0	0	7.3	9	< 1	48	10	515
H14120167-017	3-079-1824	0	0	7.7	1560	5	5160	760	1530
H14120167-018	3-079-2430	0	0	7.1	37	< 1	1020	29	347
H14120167-019	3-079-3036	0	0	7.3	5	< 1	34	9	235
H14120167-020	3-083-3642	0	0	6.3	328	13	2980	354	5110
H14120167-021	3-083-4248	0	0	6.7	303	9	2990	295	3180
H14120167-022	3-084-1824	0	0	6.9	1200	7	13700	1900	3730
H14120167-023	3-084-2430	0	0	6.9	44	4	1350	71	770
H14120167-024	3-084-3036	0	0	7.1	6	3	1610	12	554
H14120167-025	3-085-3642	0	0	7.3	87	3	9470	14	1120
H14120167-026	3-085-4248	0	0	7.4	35	2	6000	13	682
H14120167-027	3-086-1824	0	0	7.3	2130	28	26800	2240	7170
H14120167-028	3-086-2430	0	0	6.5	88	1	478	51	426
H14120167-029	3-086-3036	0	0	7.0	13	< 1	80	14	93
H14120167-030	3-092-3642	0	0	6.6	178	14	1930	156	2930
H14120167-031	3-092-4248	0	0	7.1	358	16	3780	369	4590
H14120167-032	3-092E-0006	0	0	7.8	59	1	212	31	243
H14120167-033	3-092E-0612	0	0	7.8	27	< 1	78	21	117
H14120167-034	3-093-4854	0	0	6.3	321	9	4620	184	2640
H14120167-035	3-093-5460	0	0	6.3	285	10	3000	168	3470
H14120167-036	3-094-6066	0	0	6.8	357	11	3070	257	3770
H14120167-037	3-094-6672	0	0	6.8	245	8	3260	230	3240
H14120167-038	3-101-1824	0	0	7.5	22	15	13400	30	2460
H14120167-039	3-101-2430	0	0	7.0	99	2	871	147	409
H14120167-040	3-101-3035	0	0	6.7	11	< 1	69	20	98

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120167

Report Date: 12/24/14
Date Received: 12/08/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120167-041	3-102-1824	0	0	7.7	8	13	5830	9	2200
H14120167-042	3-102-2430	0	0	7.5	12	< 1	140	17	857
H14120167-043	3-102-3036	0	0	7.0	7	< 1	71	16	599
H14120167-044	3-103-2430	0	0	7.3	8	22	20900	13	6080
H14120167-045	3-103-3036	0	0	7.2	7	7	970	12	1430
H14120167-046	3-103-3642	0	0	7.2	7	1	1280	10	288

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120167

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141223B		
Lab ID: CCV_1_141222_1		Continuing Calibration Verification Standard							12/23/14 09:56	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141222_1		Continuing Calibration Verification Standard							12/23/14 09:57	
pH, sat. paste		3.98	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 09:59	
pH, sat. paste		10.1	s.u.	0.10	101	99	101			
Lab ID: CCV_3_141222_1		Continuing Calibration Verification Standard							12/23/14 10:13	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141222_1		Continuing Calibration Verification Standard							12/23/14 10:42	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141222_1		Continuing Calibration Verification Standard							12/23/14 10:43	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 10:44	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141222_1		Continuing Calibration Verification Standard							12/23/14 10:58	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141222_1		Continuing Calibration Verification Standard							12/23/14 11:11	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2										Batch: 27457
Lab ID: LCS-27457		Laboratory Control Sample				Run: SOIL PH METER_141223B			12/23/14 10:00	
pH, sat. paste		7.69	s.u.	0.10	103	95	105			
Lab ID: H14120167-010ADUP		Sample Duplicate				Run: SOIL PH METER_141223B			12/23/14 10:12	
pH, sat. paste		7.01	s.u.	0.10				0.4	30	
Lab ID: H14120167-020ADUP		Sample Duplicate				Run: SOIL PH METER_141223B			12/23/14 10:25	
pH, sat. paste		6.37	s.u.	0.10				0.6	30	
Method: ASAM10-3.2										Batch: 27458
Lab ID: H14120167-030ADUP		Sample Duplicate				Run: SOIL PH METER_141223B			12/23/14 10:57	
pH, sat. paste		6.62	s.u.	0.10				0.3	30	
Lab ID: H14120167-040ADUP		Sample Duplicate				Run: SOIL PH METER_141223B			12/23/14 11:10	
pH, sat. paste		6.63	s.u.	0.10				0.8	30	
Lab ID: H14120167-046ADUP		Sample Duplicate				Run: SOIL PH METER_141223B			12/23/14 11:18	
pH, sat. paste		7.18	s.u.	0.10				0.4	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120167

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**							Analytical Run: ICP2-HE_141222C		
Lab ID:	**ICV**	Initial Calibration Verification Standard							12/22/14 12:15	
Copper		0.793	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	Interference Check Sample A							12/22/14 12:30	
Copper		0.00413	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	Interference Check Sample AB							12/22/14 12:34	
Copper		0.504	mg/L	0.010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120167

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27422
Lab ID:	**MB-27422**		Method Blank				Run: ICP2-HE_141222C				12/22/14 17:17
Copper			2	mg/kg	0.2						
Lab ID:	**LFB-27422**		Laboratory Fortified Blank				Run: ICP2-HE_141222C				12/22/14 17:28
Copper			52.3	mg/kg	1.0	100	80	120			
Lab ID:	**LCS-27422**		Laboratory Control Sample				Run: ICP2-HE_141222C				12/22/14 17:32
Copper			281	mg/kg	1.1	99	77.5	109.6			
Lab ID:	**H14120167-019APDS**		Post Digestion/Distillation Spike				Run: ICP2-HE_141222C				12/22/14 19:03
Copper			270	mg/kg	1.1	95	75	125			
Lab ID:	**H14120167-019AMS**		Sample Matrix Spike				Run: ICP2-HE_141222C				12/22/14 19:07
Copper			80.5	mg/kg	1.0	99	75	125			
Lab ID:	**H14120167-019AMSD**		Sample Matrix Spike Duplicate				Run: ICP2-HE_141222C				12/22/14 19:10
Copper			78.6	mg/kg	1.1	94	75	125	2.4	20	
Method:	**SW6010B**										Batch: 27423
Lab ID:	**MB-27423**		Method Blank				Run: ICP2-HE_141222C				12/22/14 19:58
Copper			2	mg/kg	0.2						
Lab ID:	**LFB-27423**		Laboratory Fortified Blank				Run: ICP2-HE_141222C				12/22/14 20:02
Copper			51.6	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-27423**		Laboratory Control Sample				Run: ICP2-HE_141222C				12/22/14 20:06
Copper			269	mg/kg	1.1	95	77.5	109.6			
Lab ID:	**H14120167-037AMS**		Sample Matrix Spike				Run: ICP2-HE_141222C				12/22/14 21:01
Copper			3250	mg/kg	1.0		75	125			A
Lab ID:	**H14120167-037AMSD**		Sample Matrix Spike Duplicate				Run: ICP2-HE_141222C				12/22/14 21:05
Copper			3230	mg/kg	1.0		75	125	0.6	20	A
Method:	**SW6010B**										Batch: 27431
Lab ID:	**MB-27431**		Method Blank				Run: ICP2-HE_141222C				12/22/14 19:14
Copper			0.7	mg/kg	0.2						
Lab ID:	**LFB-27431**		Laboratory Fortified Blank				Run: ICP2-HE_141222C				12/22/14 19:18
Copper			52.6	mg/kg	1.0	104	80	120			
Lab ID:	**LCS-27431**		Laboratory Control Sample				Run: ICP2-HE_141222C				12/22/14 19:21
Copper			271	mg/kg	1.2	96	77.5	109.6			
Lab ID:	**H14120167-046APDS**		Post Digestion/Distillation Spike				Run: ICP2-HE_141222C				12/22/14 19:47
Copper			1590	mg/kg	1.1		75	125			A
Lab ID:	**H14120167-046AMS**		Sample Matrix Spike				Run: ICP2-HE_141222C				12/22/14 19:51
Copper			1340	mg/kg	1.0		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120167

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27431
Lab ID:	**H14120167-046AMSD**	Sample Matrix Spike Duplicate				Run: ICP2-HE_141222C			12/22/14 19:54	
Copper		1380	mg/kg	1.0		75	125	3.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120167

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141219A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/19/14 17:03	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0316	mg/L	0.0010	105	90	110			
Copper			0.0618	mg/L	0.0010	103	90	110			
Lead			0.0593	mg/L	0.0010	99	90	110			
Zinc			0.0626	mg/L	0.0010	104	90	110			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/21/14 01:03	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0311	mg/L	0.0010	104	90	110			
Copper			0.0613	mg/L	0.0010	102	90	110			
Lead			0.0596	mg/L	0.0010	99	90	110			
Zinc			0.0612	mg/L	0.0010	102	90	110			
Method:	**SW6020**									Batch: 27422	
Lab ID:	**MB-27422**	4	Method Blank				Run: ICPMS204-B_141219A			12/20/14 18:50	
Arsenic			ND	mg/kg	0.3						
Cadmium			0.2	mg/kg	0.2						
Lead			0.3	mg/kg	0.2						
Zinc			9	mg/kg	4						
Lab ID:	**LCS-27422**	4	Laboratory Control Sample				Run: ICPMS204-B_141219A			12/20/14 18:55	
Arsenic			327	mg/kg	1.0	94	72.3	106.4			
Cadmium			141	mg/kg	1.0	102	73	105.1			
Lead			205	mg/kg	1.0	108	75.9	108.6			
Zinc			236	mg/kg	3.5	105	74.2	109.9			
Lab ID:	**LFB-27422**	4	Laboratory Fortified Blank				Run: ICPMS204-B_141219A			12/20/14 19:00	
Arsenic			47.5	mg/kg	1.0	95	80	120			
Cadmium			25.8	mg/kg	1.0	103	80	120			
Lead			47.6	mg/kg	1.0	94	80	120			
Zinc			54.3	mg/kg	3.5	90	80	120			
Lab ID:	**H14120167-019AMS**	4	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/20/14 21:20	
Arsenic			48.5	mg/kg	1.0	90	75	125			
Cadmium			23.7	mg/kg	1.0	98	75	125			
Lead			52.2	mg/kg	1.0	91	75	125			
Zinc			276	mg/kg	3.3		75	125			A
Lab ID:	**H14120167-019AMSD**	4	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/20/14 21:25	
Arsenic			49.1	mg/kg	1.0	91	75	125	1.2	20	
Cadmium			23.5	mg/kg	1.0	96	75	125	0.9	20	
Lead			51.2	mg/kg	1.0	88	75	125	1.9	20	
Zinc			254	mg/kg	3.4		75	125	8.3	20	A
Method:	**SW6020**									Batch: 27423	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120167

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27423
Lab ID:	**MB-27423**	5	Method Blank				Run: ICPMS204-B_141219A			12/20/14 21:34	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			2	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			6	mg/kg	4						
Lab ID:	**LCS-27423**	5	Laboratory Control Sample				Run: ICPMS204-B_141219A			12/20/14 21:39	
Arsenic			317	mg/kg	1.0	90	72.3	106.4			
Cadmium			137	mg/kg	1.0	97	73	105.1			
Copper			280	mg/kg	1.0	96	77.5	109.6			
Lead			196	mg/kg	1.0	102	75.9	108.6			
Zinc			241	mg/kg	3.6	107	74.2	109.9			
Lab ID:	**LFB-27423**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141219A			12/20/14 21:44	
Arsenic			49.3	mg/kg	1.0	99	80	120			
Cadmium			26.6	mg/kg	1.0	106	80	120			
Copper			49.9	mg/kg	1.0	95	80	120			
Lead			48.8	mg/kg	1.0	98	80	120			
Zinc			53.0	mg/kg	3.5	93	80	120			
Lab ID:	**H14120167-037APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141219A			12/20/14 23:50	
Arsenic			2630	mg/kg	1.0	99	75	125			
Cadmium			1060	mg/kg	1.0	87	75	125			
Copper			5170	mg/kg	1.0	80	75	125			
Lead			2310	mg/kg	1.0	87	75	125			
Zinc			5230	mg/kg	3.4	83	75	125			
Lab ID:	**H14120167-037AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/20/14 23:55	
Arsenic			296	mg/kg	1.0		75	125			A
Cadmium			31.7	mg/kg	1.0	98	75	125			
Copper			3320	mg/kg	1.0		75	125			A
Lead			278	mg/kg	1.0		75	125			A
Zinc			3230	mg/kg	3.3		75	125			A
Lab ID:	**H14120167-037AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/21/14 00:00	
Arsenic			274	mg/kg	1.0		75	125	8.0	20	A
Cadmium			30.2	mg/kg	1.0	92	75	125	5.0	20	
Copper			3000	mg/kg	1.0		75	125	9.9	20	A
Lead			265	mg/kg	1.0		75	125	4.7	20	A
Zinc			2950	mg/kg	3.3		75	125	9.0	20	A
Method:	**SW6020**										Batch: 27431
Lab ID:	**MB-27431**	5	Method Blank				Run: ICPMS204-B_141219A			12/20/14 15:32	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			0.9	mg/kg	0.7						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120167

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27431
Lab ID:	**MB-27431**	5	Method Blank				Run: ICPMS204-B_141219A			12/20/14 15:32	
Lead			ND	mg/kg	0.2						
Zinc			5	mg/kg	4						
Lab ID:	**LCS-27431**	5	Laboratory Control Sample				Run: ICPMS204-B_141219A			12/20/14 15:37	
Arsenic			327	mg/kg	1.0	90	72.3	106.4			
Cadmium			140	mg/kg	1.0	97	73	105.1			
Copper			291	mg/kg	1.0	98	77.5	109.6			
Lead			205	mg/kg	1.0	104	75.9	108.6			
Zinc			231	mg/kg	3.7	101	74.2	109.9			
Lab ID:	**LFB-27431**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141219A			12/20/14 15:42	
Arsenic			48.9	mg/kg	1.0	98	80	120			
Cadmium			26.6	mg/kg	1.0	106	80	120			
Copper			52.6	mg/kg	1.0	103	80	120			
Lead			50.0	mg/kg	1.0	100	80	120			
Zinc			56.2	mg/kg	3.5	103	80	120			
Lab ID:	**H14120167-046APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141219A			12/20/14 17:10	
Arsenic			2340	mg/kg	1.0	99	75	125			
Cadmium			975	mg/kg	1.0	83	75	125			
Copper			3460	mg/kg	1.0	92	75	125			
Lead			1910	mg/kg	1.0	81	75	125			
Zinc			2570	mg/kg	3.3	97	75	125			
Lab ID:	**H14120167-046AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/20/14 17:14	
Arsenic			50.2	mg/kg	1.0	91	75	125			
Cadmium			23.9	mg/kg	1.0	95	75	125			
Copper			1270	mg/kg	1.0		75	125			A
Lead			52.4	mg/kg	1.0	89	75	125			
Zinc			314	mg/kg	3.3		75	125			A
Lab ID:	**H14120167-046AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/20/14 17:19	
Arsenic			52.9	mg/kg	1.0	97	75	125	5.2	20	
Cadmium			25.1	mg/kg	1.0	101	75	125	5.2	20	
Copper			1350	mg/kg	1.0		75	125	6.1	20	A
Lead			55.8	mg/kg	1.0	96	75	125	6.3	20	
Zinc			342	mg/kg	3.3		75	125	8.3	20	A
Lab ID:	**H14120077-023AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/20/14 18:26	
Arsenic			67.3	mg/kg	1.0	86	75	125			
Cadmium			24.5	mg/kg	1.0	98	75	125			
Copper			4860	mg/kg	1.0		75	125			A
Lead			65.9	mg/kg	1.0	91	75	125			
Zinc			529	mg/kg	3.3		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120167

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**										Batch: 27431
Lab ID: **H14120077-023AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/20/14 18:31	
Arsenic		69.1	mg/kg	1.0	90	75	125	2.6	20	
Cadmium		24.9	mg/kg	1.0	101	75	125	1.5	20	
Copper		5000	mg/kg	1.0		75	125	2.8	20	A
Lead		65.7	mg/kg	1.0	92	75	125	0.3	20	
Zinc		543	mg/kg	3.3		75	125	2.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120167

Login completed by: Tracy L. Lorash

Date Received: 12/8/2014

Reviewed by: BL2000\rwilliams

Received by: AHN

Reviewed Date: 12/12/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 0.9°C, Cooler 2 at 1.4°C. Samples were not received on ice. TI 12/8/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120163

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-058-1824	859	12/02/14	Soil	A	B		1
3-058-2430	858	12/02/14	Soil	A	B		1
3-058-3036	857	12/02/14	Soil	A	B		1
3-058-3642	856	12/02/14	Soil	A	B		1
3-058E-0006	958	12/02/14	Soil	A	B		1
3-058E-0612	957	12/02/14	Soil	A	B		1
3-066-3036	1007	12/02/14	Soil	A	B		1
3-066-3642	1006	12/02/14	Soil	A	B		1
3-066-4248	1005	12/02/14	Soil	A	B		1
3-067-3642	841	12/02/14	Soil	A	B		1
3-067-4248	840	12/02/14	Soil	A	B		1
3-075-3642	1041	12/02/14	Soil	A	B		1
3-075-4248	1040	12/02/14	Soil	A	B		1
3-078-1218	820	12/02/14	Soil	A	B		1
3-078-1824	819	12/02/14	Soil	A	B		1
3-078-2430	818	12/02/14	Soil	A	B		1
3-079-1824	750	12/02/14	Soil	A	B		1
3-079-2430	748	12/02/14	Soil	A	B		1
3-079-3036	747	12/02/14	Soil	A	B		1
3-083-3642	1556	12/02/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/8/14 1605	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] Cl = 0.9 TB C2 = 1.4 w/ice	12/8/14 1605 hand

COC120214FL pg 1-2.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H4120167

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-083-4248	1555	12/02/14	Soil	A	B		1
3-084-1824	1119	12/02/14	Soil	A	B		1
3-084-2430	1118	12/02/14	Soil	A	B		1
3-084-3036	1117	12/02/14	Soil	A	B		1
3-085-3642	1251	12/02/14	Soil	A	B		1
3-085-4248	1250	12/02/14	Soil	A	B		1
3-086-1824	1319	12/02/14	Soil	A	B		1
3-086-2430	1318	12/02/14	Soil	A	B		1
3-086-3036	1317	12/02/14	Soil	A	B		1
3-092-3642	1136	12/02/14	Soil	A	B		1
3-092-4248	1135	12/02/14	Soil	A	B		1
3-092E-0006	1542	12/02/14	Soil	A	B		1
3-092E-0612	1541	12/02/14	Soil	A	B		1
3-093-4854	1204	12/02/14	Soil	A	B		1
3-093-5460	1205	12/02/14	Soil	A	B		1
3-094-6066	1409	12/02/14	Soil	A	B		1
3-094-6672	1410	12/02/14	Soil	A	B		1
3-101-1824	1519	12/02/14	Soil	A	B		1
3-101-2430	1518	12/02/14	Soil	A	B		1
3-101-3035	1517	12/02/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/8/14 1605	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1=0.9 C2=1.4 >TB hmd	12/8/14 1605

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120167

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-102-1824	1504	12/02/14	Soil	A	B		1
3-102-2430	1503	12/02/14	Soil	A	B		1
3-102-3036	1502	12/02/14	Soil	A	B		1
3-103-2430	1433	12/02/14	Soil	A	B		1
3-103-3036	1432	12/02/14	Soil	A	B		1
3-103-3642	1431	12/02/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/8/14 1625	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1=0.9 TB C2=0.4 Ice hmd	12/8/14 1605

ANALYTICAL SUMMARY REPORT

December 31, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120166

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 32 samples for MT DEQ-Federal Superfund on 12/8/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120166-001	3-049-2430	12/01/14 10:48	12/08/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120166-002	3-049-3036	12/01/14 10:47	12/08/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120166-003	3-049-3642	12/01/14 10:46	12/08/14	Soil	Same As Above
H14120166-004	3-063-3642	12/01/14 11:26	12/08/14	Soil	Same As Above
H14120166-005	3-063-4248	12/01/14 11:25	12/08/14	Soil	Same As Above
H14120166-006	3-069-4248	12/01/14 14:55	12/08/14	Soil	Same As Above
H14120166-007	3-069-4854	12/01/14 15:10	12/08/14	Soil	Same As Above
H14120166-008	3-069-5460	12/01/14 15:11	12/08/14	Soil	Same As Above
H14120166-009	3-070-1824	12/01/14 14:04	12/08/14	Soil	Same As Above
H14120166-010	3-070-2430	12/01/14 14:03	12/08/14	Soil	Same As Above
H14120166-011	3-070-3036	12/01/14 14:02	12/08/14	Soil	Same As Above
H14120166-012	3-071-1218	12/01/14 12:10	12/08/14	Soil	Same As Above
H14120166-013	3-071-1824	12/01/14 12:09	12/08/14	Soil	Same As Above
H14120166-014	3-071-2430	12/01/14 12:08	12/08/14	Soil	Same As Above
H14120166-015	3-072-3642	12/01/14 11:46	12/08/14	Soil	Same As Above
H14120166-016	3-072-4248	12/01/14 11:45	12/08/14	Soil	Same As Above
H14120166-017	3-076-1824	12/01/14 13:14	12/08/14	Soil	Same As Above
H14120166-018	3-076-2430	12/01/14 13:13	12/08/14	Soil	Same As Above
H14120166-019	3-077-2430	12/01/14 12:28	12/08/14	Soil	Same As Above
H14120166-020	3-077-3036	12/01/14 12:27	12/08/14	Soil	Same As Above
H14120166-021	3-077-3642	12/01/14 12:26	12/08/14	Soil	Same As Above
H14120166-022	3-080-1824	12/01/14 15:29	12/08/14	Soil	Same As Above
H14120166-023	3-080-2430	12/01/14 15:28	12/08/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120166-024	3-080-3036	12/01/14 15:27	12/08/14	Soil	Same As Above
H14120166-025	3-081-1218	12/01/14 13:45	12/08/14	Soil	Same As Above
H14120166-026	3-081-1824	12/01/14 13:44	12/08/14	Soil	Same As Above
H14120166-027	3-081-2430	12/01/14 13:43	12/08/14	Soil	Same As Above
H14120166-028	3-087-4248	12/01/14 15:40	12/08/14	Soil	Same As Above
H14120166-029	3-087-4854	12/01/14 15:55	12/08/14	Soil	Same As Above
H14120166-030	3-087-5460	12/01/14 15:54	12/08/14	Soil	Same As Above
H14120166-031	3-088-4854	12/01/14 14:36	12/08/14	Soil	Same As Above
H14120166-032	3-088-5460	12/01/14 14:35	12/08/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120166

Report Date: 12/31/14
Date Received: 12/08/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120166-001	3-049-2430	0	0	7.0	256	5	1570	199	1490
H14120166-002	3-049-3036	0	0	7.4	112	4	639	99	1140
H14120166-003	3-049-3642	0	0	7.5	119	5	669	110	1360
H14120166-004	3-063-3642	0	0	6.9	209	10	1450	221	2730
H14120166-005	3-063-4248	0	0	7.2	283	6	2010	241	1500
H14120166-006	3-069-4248	0	0	6.3	11	1	119	11	808
H14120166-007	3-069-4854	0	0	7.2	45	1	224	34	985
H14120166-008	3-069-5460	0	0	7.4	155	1	1100	98	807
H14120166-009	3-070-1824	0	0	7.3	161	8	6350	137	2030
H14120166-010	3-070-2430	0	0	7.0	7	< 1	467	8	275
H14120166-011	3-070-3036	0	0	6.9	17	1	629	27	522
H14120166-012	3-071-1218	0	0	6.7	217	2	915	230	531
H14120166-013	3-071-1824	0	0	7.1	1560	2	557	760	867
H14120166-014	3-071-2430	0	0	7.2	21	< 1	573	16	131
H14120166-015	3-072-3642	0	0	7.0	257	3	1860	218	1370
H14120166-016	3-072-4248	0	0	7.3	543	3	1430	346	980
H14120166-017	3-076-1824	0	0	7.1	132	3	722	108	872
H14120166-018	3-076-2430	0	0	7.1	153	4	706	111	1110
H14120166-019	3-077-2430	0	0	7.1	268	1	2010	161	439
H14120166-020	3-077-3036	0	0	7.0	21	< 1	128	12	110
H14120166-021	3-077-3642	0	0	6.9	17	< 1	73	18	96
H14120166-022	3-080-1824	0	0	7.8	205	3	1450	264	999
H14120166-023	3-080-2430	0	0	7.6	7	< 1	35	14	118
H14120166-024	3-080-3036	0	0	7.5	4	< 1	24	11	162
H14120166-025	3-081-1218	0	0	7.4	570	6	3280	362	2000
H14120166-026	3-081-1824	0	0	7.2	44	< 1	337	41	276
H14120166-027	3-081-2430	0	0	6.8	34	< 1	205	19	209
H14120166-028	3-087-4248	0	0	6.9	344	8	2400	414	2370
H14120166-029	3-087-4854	0	0	7.2	17	2	107	24	433
H14120166-030	3-087-5460	0	0	7.3	95	4	1070	124	776
H14120166-031	3-088-4854	0	0	7.2	152	10	2520	168	3840
H14120166-032	3-088-5460	0	0	6.9	210	28	3510	192	7710

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120166

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141223A		
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 07:41	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 08:17	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_141222_1		Continuing Calibration Verification Standard							12/23/14 08:52	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141222_1		Continuing Calibration Verification Standard							12/23/14 08:52	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 08:53	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141222_1		Continuing Calibration Verification Standard							12/23/14 09:05	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141222_1		Continuing Calibration Verification Standard							12/23/14 09:26	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141222_1		Continuing Calibration Verification Standard							12/23/14 09:27	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 09:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141222_1		Continuing Calibration Verification Standard							12/23/14 09:37	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 06:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 27455	
Lab ID: LCS-27455		Laboratory Control Sample				Run: SOIL PH METER_141223A			12/23/14 08:54	
pH, sat. paste		7.66	s.u.	0.10	102	95	105			
Lab ID: H14120166-010ADUP		Sample Duplicate				Run: SOIL PH METER_141223A			12/23/14 09:05	
pH, sat. paste		7.01	s.u.	0.10				0.1	30	
Lab ID: H14120166-020ADUP		Sample Duplicate				Run: SOIL PH METER_141223A			12/23/14 09:16	
pH, sat. paste		7.04	s.u.	0.10				0.0	30	
Method: ASAM10-3.2									Batch: 27456	
Lab ID: LCS-27456		Laboratory Control Sample				Run: SOIL PH METER_141223A			12/23/14 09:29	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14120166-030ADUP		Sample Duplicate				Run: SOIL PH METER_141223A			12/23/14 09:37	
pH, sat. paste		7.26	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120166

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27456
Lab ID: H14120166-032ADUP		Sample Duplicate				Run: SOIL PH METER_141223A			12/23/14 09:40	
pH, sat. paste		6.95	s.u.	0.10				0.4	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120166

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_141219B	
Lab ID:	**ICV**	3	Initial Calibration Verification Standard							12/19/14 09:57	
Copper			0.805	mg/L	0.010	101	90	110			
Lead			0.744	mg/L	0.010	93	90	110			
Zinc			0.790	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							12/19/14 10:12	
Copper			0.00397	mg/L	0.010		0	0			
Lead			-0.00803	mg/L	0.010		0	0			
Zinc			0.00143	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	3	Interference Check Sample AB							12/19/14 10:16	
Copper			0.516	mg/L	0.010	103	80	120			
Lead			0.845	mg/L	0.010	85	80	120			
Zinc			0.962	mg/L	0.010	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120166

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_141229A		
Lab ID:	**ICV STD**		Initial Calibration Verification Standard							12/30/14 01:41	
Lead			0.0587	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							12/30/14 01:46	
Lead			0.000213	mg/L	0.010						
Lab ID:	**ICSAB**		Interference Check Sample AB							12/30/14 01:50	
Lead			0.000202	mg/L	0.010		0	0			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120166

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27420
Lab ID:	**MB-27420**	3	Method Blank				Run: ICP2-HE_141219B			12/19/14 20:22	
Copper			ND	mg/kg	0.2						
Lead			1	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27420**	3	Laboratory Fortified Blank				Run: ICP2-HE_141219B			12/19/14 20:26	
Copper			48.9	mg/kg	1.0	98	80	120			
Lead			48.7	mg/kg	1.0	95	80	120			
Zinc			49.5	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27420**	3	Laboratory Control Sample				Run: ICP2-HE_141219B			12/19/14 20:37	
Copper			258	mg/kg	1.0	97	77.5	109.6			
Lead			192	mg/kg	3.0	107	75.9	108.6			
Zinc			201	mg/kg	1.0	99	74.2	109.9			
Lab ID:	**H14120166-019APDS**	3	Post Digestion/Distillation Spike				Run: ICP2-HE_141219B			12/19/14 22:09	
Copper			2200	mg/kg	1.1		75	125			A
Lead			406	mg/kg	3.3	95	75	125			
Zinc			692	mg/kg	1.0	98	75	125			
Lab ID:	**H14120166-019AMS**	3	Sample Matrix Spike				Run: ICP2-HE_141219B			12/19/14 22:13	
Copper			2030	mg/kg	1.1		75	125			A
Lead			216	mg/kg	3.2	109	75	125			
Zinc			506	mg/kg	1.0		75	125			A
Lab ID:	**H14120166-019AMSD**	3	Sample Matrix Spike Duplicate				Run: ICP2-HE_141219B			12/19/14 22:17	
Copper			2060	mg/kg	1.1		75	125	1.1	20	A
Lead			214	mg/kg	3.2	105	75	125	0.9	20	
Zinc			518	mg/kg	1.0		75	125	2.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120166

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141219A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/19/14 17:03	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0316	mg/L	0.0010	105	90	110			
Copper			0.0618	mg/L	0.0010	103	90	110			
Lead			0.0593	mg/L	0.0010	99	90	110			
Zinc			0.0626	mg/L	0.0010	104	90	110			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/21/14 01:03	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0311	mg/L	0.0010	104	90	110			
Copper			0.0613	mg/L	0.0010	102	90	110			
Lead			0.0596	mg/L	0.0010	99	90	110			
Zinc			0.0612	mg/L	0.0010	102	90	110			
Method:	**SW6020**									Batch: 27420	
Lab ID:	**MB-27420**	2	Method Blank				Run: ICPMS204-B_141219A			12/19/14 22:17	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lab ID:	**LCS-27420**	2	Laboratory Control Sample				Run: ICPMS204-B_141219A			12/19/14 22:22	
Arsenic			321	mg/kg	1.0	98	72.3	106.4			
Cadmium			134	mg/kg	1.0	103	73	105.1			
Lab ID:	**LFB-27420**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141219A			12/19/14 22:26	
Arsenic			50.0	mg/kg	1.0	100	80	120			
Cadmium			25.4	mg/kg	1.0	102	80	120			
Lab ID:	**H14120166-019APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141219A			12/20/14 00:48	
Arsenic			3000	mg/kg	1.0	109	75	125			
Cadmium			1210	mg/kg	1.0	96	75	125			
Lab ID:	**H14120166-019AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/20/14 00:52	
Arsenic			329	mg/kg	1.0		75	125			A
Cadmium			26.4	mg/kg	1.0	100	75	125			
Lab ID:	**H14120166-019AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/20/14 00:57	
Arsenic			318	mg/kg	1.0		75	125	3.5	20	A
Cadmium			25.2	mg/kg	1.0	95	75	125	4.8	20	
Method:	**SW6020**									Batch: 27421	
Lab ID:	**MB-27421**	5	Method Blank				Run: ICPMS204-B_141219A			12/20/14 01:06	
Arsenic			0.8	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			6	mg/kg	0.7						
Lead			0.5	mg/kg	0.2						
Zinc			6	mg/kg	4						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120166

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27421
Lab ID:	**LCS-27421**	5	Laboratory Control Sample				Run: ICPMS204-B_141219A			12/20/14 01:11	
Arsenic			311	mg/kg	1.0	88	72.3	106.4			
Cadmium			130	mg/kg	1.0	92	73	105.1			
Copper			288	mg/kg	1.0	98	77.5	109.6			
Lead			191	mg/kg	1.0	99	75.9	108.6			
Zinc			224	mg/kg	3.6	99	74.2	109.9			
Lab ID:	**LFB-27421**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141219A			12/20/14 01:16	
Arsenic			48.9	mg/kg	1.0	96	80	120			
Cadmium			25.8	mg/kg	1.0	103	80	120			
Copper			51.4	mg/kg	1.0	91	80	120			
Lead			48.8	mg/kg	1.0	97	80	120			
Zinc			56.6	mg/kg	3.5	102	80	120			
Lab ID:	**H14120166-032APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141219A			12/20/14 03:00	
Arsenic			2870	mg/kg	1.0	102	75	125			
Cadmium			1250	mg/kg	1.0	94	75	125			
Copper			5350	mg/kg	1.0	71	75	125			S
Lead			2610	mg/kg	1.0	93	75	125			
Zinc			8730	mg/kg	3.7	39	75	125			S
Lab ID:	**H14120166-032AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/20/14 03:04	
Arsenic			262	mg/kg	1.0		75	125			A
Cadmium			52.6	mg/kg	1.0	94	75	125			
Copper			3530	mg/kg	1.0		75	125			A
Lead			240	mg/kg	1.0	93	75	125			
Zinc			7840	mg/kg	3.7		75	125			A
Lab ID:	**H14120166-032AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/20/14 03:09	
Arsenic			266	mg/kg	1.0		75	125	1.3	20	A
Cadmium			53.6	mg/kg	1.0	97	75	125	1.8	20	
Copper			3630	mg/kg	1.0		75	125	2.7	20	A
Lead			240	mg/kg	1.0	93	75	125	0.0	20	
Zinc			8000	mg/kg	3.7		75	125	2.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120166

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020								Analytical Run: ICPMS204-B_141229A		
Lab ID: ICV STD		Initial Calibration Verification Standard							12/29/14 11:05	
Lead		0.0576	mg/L	0.0010	96	90	110			
Method: SW6020									Batch: 27492	
Lab ID: MB-27492		Method Blank				Run: ICPMS204-B_141229A			12/29/14 15:21	
Lead		ND	mg/kg	0.2						
Lab ID: LCS-27492		Laboratory Control Sample				Run: ICPMS204-B_141229A			12/29/14 15:25	
Lead		190	mg/kg	1.0	101	75.9	108.6			
Lab ID: LFB-27492		Laboratory Fortified Blank				Run: ICPMS204-B_141229A			12/29/14 15:30	
Lead		47.9	mg/kg	1.0	96	80	120			
Lab ID: H14120166-014AMS		Sample Matrix Spike				Run: ICPMS204-B_141229A			12/29/14 16:05	
Lead		67.5	mg/kg	1.0	100	75	125			
Lab ID: H14120166-014AMSD		Sample Matrix Spike Duplicate				Run: ICPMS204-B_141229A			12/29/14 16:10	
Lead		64.5	mg/kg	1.0	94	75	125	4.6	20	
Lab ID: H14120242-013APDS		Post Digestion/Distillation Spike				Run: ICPMS204-B_141229A			12/29/14 17:45	
Lead		2540	mg/kg	1.0	101	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120166

Login completed by: Tracy L. Lorash

Date Received: 12/8/2014

Reviewed by: BL2000\rwilliams

Received by: AHN

Reviewed Date: 12/12/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 0.9°C, Cooler 2 at 1.4°C. Samples were not received on ice. TI 12/11/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120166

SAMPLE ID	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-049-2430	1048	12/01/14	Soil	A	B		1
3-049-3036	1047	12/01/14	Soil	A	B		1
3-049-3642	1046	12/01/14	Soil	A	B		1
3-063-3642	1126	12/01/14	Soil	A	B		1
3-063-4248	1125	12/01/14	Soil	A	B		1
3-069-4248	1455	12/01/14	Soil	A	B		1
3-069-4854	1510	12/01/14	Soil	A	B		1
3-069-5460	1511	12/01/14	Soil	A	B		1
3-070-1824	1404	12/01/14	Soil	A	B		1
3-070-2430	1403	12/01/14	Soil	A	B		1
3-070-3036	1402	12/01/14	Soil	A	B		1
3-071-1218	1210	12/01/14	Soil	A	B		1
3-071-1824	1209	12/01/14	Soil	A	B		1
3-071-2430	1208	12/01/14	Soil	A	B		1
3-072-3642	1146	12/01/14	Soil	A	B		1
3-072-4248	1145	12/01/14	Soil	A	B		1
3-076-1824	1314	12/01/14	Soil	A	B		1
3-076-2430	1313	12/01/14	Soil	A	B		1
3-077-2430	1228	12/01/14	Soil	A	B		1
3-077-3036	1227	12/01/14	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/8/14 1605	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] Cl = 0.9 Cl2 = 1.4 > to GICC hmd del 12/8/14 1605	

COC120114EL pg 1-2.xls

Page 1 of 2

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H4120166

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-077-3642	1226	12/01/14	Soil	A	B		1
3-080-1824	1529	12/01/14	Soil	A	B		1
3-080-2430	1528	12/01/14	Soil	A	B		1
3-080-3036	1527	12/01/14	Soil	A	B		1
3-081-1218	1345	12/01/14	Soil	A	B		1
3-081-1824	1344	12/01/14	Soil	A	B		1
3-081-2430	1343	12/01/14	Soil	A	B		1
3-087-4248	1540	12/01/14	Soil	A	B		1
3-087-4854	1555	12/01/14	Soil	A	B		1
3-087-5460	1554	12/01/14	Soil	A	B		1
3-088-4854	1436	12/01/14	Soil	A	B		1
3-088-5460	1435	12/01/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/8/14 1605	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature]	12/8/14 1605 hand del Cl: 0.9 y TB C2: 4 ice

ANALYTICAL SUMMARY REPORT

December 24, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120165

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 47 samples for MT DEQ-Federal Superfund on 12/8/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120165-001	3-058s-0006	12/03/14 8:37	12/08/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120165-002	3-058s-0612	12/03/14 8:36	12/08/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120165-003	3-058s-1218	12/03/14 8:35	12/08/14	Soil	Same As Above
H14120165-004	3-066e-0006	12/03/14 8:18	12/08/14	Soil	Same As Above
H14120165-005	3-066e-0612	12/03/14 8:17	12/08/14	Soil	Same As Above
H14120165-006	3-066e-1218	12/03/14 8:15	12/08/14	Soil	Same As Above
H14120165-007	3-074-3642	12/03/14 7:41	12/08/14	Soil	Same As Above
H14120165-008	3-074-4248	12/03/14 7:40	12/08/14	Soil	Same As Above
H14120165-009	3-074e-0612	12/03/14 9:36	12/08/14	Soil	Same As Above
H14120165-010	3-074e-1218	12/03/14 9:35	12/08/14	Soil	Same As Above
H14120165-011	3-074e-1824	12/03/14 9:33	12/08/14	Soil	Same As Above
H14120165-012	3-083e-0006	12/03/14 9:58	12/08/14	Soil	Same As Above
H14120165-013	3-083e-0612	12/03/14 9:57	12/08/14	Soil	Same As Above
H14120165-014	3-101e-0006	12/03/14 10:13	12/08/14	Soil	Same As Above
H14120165-015	3-101e-1218	12/03/14 10:11	12/08/14	Soil	Same As Above
H14120165-016	3-101e-0612	12/03/14 10:12	12/08/14	Soil	Same As Above
H14120165-017	3-111-1824	12/03/14 11:14	12/08/14	Soil	Same As Above
H14120165-018	3-111-2430	12/03/14 11:13	12/08/14	Soil	Same As Above
H14120165-019	3-111-3036	12/03/14 11:12	12/08/14	Soil	Same As Above
H14120165-020	3-112-1824	12/03/14 11:44	12/08/14	Soil	Same As Above
H14120165-021	3-112-2430	12/03/14 11:43	12/08/14	Soil	Same As Above
H14120165-022	3-112-3036	12/03/14 11:42	12/08/14	Soil	Same As Above
H14120165-023	3-019-4854	11/24/14 13:35	12/08/14	Soil	Same As Above
H14120165-024	3-019-5460	11/24/14 13:34	12/08/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120165-025	3-045n-1218	11/25/14 15:20	12/08/14	Soil	Same As Above
H14120165-026	3-045n-1824	11/25/14 15:19	12/08/14	Soil	Same As Above
H14120165-027	3-045n-2430	11/25/14 15:18	12/08/14	Soil	Same As Above
H14120165-028	3-315e2-0006	11/18/14 12:25	12/08/14	Soil	Same As Above
H14120165-029	3-315e2-0612	11/18/14 12:24	12/08/14	Soil	Same As Above
H14120165-030	3-315e2-1218	11/18/14 12:23	12/08/14	Soil	Same As Above
H14120165-031	3-329-4248	11/18/14 14:15	12/08/14	Soil	Same As Above
H14120165-032	3-329-4854	11/18/14 14:26	12/08/14	Soil	Same As Above
H14120165-033	3-329-5460	11/18/14 14:25	12/08/14	Soil	Same As Above
H14120165-034	3-329e-2430	11/18/14 15:33	12/08/14	Soil	Same As Above
H14120165-035	3-329e-3036	11/18/14 15:32	12/08/14	Soil	Same As Above
H14120165-036	3-329e-3642	11/18/14 15:31	12/08/14	Soil	Same As Above
H14120165-037	3-330-1824	11/18/14 13:54	12/08/14	Soil	Same As Above
H14120165-038	3-330-2430	11/18/14 13:53	12/08/14	Soil	Same As Above
H14120165-039	3-330-3036	11/18/14 13:52	12/08/14	Soil	Same As Above
H14120165-040	3-343-1218	11/18/14 14:45	12/08/14	Soil	Same As Above
H14120165-041	3-343-1824	11/18/14 14:44	12/08/14	Soil	Same As Above
H14120165-042	3-343-2430	11/18/14 14:43	12/08/14	Soil	Same As Above
H14120165-043	3-344-0612	11/18/14 15:11	12/08/14	Soil	Same As Above
H14120165-044	3-344-1218	11/18/14 15:10	12/08/14	Soil	Same As Above
H14120165-045	3-344-1824	11/18/14 15:09	12/08/14	Soil	Same As Above
H14120165-046	3-370e-1218	11/19/14 12:53	12/08/14	Soil	Same As Above
H14120165-047	3-066E-1218D	12/03/14 8:16	12/08/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120165

Report Date: 12/24/14
Date Received: 12/08/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120165-001	3-058s-0006	0	0	8.2	282	3	1620	190	891
H14120165-002	3-058s-0612	0	0	8.0	48	< 1	125	23	111
H14120165-003	3-058s-1218	0	0	7.7	10	< 1	52	13	77
H14120165-004	3-066e-0006	0	0	8.0	827	9	5920	568	2320
H14120165-005	3-066e-0612	0	0	7.9	291	3	1770	208	938
H14120165-006	3-066e-1218	0	0	7.9	39	< 1	130	34	136
H14120165-007	3-074-3642	0	0	6.9	478	8	6170	374	4060
H14120165-008	3-074-4248	0	0	6.9	312	6	3290	249	2570
H14120165-009	3-074e-0612	0	0	7.6	87	2	1340	120	488
H14120165-010	3-074e-1218	0	0	7.8	13	< 1	57	16	79
H14120165-011	3-074e-1824	0	0	7.6	11	< 1	43	16	81
H14120165-012	3-083e-0006	0	0	7.7	232	5	2820	255	1170
H14120165-013	3-083e-0612	0	0	7.7	20	< 1	78	20	98
H14120165-014	3-101e-0006	0	0	8.1	444	5	2350	306	1250
H14120165-015	3-101e-1218	0	0	7.9	22	< 1	63	20	97
H14120165-016	3-101e-0612	0	0	7.9	46	< 1	83	19	99
H14120165-017	3-111-1824	0	0	7.0	857	11	13500	1400	2870
H14120165-018	3-111-2430	0	0	6.7	16	< 1	86	31	265
H14120165-019	3-111-3036	0	0	6.9	8	< 1	36	13	67
H14120165-020	3-112-1824	0	0	7.3	28	39	29700	136	4990
H14120165-021	3-112-2430	0	0	6.9	17	< 1	197	20	432
H14120165-022	3-112-3036	0	0	7.0	8	< 1	142	13	406
H14120165-023	3-019-4854	0	0	7.3	380	26	4260	1130	11000
H14120165-024	3-019-5460	0	0	7.2	402	18	3560	575	6690
H14120165-025	3-045n-1218	0	0	6.9	1340	6	8900	807	2980
H14120165-026	3-045n-1824	0	0	7.6	20	< 1	161	22	288
H14120165-027	3-045n-2430	0	0	7.5	10	< 1	89	19	110
H14120165-028	3-315e2-0006	0	0	7.6	1580	18	11800	1230	4940
H14120165-029	3-315e2-0612	0	0	7.7	43	< 1	150	29	159
H14120165-030	3-315e2-1218	0	0	7.7	18	< 1	36	15	86
H14120165-031	3-329-4248	0	0	7.3	5	16	1470	11	974
H14120165-032	3-329-4854	0	0	7.3	6	19	3160	12	429
H14120165-033	3-329-5460	0	0	7.2	15	72	3750	21	1020
H14120165-034	3-329e-2430	0	0	7.6	8	34	1150	14	4010
H14120165-035	3-329e-3036	0	0	7.7	6	5	100	11	1130
H14120165-036	3-329e-3642	0	0	7.7	7	< 1	39	9	283
H14120165-037	3-330-1824	0	0	7.3	7	6	2740	18	1220
H14120165-038	3-330-2430	0	0	7.2	4	2	178	15	959
H14120165-039	3-330-3036	0	0	7.1	7	3	228	19	1110
H14120165-040	3-343-1218	0	0	7.5	1470	17	12800	939	3270

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120165

Report Date: 12/24/14
Date Received: 12/08/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120165-041	3-343-1824	0	0	7.3	17	< 1	176	25	212
H14120165-042	3-343-2430	0	0	7.2	6	2	70	13	455
H14120165-043	3-344-0612	0	0	7.3	1670	11	10200	1140	2400
H14120165-044	3-344-1218	0	0	7.3	52	3	258	28	722
H14120165-045	3-344-1824	0	0	7.3	35	3	77	11	783
H14120165-046	3-370e-1218	0	0	7.6	28	< 1	138	27	126
H14120165-047	3-066E-1218D	0	0	7.8	42	< 1	144	33	145

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120165

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141223A		
Lab ID: CCV_1_141222_1		Continuing Calibration Verification Standard							12/23/14 07:40	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141222_1		Continuing Calibration Verification Standard							12/23/14 07:41	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 07:41	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141222_1		Continuing Calibration Verification Standard							12/23/14 07:51	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141222_1		Continuing Calibration Verification Standard							12/23/14 08:15	
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141222_1		Continuing Calibration Verification Standard							12/23/14 08:16	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 08:17	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141222_1		Continuing Calibration Verification Standard							12/23/14 08:28	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141222_1		Continuing Calibration Verification Standard							12/23/14 08:39	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 08:53	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 09:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141222_1		Initial Calibration Verification Standard							12/23/14 06:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 27453	
Lab ID: LCS-27453		Laboratory Control Sample				Run: SOIL PH METER_141223A			12/23/14 07:43	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H14120165-010ADUP		Sample Duplicate				Run: SOIL PH METER_141223A			12/23/14 07:51	
pH, sat. paste		7.76	s.u.	0.10				0.1	30	
Lab ID: H14120165-020ADUP		Sample Duplicate				Run: SOIL PH METER_141223A			12/23/14 08:01	
pH, sat. paste		7.28	s.u.	0.10				0.3	30	
Method: ASAM10-3.2									Batch: 27454	
Lab ID: LCS-27454		Laboratory Control Sample				Run: SOIL PH METER_141223A			12/23/14 08:17	
pH, sat. paste		7.68	s.u.	0.10	103	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120165

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27454
Lab ID: H14120165-030ADUP		Sample Duplicate				Run: SOIL PH METER_141223A			12/23/14 08:28	
pH, sat. paste		7.70	s.u.	0.10				0.1	30	
Lab ID: H14120165-040ADUP		Sample Duplicate				Run: SOIL PH METER_141223A			12/23/14 08:38	
pH, sat. paste		7.51	s.u.	0.10				0.0	30	
Lab ID: H14120165-047ADUP		Sample Duplicate				Run: SOIL PH METER_141223A			12/23/14 08:44	
pH, sat. paste		7.83	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120165

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141218B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/18/14 10:20	
Arsenic			0.815	mg/L	0.0085	102	90	110			
Cadmium			0.395	mg/L	0.0010	99	90	110			
Copper			0.791	mg/L	0.010	99	90	110			
Lead			0.798	mg/L	0.010	100	90	110			
Zinc			0.805	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/18/14 10:35	
Arsenic			0.00947	mg/L	0.0085		0	0			
Cadmium			0.00310	mg/L	0.0010		0	0			
Copper			-0.00357	mg/L	0.010		0	0			
Lead			-0.0174	mg/L	0.010		0	0			
Zinc			0.00349	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/18/14 10:39	
Arsenic			1.01	mg/L	0.0085	101	80	120			
Cadmium			0.925	mg/L	0.0010	92	80	120			
Copper			0.507	mg/L	0.010	101	80	120			
Lead			0.958	mg/L	0.010	96	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141219B		
Lab ID:	**ICV**		Initial Calibration Verification Standard							12/19/14 09:57	
Copper			0.805	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							12/19/14 10:12	
Copper			0.00397	mg/L	0.010		0	0			
Lab ID:	**ICSAB**		Interference Check Sample AB							12/19/14 10:16	
Copper			0.516	mg/L	0.010	103	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120165

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27390
Lab ID:	**MB-27390**	5	Method Blank				Run: ICP2-HE_141218B				12/18/14 21:25
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27390**	5	Laboratory Fortified Blank				Run: ICP2-HE_141218B				12/18/14 21:29
Arsenic			45.0	mg/kg	1.0	90	80	120			
Cadmium			22.3	mg/kg	1.0	89	80	120			
Copper			49.4	mg/kg	1.0	99	80	120			
Lead			44.9	mg/kg	1.0	90	80	120			
Zinc			46.2	mg/kg	1.0	92	80	120			
Lab ID:	**LCS-27390**	5	Laboratory Control Sample				Run: ICP2-HE_141218B				12/18/14 21:33
Arsenic			279	mg/kg	1.8	83	72.3	106.4			
Cadmium			116	mg/kg	1.0	87	73	105.1			
Copper			258	mg/kg	1.1	94	77.5	109.6			
Lead			175	mg/kg	3.1	95	75.9	108.6			
Zinc			190	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120165-019APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141218B				12/18/14 23:32
Arsenic			234	mg/kg	1.8	90	75	125			
Cadmium			111	mg/kg	1.0	89	75	125			
Copper			257	mg/kg	1.1	88	75	125			
Lead			238	mg/kg	3.2	89	75	125			
Zinc			297	mg/kg	1.0	92	75	125			
Lab ID:	**H14120165-019AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141218B				12/18/14 23:35
Arsenic			48.9	mg/kg	1.7	85	75	125			
Cadmium			21.5	mg/kg	1.0	88	75	125			
Copper			79.9	mg/kg	1.1	90	75	125			
Lead			60.8	mg/kg	3.1	92	75	125			
Zinc			114	mg/kg	1.0	96	75	125			
Lab ID:	**H14120165-019AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141218B				12/18/14 23:39
Arsenic			49.0	mg/kg	1.7	85	75	125	0.3	20	
Cadmium			22.0	mg/kg	1.0	90	75	125	2.2	20	
Copper			77.9	mg/kg	1.1	85	75	125	2.5	20	
Lead			60.0	mg/kg	3.1	91	75	125	1.3	20	
Zinc			116	mg/kg	1.0	99	75	125	1.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120165

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27391
Lab ID:	**MB-27391**		Method Blank				Run: ICP2-HE_141219B				12/19/14 16:33
Copper			0.2	mg/kg	0.2						
Lab ID:	**LFB-27391**		Laboratory Fortified Blank				Run: ICP2-HE_141219B				12/19/14 16:37
Copper			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27391**		Laboratory Control Sample				Run: ICP2-HE_141219B				12/19/14 16:41
Copper			263	mg/kg	1.1	92	77.5	109.6			
Lab ID:	**H14120165-037APDS**		Post Digestion/Distillation Spike				Run: ICP2-HE_141219B				12/19/14 18:09
Copper			2610	mg/kg	1.2		75	125			A
Lab ID:	**H14120165-037AMS**		Sample Matrix Spike				Run: ICP2-HE_141219B				12/19/14 18:12
Copper			2410	mg/kg	1.1		75	125			A
Lab ID:	**H14120165-037AMSD**		Sample Matrix Spike Duplicate				Run: ICP2-HE_141219B				12/19/14 18:16
Copper			2410	mg/kg	1.1		75	125	0.0	20	A
Method:	**SW6010B**										Batch: 27392
Lab ID:	**MB-27392**		Method Blank				Run: ICP2-HE_141219B				12/19/14 18:20
Copper			0.3	mg/kg	0.2						
Lab ID:	**LFB-27392**		Laboratory Fortified Blank				Run: ICP2-HE_141219B				12/19/14 18:23
Copper			48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27392**		Laboratory Control Sample				Run: ICP2-HE_141219B				12/19/14 18:27
Copper			255	mg/kg	1.1	87	77.5	109.6			
Lab ID:	**H14120165-047APDS**		Post Digestion/Distillation Spike				Run: ICP2-HE_141219B				12/19/14 19:52
Copper			353	mg/kg	1.2	84	75	125			
Lab ID:	**H14120165-047AMS**		Sample Matrix Spike				Run: ICP2-HE_141219B				12/19/14 19:56
Copper			171	mg/kg	1.1	81	75	125			
Lab ID:	**H14120165-047AMSD**		Sample Matrix Spike Duplicate				Run: ICP2-HE_141219B				12/19/14 20:00
Copper			166	mg/kg	1.1	71	75	125	3.2	20	S

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120165

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141218B	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/18/14 16:12	
Arsenic			0.0580	mg/L	0.0010	97	90	110			
Lead			0.0590	mg/L	0.0010	98	90	110			
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/19/14 02:17	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Lead			0.0594	mg/L	0.0010	99	90	110			
Method:	**SW6020**										Batch: 27390
Lab ID:	**MB-27390**	2	Method Blank				Run: ICPMS204-B_141218B			12/18/14 22:49	
Arsenic			ND	mg/kg	0.3						
Lead			0.3	mg/kg	0.2						
Lab ID:	**LCS-27390**	2	Laboratory Control Sample				Run: ICPMS204-B_141218B			12/18/14 22:54	
Arsenic			307	mg/kg	1.0	91	72.3	106.4			
Lead			188	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27390**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141218B			12/18/14 22:59	
Arsenic			47.4	mg/kg	1.0	95	80	120			
Lead			45.9	mg/kg	1.0	91	80	120			
Lab ID:	**H14120165-019APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141218B			12/19/14 01:06	
Arsenic			2370	mg/kg	1.0	97	75	125			
Lead			2080	mg/kg	1.0	85	75	125			
Lab ID:	**H14120165-019AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141218B			12/19/14 01:10	
Arsenic			51.8	mg/kg	1.0	92	75	125			
Lead			56.4	mg/kg	1.0	90	75	125			
Lab ID:	**H14120165-019AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141218B			12/19/14 01:15	
Arsenic			51.2	mg/kg	1.0	91	75	125	1.2	20	
Lead			56.1	mg/kg	1.0	90	75	125	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120165

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141219A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/19/14 17:03	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0316	mg/L	0.0010	105	90	110			
Copper			0.0618	mg/L	0.0010	103	90	110			
Lead			0.0593	mg/L	0.0010	99	90	110			
Zinc			0.0626	mg/L	0.0010	104	90	110			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/21/14 01:03	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0311	mg/L	0.0010	104	90	110			
Copper			0.0613	mg/L	0.0010	102	90	110			
Lead			0.0596	mg/L	0.0010	99	90	110			
Zinc			0.0612	mg/L	0.0010	102	90	110			
Method:	**SW6020**										Batch: 27391
Lab ID:	**MB-27391**	5	Method Blank				Run: ICPMS204-B_141219A			12/19/14 17:36	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			0.9	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			5	mg/kg	4						
Lab ID:	**LCS-27391**	5	Laboratory Control Sample				Run: ICPMS204-B_141219A			12/19/14 17:41	
Arsenic			329	mg/kg	1.0	94	72.3	106.4			
Cadmium			133	mg/kg	1.0	95	73	105.1			
Copper			302	mg/kg	1.0	105	77.5	109.6			
Lead			200	mg/kg	1.0	105	75.9	108.6			
Zinc			237	mg/kg	3.6	107	74.2	109.9			
Lab ID:	**LFB-27391**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141219A			12/19/14 17:45	
Arsenic			48.2	mg/kg	1.0	97	80	120			
Cadmium			24.9	mg/kg	1.0	99	80	120			
Copper			51.2	mg/kg	1.0	101	80	120			
Lead			47.4	mg/kg	1.0	95	80	120			
Zinc			53.8	mg/kg	3.5	98	80	120			
Lab ID:	**H14120165-037APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141219A			12/19/14 19:52	
Arsenic			2590	mg/kg	1.0	101	75	125			
Cadmium			1200	mg/kg	1.0	94	75	125			
Copper			4650	mg/kg	1.0	75	75	125			
Lead			2440	mg/kg	1.0	95	75	125			
Zinc			3540	mg/kg	3.6	91	75	125			
Lab ID:	**H14120165-037AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/19/14 19:56	
Arsenic			56.4	mg/kg	1.0	97	75	125			
Cadmium			31.2	mg/kg	1.0	97	75	125			
Copper			2810	mg/kg	1.0		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120165

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27391
Lab ID:	**H14120165-037AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/19/14 19:56	
Lead			68.6	mg/kg	1.0	98	75	125			
Zinc			1280	mg/kg	3.6		75	125			A
Lab ID:	**H14120165-037AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/19/14 20:01	
Arsenic			54.1	mg/kg	1.0	92	75	125	4.2	20	
Cadmium			29.3	mg/kg	1.0	90	75	125	6.3	20	
Copper			2720	mg/kg	1.0		75	125	3.1	20	A
Lead			65.4	mg/kg	1.0	92	75	125	4.8	20	
Zinc			1240	mg/kg	3.6		75	125	2.7	20	A
Method:	**SW6020**										Batch: 27392
Lab ID:	**MB-27392**	5	Method Blank				Run: ICPMS204-B_141219A			12/19/14 20:10	
Arsenic			0.8	mg/kg	0.3						
Cadmium			0.4	mg/kg	0.2						
Copper			3	mg/kg	0.7						
Lead			0.5	mg/kg	0.2						
Zinc			6	mg/kg	4						
Lab ID:	**LCS-27392**	5	Laboratory Control Sample				Run: ICPMS204-B_141219A			12/19/14 20:15	
Arsenic			319	mg/kg	1.0	89	72.3	106.4			
Cadmium			132	mg/kg	1.0	92	73	105.1			
Copper			291	mg/kg	1.0	99	77.5	109.6			
Lead			196	mg/kg	1.0	101	75.9	108.6			
Zinc			230	mg/kg	3.7	101	74.2	109.9			
Lab ID:	**LFB-27392**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141219A			12/19/14 20:20	
Arsenic			48.7	mg/kg	1.0	96	80	120			
Cadmium			25.0	mg/kg	1.0	99	80	120			
Copper			52.1	mg/kg	1.0	99	80	120			
Lead			47.8	mg/kg	1.0	94	80	120			
Zinc			55.5	mg/kg	3.5	99	80	120			
Lab ID:	**H14120165-047APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141219A			12/19/14 21:59	
Arsenic			2670	mg/kg	1.0	102	75	125			
Cadmium			1200	mg/kg	1.0	93	75	125			
Copper			2780	mg/kg	1.0	102	75	125			
Lead			2470	mg/kg	1.0	95	75	125			
Zinc			2720	mg/kg	3.6	100	75	125			
Lab ID:	**H14120165-047AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/19/14 22:03	
Arsenic			92.5	mg/kg	1.0	98	75	125			
Cadmium			24.0	mg/kg	1.0	92	75	125			
Copper			197	mg/kg	1.0	103	75	125			
Lead			82.6	mg/kg	1.0	97	75	125			
Zinc			199	mg/kg	3.6	105	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/24/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120165

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**										Batch: 27392
Lab ID: **H14120165-047AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/19/14 22:07	
Arsenic		93.2	mg/kg	1.0	99	75	125	0.7	20	
Cadmium		24.1	mg/kg	1.0	92	75	125	0.5	20	
Copper		194	mg/kg	1.0	98	75	125	1.5	20	
Lead		81.5	mg/kg	1.0	95	75	125	1.3	20	
Zinc		200	mg/kg	3.6	108	75	125	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120165

Login completed by: Tracy L. Lorash
Date Received: 12/8/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 12/12/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.0°C No Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection time on COC for 3-074e-1824 is 0933 - time on bag is 934. Logged in with time from COC.
Sample ID on COC is 3-329e-2430 -ID on bag is 3-329-2430. Logged in with ID from COC. TI 12/8/14

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120165

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-058s-0006	837	12/03/14	Soil	A	B		1
3-058s-0612	836	12/03/14	Soil	A	B		1
3-058s-1218	835	12/03/14	Soil	A	B		1
3-066e-0006	818	12/03/14	Soil	A	B		1
3-066e-0612	817	12/03/14	Soil	A	B		1
3-066e-1218	815	12/03/14	Soil	A	B		1
3-074-3642	741	12/03/14	Soil	A	B		1
3-074-4248	740	12/03/14	Soil	A	B		1
3-074e-0612	936	12/03/14	Soil	A	B		1
3-074e-1218	935	12/03/14	Soil	A	B		1
3-074e-1824	933	12/03/14	Soil	A	B		1
3-083e-0006	958	12/03/14	Soil	A	B		1
3-083e-0612	957	12/03/14	Soil	A	B		1
3-101e-0006	1013	12/03/14	Soil	A	B		1
3-101e-1218	1011	12/03/14	Soil	A	B		1
3-101e-0612	1012	12/03/14	Soil	A	B		1
3-111-1824	1114	12/03/14	Soil	A	B		1
3-111-2430	1113	12/03/14	Soil	A	B		1
3-111-3036	1112	12/03/14	Soil	A	B		1
3-112-1824	1144	12/03/14	6521.92	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/8/14 1605	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] hand del	2.0 TB, 0 Ice 12/8/14 1605

COC120314EL pg 1-2.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120165

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-112-2430	1143	12/03/14	Soil	A	B		1
3-112-3036	1142	12/03/14	Soil	A	B		1
3-019-4854	1335	11/24/14	Soil	A	B		1
3-019-5460	1334	11/24/14	Soil	A	B		1
3-045n-1218	1520	11/25/14	Soil	A	B		1
3-045n-1824	1519	11/25/14	Soil	A	B		1
3-045n-2430	1518	11/25/14	Soil	A	B		1
3-315e2-0006	1225	11/18/14	Soil	A	B		1
3-315e2-0612	1224	11/18/14	Soil	A	B		1
3-315e2-1218	1223	11/18/14	Soil	A	B		1
3-329-4248	1415	11/18/14	Soil	A	B		1
3-329-4854	1426	11/18/14	Soil	A	B		1
3-329-5460	1425	11/18/14	Soil	A	B		1
3-329e-2430	1533	11/18/14	Soil	A	B		1
3-329e-3036	1532	11/18/14	Soil	A	B		1
3-329e-3642	1531	11/18/14	Soil	A	B		1
3-330-1824	1354	11/18/14	Soil	A	B		1
3-330-2430	1353	11/18/14	Soil	A	B		1
3-330-3036	1352	11/18/14	Soil	A	B		1
3-343-1218	1445	11/18/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/8/14 1605

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] hmd
Date/Time: 12/8/14 1605
20 TB ICE

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120165

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-343-1824	1444	11/18/14	Soil	A	B		1
3-343-2430	1443	11/18/14	Soil	A	B		1
3-344-0612	1511	11/18/14	Soil	A	B		1
3-344-1218	1510	11/18/14	Soil	A	B		1
3-344-1824	1509	11/18/14	Soil	A	B		1
3-370e-1218	1253	11/19/14	Soil	A	B		1
3-066E-1218D	816	12/03/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/8/14 1605	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature]	2.0 TB 0TEP 12/8/14 1605

COC120314EL pg 1-2.xls

ANALYTICAL SUMMARY REPORT

December 16, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120095

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 28 samples for MT DEQ-Federal Superfund on 12/4/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120095-001	FB24-111414	11/14/14 11:00	12/04/14	Aqueous	Metals by ICP/ICPMS, Total pH Metals Digestion by EPA 200.2
H14120095-002	FB25-111414	11/14/14 15:30	12/04/14	Aqueous	Same As Above
H14120095-003	CCB11-111414	11/14/14 15:35	12/04/14	Aqueous	Same As Above
H14120095-004	FB26-111714	11/17/14 12:00	12/04/14	Aqueous	Same As Above
H14120095-005	FB27-111714	11/17/14 14:40	12/04/14	Aqueous	Same As Above
H14120095-006	FB28-111714	11/17/14 16:41	12/04/14	Aqueous	Same As Above
H14120095-007	CCB12-111714	11/17/14 16:45	12/04/14	Aqueous	Same As Above
H14120095-008	FB29-111814	11/18/14 10:35	12/04/14	Aqueous	Same As Above
H14120095-009	FB30-111814	11/18/14 15:00	12/04/14	Aqueous	Same As Above
H14120095-010	FB31-111914	11/19/14 9:50	12/04/14	Aqueous	Same As Above
H14120095-011	FB32-111914	11/19/14 13:05	12/04/14	Aqueous	Same As Above
H14120095-012	FB33-111914	11/19/14 15:45	12/04/14	Aqueous	Same As Above
H14120095-013	FB34-112414	11/24/14 9:15	12/04/14	Aqueous	Same As Above
H14120095-014	CCB13-112414	11/24/14 9:20	12/04/14	Aqueous	Same As Above
H14120095-015	FB35-112414	11/24/14 13:05	12/04/14	Aqueous	Same As Above
H14120095-016	FB36-112414	11/24/14 14:20	12/04/14	Aqueous	Same As Above
H14120095-017	FB37-112414	11/24/14 16:30	12/04/14	Aqueous	Same As Above
H14120095-018	CCB14-112414	11/24/14 16:35	12/04/14	Aqueous	Same As Above
H14120095-019	FB38-112514	11/25/14 9:10	12/04/14	Aqueous	Same As Above
H14120095-020	CCB15-112514	11/25/14 9:15	12/04/14	Aqueous	Same As Above
H14120095-021	FB39-112514	11/25/14 15:00	12/04/14	Aqueous	Same As Above
H14120095-022	FB40-112514	11/25/14 15:40	12/04/14	Aqueous	Same As Above
H14120095-023	CCB16-112514	11/25/14 15:45	12/04/14	Aqueous	Same As Above
H14120095-024	FB41-112614	11/26/14 8:45	12/04/14	Aqueous	Same As Above
H14120095-025	CCB17-112614	11/26/14 12:05	12/04/14	Aqueous	Same As Above
H14120095-026	FB42-112614	11/26/14 13:00	12/04/14	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

H14120095-027	FB43-112614	11/26/14 15:10	12/04/14	Aqueous	Same As Above
H14120095-028	CCB18-112614	11/26/14 15:15	12/04/14	Aqueous	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-001
Client Sample ID: FB24-111414

Report Date: 12/22/14
Collection Date: 11/14/14 11:00
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 09:51 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 17:05 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 17:05 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 17:05 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 17:05 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 17:05 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-002
Client Sample ID: FB25-111414

Report Date: 12/22/14
Collection Date: 11/14/14 15:30
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 09:54 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 17:36 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 17:36 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 17:36 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 17:36 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 17:36 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-003
Client Sample ID: CCB11-111414

Report Date: 12/22/14
Collection Date: 11/14/14 15:35
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 10:00 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 17:41 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 17:41 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 17:41 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 17:41 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 17:41 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-004
Client Sample ID: FB26-111714

Report Date: 12/22/14
Collection Date: 11/17/14 12:00
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 10:03 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 17:45 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 17:45 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 17:45 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 17:45 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 17:45 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-005
Client Sample ID: FB27-111714

Report Date: 12/22/14
Collection Date: 11/17/14 14:40
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	12/05/14 10:05 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 17:50 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 17:50 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 17:50 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 17:50 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 17:50 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-006
Client Sample ID: FB28-111714

Report Date: 12/22/14
Collection Date: 11/17/14 16:41
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 10:08 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 17:55 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 17:55 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 17:55 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 17:55 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 17:55 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-007
Client Sample ID: CCB12-111714

Report Date: 12/22/14
Collection Date: 11/17/14 16:45
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	12/05/14 10:11 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 17:59 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 17:59 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 17:59 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 17:59 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 17:59 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-008
Client Sample ID: FB29-111814

Report Date: 12/22/14
Collection Date: 11/18/14 10:35
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	12/05/14 10:14 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 18:04 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 18:04 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 18:04 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 18:04 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 18:04 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-009
Client Sample ID: FB30-111814

Report Date: 12/22/14
Collection Date: 11/18/14 15:00
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	12/05/14 10:17 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 18:09 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 18:09 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 18:09 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 18:09 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 18:09 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-010
Client Sample ID: FB31-111914

Report Date: 12/22/14
Collection Date: 11/19/14 09:50
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	12/05/14 10:19 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 18:13 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 18:13 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 18:13 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 18:13 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 18:13 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-011
Client Sample ID: FB32-111914

Report Date: 12/22/14
Collection Date: 11/19/14 13:05
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	12/05/14 10:22 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 18:45 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 18:45 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 18:45 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 18:45 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 18:45 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-012
Client Sample ID: FB33-111914

Report Date: 12/22/14
Collection Date: 11/19/14 15:45
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 10:33 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 18:49 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 18:49 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 18:49 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 18:49 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 18:49 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-013
Client Sample ID: FB34-112414

Report Date: 12/22/14
Collection Date: 11/24/14 09:15
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.8	s.u.	H	0.1		A4500-H B	12/05/14 10:36 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 18:54 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 18:54 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 18:54 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 18:54 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 18:54 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-014
Client Sample ID: CCB13-112414

Report Date: 12/22/14
Collection Date: 11/24/14 09:20
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.9	s.u.	H	0.1		A4500-H B	12/05/14 10:39 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 18:59 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 18:59 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 18:59 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 18:59 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 18:59 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-015
Client Sample ID: FB35-112414

Report Date: 12/22/14
Collection Date: 11/24/14 13:05
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 10:42 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 19:03 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 19:03 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 19:03 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 19:03 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 19:03 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-016
Client Sample ID: FB36-112414

Report Date: 12/22/14
Collection Date: 11/24/14 14:20
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 10:45 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 19:08 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 19:08 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 19:08 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 19:08 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 19:08 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-017
Client Sample ID: FB37-112414

Report Date: 12/22/14
Collection Date: 11/24/14 16:30
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 10:48 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 19:12 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 19:12 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 19:12 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 19:12 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 19:12 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-018
Client Sample ID: CCB14-112414

Report Date: 12/22/14
Collection Date: 11/24/14 16:35
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 10:50 / SRW
METALS, TOTAL							
Arsenic	0.003	mg/L		0.001		E200.8	12/09/14 19:17 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 19:17 / dck
Copper	0.026	mg/L		0.005		E200.8	12/09/14 19:17 / dck
Lead	0.003	mg/L		0.001		E200.8	12/09/14 19:17 / dck
Zinc	0.02	mg/L		0.01		E200.8	12/09/14 19:17 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-019
Client Sample ID: FB38-112514

Report Date: 12/22/14
Collection Date: 11/25/14 09:10
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	12/05/14 10:53 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 19:22 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 19:22 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 19:22 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 19:22 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 19:22 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-020
Client Sample ID: CCB15-112514

Report Date: 12/22/14
Collection Date: 11/25/14 09:15
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.7	s.u.	H	0.1		A4500-H B	12/05/14 10:56 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 19:58 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 19:58 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 19:58 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 19:58 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 19:58 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-021
Client Sample ID: FB39-112514

Report Date: 12/22/14
Collection Date: 11/25/14 15:00
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	12/05/14 10:59 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 20:21 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 20:21 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 20:21 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 20:21 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 20:21 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-022
Client Sample ID: FB40-112514

Report Date: 12/22/14
Collection Date: 11/25/14 15:40
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 11:04 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 20:25 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 20:25 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 20:25 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 20:25 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 20:25 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-023
Client Sample ID: CCB16-112514

Report Date: 12/22/14
Collection Date: 11/25/14 15:45
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	12/05/14 11:10 / SRW
METALS, TOTAL							
Arsenic	0.001	mg/L		0.001		E200.8	12/09/14 20:30 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 20:30 / dck
Copper	0.009	mg/L		0.005		E200.8	12/09/14 20:30 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 20:30 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 20:30 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-024
Client Sample ID: FB41-112614

Report Date: 12/22/14
Collection Date: 11/26/14 08:45
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 11:12 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 20:35 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 20:35 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 20:35 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 20:35 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 20:35 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-025
Client Sample ID: CCB17-112614

Report Date: 12/22/14
Collection Date: 11/26/14 12:05
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 11:15 / SRW
METALS, TOTAL							
Arsenic	0.002	mg/L		0.001		E200.8	12/09/14 20:39 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 20:39 / dck
Copper	0.023	mg/L		0.005		E200.8	12/09/14 20:39 / dck
Lead	0.001	mg/L		0.001		E200.8	12/09/14 20:39 / dck
Zinc	0.02	mg/L		0.01		E200.8	12/09/14 20:39 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-026
Client Sample ID: FB42-112614

Report Date: 12/22/14
Collection Date: 11/26/14 13:00
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 11:18 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 20:44 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 20:44 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 20:44 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 20:44 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 20:44 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-027
Client Sample ID: FB43-112614

Report Date: 12/22/14
Collection Date: 11/26/14 15:10
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 11:20 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	12/09/14 20:49 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 20:49 / dck
Copper	ND	mg/L		0.005		E200.8	12/09/14 20:49 / dck
Lead	ND	mg/L		0.001		E200.8	12/09/14 20:49 / dck
Zinc	ND	mg/L		0.01		E200.8	12/09/14 20:49 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14120095-028
Client Sample ID: CCB18-112614

Report Date: 12/22/14
Collection Date: 11/26/14 15:15
DateReceived: 12/04/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	12/05/14 11:23 / SRW
METALS, TOTAL							
Arsenic	0.003	mg/L		0.001		E200.8	12/09/14 20:53 / dck
Cadmium	ND	mg/L		0.001		E200.8	12/09/14 20:53 / dck
Copper	0.033	mg/L		0.005		E200.8	12/09/14 20:53 / dck
Lead	0.002	mg/L		0.001		E200.8	12/09/14 20:53 / dck
Zinc	0.01	mg/L		0.01		E200.8	12/09/14 20:53 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/16/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120095

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PHSC_101-H_141205A		
Lab ID: pH 7	Initial Calibration Verification Standard								12/05/14 08:41	
pH		7.0	s.u.	0.1	100	98	102			
Lab ID: pH 7	Initial Calibration Verification Standard								12/05/14 09:06	
pH		7.0	s.u.	0.1	100	98	102			
Lab ID: CCV - pH 7	Continuing Calibration Verification Standard								12/05/14 10:25	
pH		7.0	s.u.	0.1	100	98	102			
Method: A4500-H B									Batch: R102641	
Lab ID: H14120095-002BDUP	Sample Duplicate					Run: PHSC_101-H_141205A			12/05/14 09:57	
pH		5.5	s.u.	0.1				0.4	3	
Lab ID: H14120095-021BDUP	Sample Duplicate					Run: PHSC_101-H_141205A			12/05/14 11:01	
pH		5.5	s.u.	0.1				2.5	3	
Lab ID: H14120095-022BDUP	Sample Duplicate					Run: PHSC_101-H_141205A			12/05/14 11:07	
pH		5.6	s.u.	0.1				2.9	3	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/16/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120095

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_141209B		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/09/14 10:16	
Arsenic			0.0584	mg/L	0.0050	97	90	110			
Cadmium			0.0308	mg/L	0.0010	103	90	110			
Copper			0.0605	mg/L	0.010	101	90	110			
Lead			0.0573	mg/L	0.010	96	90	110			
Zinc			0.0611	mg/L	0.010	102	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/09/14 10:20	
Arsenic			0.000102	mg/L	0.0050						
Cadmium			0.000437	mg/L	0.0010						
Copper			0.000345	mg/L	0.010						
Lead			0.000203	mg/L	0.010						
Zinc			0.000905	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/09/14 10:25	
Arsenic			0.0106	mg/L	0.0050	106	70	130			
Cadmium			0.00968	mg/L	0.0010	97	70	130			
Copper			0.0210	mg/L	0.010	105	70	130			
Lead			0.000217	mg/L	0.010		0	0			
Zinc			0.0112	mg/L	0.010	112	70	130			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/09/14 23:24	
Arsenic			0.000155	mg/L	0.0050						
Cadmium			0.000451	mg/L	0.0010						
Copper			0.000365	mg/L	0.010						
Lead			0.000239	mg/L	0.010						
Zinc			0.000999	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/09/14 23:28	
Arsenic			0.0102	mg/L	0.0050	102	70	130			
Cadmium			0.00928	mg/L	0.0010	93	70	130			
Copper			0.0206	mg/L	0.010	103	70	130			
Lead			0.000224	mg/L	0.010		0	0			
Zinc			0.0107	mg/L	0.010	107	70	130			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/10/14 11:53	
Arsenic			0.0593	mg/L	0.0050	99	90	110			
Cadmium			0.0316	mg/L	0.0010	105	90	110			
Copper			0.0614	mg/L	0.010	102	90	110			
Lead			0.0597	mg/L	0.010	100	90	110			
Zinc			0.0607	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/10/14 11:58	
Arsenic			0.000117	mg/L	0.0050						
Cadmium			0.000495	mg/L	0.0010						
Copper			0.000342	mg/L	0.010						
Lead			0.000224	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/16/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120095

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Analytical Run: ICPMS204-B_141209B	
Lab ID:	**ICSA**	5	Interference Check Sample A							12/10/14 11:58	
Zinc			0.000889	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/10/14 12:02	
Arsenic			0.0104	mg/L	0.0050	104	70	130			
Cadmium			0.00966	mg/L	0.0010	97	70	130			
Copper			0.0208	mg/L	0.010	104	70	130			
Lead			0.000226	mg/L	0.010		0	0			
Zinc			0.0112	mg/L	0.010	112	70	130			
Method:	**E200.8**										Batch: 27294
Lab ID:	**MB-27294**	5	Method Blank				Run: ICPMS204-B_141209B			12/09/14 16:28	
Arsenic			ND	mg/L	6E-05						
Cadmium			ND	mg/L	3E-05						
Copper			ND	mg/L	0.0003						
Lead			ND	mg/L	3E-05						
Zinc			0.002	mg/L	0.001						
Lab ID:	**LCS-27294**	5	Laboratory Control Sample				Run: ICPMS204-B_141209B			12/09/14 16:32	
Arsenic			0.495	mg/L	0.0010	99	85	115			
Cadmium			0.265	mg/L	0.0010	106	85	115			
Copper			0.512	mg/L	0.0050	102	85	115			
Lead			0.504	mg/L	0.0010	101	85	115			
Zinc			0.492	mg/L	0.010	98	85	115			
Lab ID:	**H14120095-001AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_141209B			12/09/14 17:09	
Arsenic			0.490	mg/L	0.0010	98	70	130			
Cadmium			0.264	mg/L	0.0010	106	70	130			
Copper			0.512	mg/L	0.0050	102	70	130			
Lead			0.506	mg/L	0.0010	101	70	130			
Zinc			0.488	mg/L	0.010	97	70	130			
Lab ID:	**H14120095-001AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141209B			12/09/14 17:13	
Arsenic			0.483	mg/L	0.0010	97	70	130	1.3	20	
Cadmium			0.263	mg/L	0.0010	105	70	130	0.3	20	
Copper			0.504	mg/L	0.0050	101	70	130	1.6	20	
Lead			0.500	mg/L	0.0010	100	70	130	1.2	20	
Zinc			0.480	mg/L	0.010	96	70	130	1.7	20	
Lab ID:	**H14120095-010AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_141209B			12/09/14 18:18	
Arsenic			0.491	mg/L	0.0010	98	70	130			
Cadmium			0.264	mg/L	0.0010	106	70	130			
Copper			0.514	mg/L	0.0050	103	70	130			
Lead			0.504	mg/L	0.0010	101	70	130			
Zinc			0.492	mg/L	0.010	98	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/16/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120095

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Batch: 27294	
Lab ID:	**H14120095-010AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141209B			12/09/14 18:22	
Arsenic			0.484	mg/L	0.0010	97	70	130	1.4	20	
Cadmium			0.265	mg/L	0.0010	106	70	130	0.4	20	
Copper			0.508	mg/L	0.0050	102	70	130	1.2	20	
Lead			0.508	mg/L	0.0010	102	70	130	0.7	20	
Zinc			0.483	mg/L	0.010	97	70	130	1.8	20	
Method:	**E200.8**									Batch: 27295	
Lab ID:	**MB-27295**	5	Method Blank				Run: ICPMS204-B_141209B			12/09/14 19:40	
Arsenic			ND	mg/L	6E-05						
Cadmium			ND	mg/L	3E-05						
Copper			ND	mg/L	0.0003						
Lead			ND	mg/L	3E-05						
Zinc			0.001	mg/L	0.001						
Lab ID:	**LCS-27295**	5	Laboratory Control Sample				Run: ICPMS204-B_141209B			12/09/14 19:45	
Arsenic			0.489	mg/L	0.0010	98	85	115			
Cadmium			0.268	mg/L	0.0010	107	85	115			
Copper			0.496	mg/L	0.0050	99	85	115			
Lead			0.508	mg/L	0.0010	102	85	115			
Zinc			0.484	mg/L	0.010	96	85	115			
Lab ID:	**H14120095-020AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_141209B			12/09/14 20:03	
Arsenic			0.489	mg/L	0.0010	98	70	130			
Cadmium			0.265	mg/L	0.0010	106	70	130			
Copper			0.514	mg/L	0.0050	102	70	130			
Lead			0.506	mg/L	0.0010	101	70	130			
Zinc			0.482	mg/L	0.010	96	70	130			
Lab ID:	**H14120095-020AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141209B			12/09/14 20:07	
Arsenic			0.493	mg/L	0.0010	99	70	130	0.8	20	
Cadmium			0.262	mg/L	0.0010	105	70	130	0.8	20	
Copper			0.525	mg/L	0.0050	105	70	130	2.3	20	
Lead			0.504	mg/L	0.0010	101	70	130	0.4	20	
Zinc			0.494	mg/L	0.010	98	70	130	2.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14120095

Login completed by: Tracy L. Lorash
Date Received: 12/4/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 12/10/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample media on COC is soil, however we received aqueous samples.
Cooler 1 was received at 4.0°C, Cooler 2 at 3.1°C. Samples were received on wet ice. TI 12/4/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120095

SAMPLE ID		DATE	TIME	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
FB24-111414	C1	11/14/14	11:00	Soil	A	B		1
FB25-111414	C1	11/14/14	15:30	Soil	A	B		1
CCB11-111414	C2	11/14/14	15:35	Soil	A	B		1
FB26-111714	C1	11/17/14	12:00	Soil	A	B		1
FB27-111714		11/17/14	14:40	Soil	A	B		1
FB28-111714		11/17/14	16:41	Soil	A	B		1
CCB12-111714	C2	11/17/14	16:45	Soil	A	B		1
FB29-111814	C1	11/18/14	10:35	Soil	A	B		1
FB30-111814		11/18/14	15:00	Soil	A	B		1
FB31-111914		11/19/14	09:50	Soil	A	B		1
FB32-111914		11/19/14	13:05	Soil	A	B		1
FB33-111914		11/19/14	15:45	Soil	A	B		1
FB34-112414		11/24/14	09:15	Soil	A	B		1
CCB13-112414	C2	11/24/14	09:20	Soil	A	B		1
FB35-112414	C1	11/24/14	13:05	Soil	A	B		1
FB36-112414	C1	11/24/14	14:20	Soil	A	B		1
FB37-112414	C2	11/24/14	16:30	Soil	A	B		1
CCB14-112414		11/24/14	16:35	Soil	A	B		1
FB38-112514		11/25/14	09:10	Soil	A	B		1
CCB15-112514		11/25/14	09:15	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/4/14 1545	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1=4.0 C2=3.1 >0°C on ice	hand del. 12/4/14 15:45

COC 120414 CCB-FB PG 1-2.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120095

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
FB39-112514	11/25/14	15:00	Soil	A	B		1
FB40-112514	11/25/14	15:40	Soil	A	B		1
CCB16-112514	11/25/14	15:45	Soil	A	B		1
FB41-112614	11/26/14	08:45	Soil	A	B		1
CCB17-112614	11/26/14	12:05	Soil	A	B		1
FB42-112614	11/26/14	13:00	Soil	A	B		1
FB43-112614	11/26/14	15:10	Soil	A	B		1
CCB18-112614	11/26/14	15:15	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 12/4/14 1545

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1 = 4.0
C2 = 3.1 > OTB
on ice

Date/Time: hand del 12/4/14 15:45

ANALYTICAL SUMMARY REPORT

December 13, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120078

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 11 samples for MT DEQ-Federal Superfund on 12/2/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120078-001	3-008-0006	10/30/14 9:07	12/02/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120078-002	3-096-4854	10/30/14 15:15	12/02/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120078-003	3-104-1824	10/31/14 8:45	12/02/14	Soil	Same As Above
H14120078-004	3-104-2430	10/31/14 8:44	12/02/14	Soil	Same As Above
H14120078-005	3-118-4248	10/31/14 13:00	12/02/14	Soil	Same As Above
H14120078-006	3-133-4854	10/31/14 11:25	12/02/14	Soil	Same As Above
H14120078-007	3-133-5460	10/31/14 11:26	12/02/14	Soil	Same As Above
H14120078-008	3-138-1824	11/01/14 14:39	12/02/14	Soil	Same As Above
H14120078-009	3-138-2430	11/01/14 14:38	12/02/14	Soil	Same As Above
H14120078-010	3-315e-2430	11/18/14 11:48	12/02/14	Soil	Same As Above
H14120078-011	3-315e-3036	11/18/14 11:47	12/02/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120078

Report Date: 12/13/14
Date Received: 12/02/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120078-001	3-008-0006	0	0	7.7	1740	16	14800	701	3400
H14120078-002	3-096-4854	0	0	8.0	16	< 1	124	16	80
H14120078-003	3-104-1824	0	0	7.5	84	3	588	79	767
H14120078-004	3-104-2430	0	0	7.7	63	2	433	61	507
H14120078-005	3-118-4248	0	0	7.2	16	< 1	86	15	81
H14120078-006	3-133-4854	0	0	7.6	9	< 1	871	12	195
H14120078-007	3-133-5460	0	0	7.7	41	< 1	367	15	352
H14120078-008	3-138-1824	0	0	7.2	3420	17	10800	1020	6190
H14120078-009	3-138-2430	0	0	7.4	39	1	250	34	796
H14120078-010	3-315e-2430	0	0	7.5	35	1	121	27	677
H14120078-011	3-315e-3036	0	0	7.2	24	< 1	155	28	189

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/13/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120078

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141212A		
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 08:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/10/14 07:24	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/10/14 08:03	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 09:05	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 09:52	
pH, sat. paste		9.98	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 10:13	
pH, sat. paste		10.0	s.u.	0.10	101	99	101			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 10:34	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_141210_1		Continuing Calibration Verification Standard							12/11/14 09:34	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141210_1		Continuing Calibration Verification Standard							12/11/14 09:34	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 09:35	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141210_1		Continuing Calibration Verification Standard							12/11/14 09:44	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 08:37	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 07:12	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 07:51	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27349
Lab ID: LCS-27349		Laboratory Control Sample				Run: SOIL PH METER_141212A			12/11/14 09:35	
pH, sat. paste		7.72	s.u.	0.10	103	95	105			
Lab ID: H14120078-005ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/11/14 09:40	
pH, sat. paste		7.18	s.u.	0.10				0.0	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/13/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120078

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27349
Lab ID: H14120078-011ADUP	Sample Duplicate					Run: SOIL PH METER_141212A			12/11/14 09:45	
pH, sat. paste		7.25	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/13/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120078

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_141210B	
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/10/14 08:56	
Arsenic			0.770	mg/L	0.0085	96	90	110			
Cadmium			0.385	mg/L	0.0010	96	90	110			
Copper			0.784	mg/L	0.010	98	90	110			
Lead			0.769	mg/L	0.010	96	90	110			
Zinc			0.788	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/10/14 09:11	
Arsenic			0.00487	mg/L	0.0085		0	0			
Cadmium			0.00217	mg/L	0.0010		0	0			
Copper			0.00449	mg/L	0.010		0	0			
Lead			-0.0112	mg/L	0.010		0	0			
Zinc			0.00231	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/10/14 09:15	
Arsenic			0.987	mg/L	0.0085	99	80	120			
Cadmium			0.917	mg/L	0.0010	92	80	120			
Copper			0.512	mg/L	0.010	102	80	120			
Lead			0.936	mg/L	0.010	94	80	120			
Zinc			0.996	mg/L	0.010	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/13/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120078

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27289	
Lab ID:	**MB-27289**	5	Method Blank				Run: ICP2-HE_141210B			12/10/14 15:03	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27289**	5	Laboratory Fortified Blank				Run: ICP2-HE_141210B			12/10/14 15:07	
Arsenic			43.9	mg/kg	1.0	88	80	120			
Cadmium			21.9	mg/kg	1.0	87	80	120			
Copper			48.2	mg/kg	1.0	96	80	120			
Lead			43.1	mg/kg	1.0	86	80	120			
Zinc			45.5	mg/kg	1.0	90	80	120			
Lab ID:	**LCS-27289**	5	Laboratory Control Sample				Run: ICP2-HE_141210B			12/10/14 15:11	
Arsenic			266	mg/kg	1.7	77	72.3	106.4			
Cadmium			113	mg/kg	1.0	82	73	105.1			
Copper			252	mg/kg	1.0	90	77.5	109.6			
Lead			162	mg/kg	2.9	87	75.9	108.6			
Zinc			185	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120078-011AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141210B			12/10/14 16:17	
Arsenic			64.3	mg/kg	1.8	79	75	125			
Cadmium			21.9	mg/kg	1.0	84	75	125			
Copper			195	mg/kg	1.1	79	75	125			
Lead			67.1	mg/kg	3.2	81	75	125			
Zinc			233	mg/kg	1.0	86	75	125			
Lab ID:	**H14120078-011AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141210B			12/10/14 16:21	
Arsenic			62.5	mg/kg	1.8	77	75	125	2.8	20	
Cadmium			20.9	mg/kg	1.0	81	75	125	4.5	20	
Copper			207	mg/kg	1.1	102	75	125	5.7	20	
Lead			63.1	mg/kg	3.2	74	75	125	6.2	20	S
Zinc			228	mg/kg	1.0	77	75	125	2.2	20	

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/13/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120078

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141211A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/11/14 10:26	
Arsenic			0.0582	mg/L	0.0010	97	90	110			
Cadmium			0.0312	mg/L	0.0010	104	90	110			
Lead			0.0592	mg/L	0.0010	99	90	110			
Method:	**SW6020**										Batch: 27289
Lab ID:	**MB-27289**	3	Method Blank				Run: ICPMS204-B_141211A			12/11/14 19:06	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27289**	3	Laboratory Control Sample				Run: ICPMS204-B_141211A			12/11/14 19:10	
Arsenic			312	mg/kg	1.0	91	72.3	106.4			
Cadmium			130	mg/kg	1.0	95	73	105.1			
Lead			191	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27289**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141211A			12/11/14 19:15	
Arsenic			48.0	mg/kg	1.0	96	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Lead			47.8	mg/kg	1.0	96	80	120			
Lab ID:	**H14120078-011AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141211A			12/11/14 20:38	
Arsenic			76.0	mg/kg	1.0	97	75	125			
Cadmium			25.6	mg/kg	1.0	98	75	125			
Lead			76.9	mg/kg	1.0	96	75	125			
Lab ID:	**H14120078-011AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141211A			12/11/14 20:42	
Arsenic			74.4	mg/kg	1.0	95	75	125	2.0	20	
Cadmium			24.7	mg/kg	1.0	96	75	125	3.7	20	
Lead			76.2	mg/kg	1.0	95	75	125	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14120078

Login completed by: Tracy L. Lorash
Date Received: 12/2/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 12/10/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.0°C Blue Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample ID on COC is 3-096-4854 -ID on bag is 3-096 "48-54 ". Logged in with ID from COC.
Sample ID on COC is 3-104-1824 -ID on bag is 3-104 18-24". Logged in with ID from COC.
Sample ID on COC is 3-104-2430 -ID on bag is 3-104 24-30". Logged in with ID from COC.
Sample ID on COC is 3-118-4248 -ID on bag is 3-104 42-48". Logged in with ID from COC.
Sample ID on COC is 3-133-4854 -ID on bag is 3-133 48-54. Logged in with ID from COC.
Sample ID on COC is 3-133-5460 -ID on bag is 3-133 54-60. Logged in with ID from COC.
Sample ID on COC is 3-138-1824 -ID on bag is 3-133 18-24. Logged in with ID from COC.
Sample ID on COC is 3-138-2430 -ID on bag is 3-133 24-30. Logged in with ID from COC. TI 12/2/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120078

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-008-0006	0907	10/30/14	Soil	A	B		1
3-096-4854	1515	10/30/14	Soil	A	B		1
3-104-1824	0845	10/31/14	Soil	A	B		1
3-104-2430	0844	10/31/14	Soil	A	B		1
3-118-4248	1300	10/31/14	Soil	A	B		1
3-133-4854	1125	10/31/14	Soil	A	B		1
3-133-5460	1126	10/31/14	Soil	A	B		1
3-138-1824	1439	11/1/14	Soil	A	B		1
3-138-2430	1438	11/1/14	Soil	A	B		1
3-315e-2430	1148	11/18/14	Soil	A	B		1
3-315e-3036	1147	11/18/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/1/14 16:40	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] hand delivered (4.1=2.0°C)	12/2/14 16:40

ANALYTICAL SUMMARY REPORT

December 22, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120077

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 50 samples for MT DEQ-Federal Superfund on 12/2/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120077-001	3-001-0612	11/24/14 12:36	12/02/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120077-002	3-001-1218	11/24/14 12:35	12/02/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120077-003	3-001-1824	11/24/14 12:34	12/02/14	Soil	Same As Above
H14120077-004	3-002-1218	11/24/14 11:50	12/02/14	Soil	Same As Above
H14120077-005	3-002-1824	11/24/14 11:49	12/02/14	Soil	Same As Above
H14120077-006	3-002-2430	11/24/14 11:48	12/02/14	Soil	Same As Above
H14120077-007	3-003-1824	11/24/14 11:34	12/02/14	Soil	Same As Above
H14120077-008	3-003-2430	11/24/14 11:33	12/02/14	Soil	Same As Above
H14120077-009	3-003-3036	11/24/14 11:32	12/02/14	Soil	Same As Above
H14120077-010	3-004-1218	11/24/14 11:15	12/02/14	Soil	Same As Above
H14120077-011	3-004-1824	11/24/14 11:14	12/02/14	Soil	Same As Above
H14120077-012	3-004-2430	11/24/14 11:13	12/02/14	Soil	Same As Above
H14120077-013	3-005-1824	11/24/14 10:54	12/02/14	Soil	Same As Above
H14120077-014	3-005-2430	11/24/14 10:53	12/02/14	Soil	Same As Above
H14120077-015	3-005-3036	11/24/14 10:52	12/02/14	Soil	Same As Above
H14120077-016	3-006-1824	11/24/14 10:19	12/02/14	Soil	Same As Above
H14120077-017	3-006-2430	11/24/14 10:18	12/02/14	Soil	Same As Above
H14120077-018	3-006-3036	11/24/14 10:17	12/02/14	Soil	Same As Above
H14120077-019	3-007-1218	11/24/14 10:00	12/02/14	Soil	Same As Above
H14120077-020	3-007-1824	11/24/14 9:59	12/02/14	Soil	Same As Above
H14120077-021	3-007-2430	11/24/14 9:58	12/02/14	Soil	Same As Above
H14120077-022	3-012-4854	11/24/14 13:45	12/02/14	Soil	Same As Above
H14120077-023	3-012-5460	11/24/14 13:44	12/02/14	Soil	Same As Above
H14120077-024	3-014-1824	11/24/14 12:49	12/02/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120077-025	3-014-2430	11/24/14 12:48	12/02/14	Soil	Same As Above
H14120077-026	3-014-3036	11/24/14 12:47	12/02/14	Soil	Same As Above
H14120077-027	3-015-0612	11/24/14 13:06	12/02/14	Soil	Same As Above
H14120077-028	3-015-1218	11/24/14 13:05	12/02/14	Soil	Same As Above
H14120077-029	3-015-1824	11/24/14 13:04	12/02/14	Soil	Same As Above
H14120077-030	3-016-0612	11/24/14 13:46	12/02/14	Soil	Same As Above
H14120077-031	3-016-1218	11/24/14 13:45	12/02/14	Soil	Same As Above
H14120077-032	3-016-1824	11/24/14 13:44	12/02/14	Soil	Same As Above
H14120077-033	3-017-0006	11/24/14 14:17	12/02/14	Soil	Same As Above
H14120077-034	3-017-0612	11/24/14 14:16	12/02/14	Soil	Same As Above
H14120077-035	3-017-1218	11/24/14 14:15	12/02/14	Soil	Same As Above
H14120077-036	3-018-4248	11/24/14 14:35	12/02/14	Soil	Same As Above
H14120077-037	3-018-4854	11/24/14 14:50	12/02/14	Soil	Same As Above
H14120077-038	3-018-5460	11/24/14 14:49	12/02/14	Soil	Same As Above
H14120077-039	3-026-4854	11/24/14 16:15	12/02/14	Soil	Same As Above
H14120077-040	3-026-5460	11/24/14 16:14	12/02/14	Soil	Same As Above
H14120077-041	3-106-0612	11/24/14 8:22	12/02/14	Soil	Same As Above
H14120077-042	3-106-1218	11/24/14 8:20	12/02/14	Soil	Same As Above
H14120077-043	3-106-1218D	11/24/14 8:21	12/02/14	Soil	Same As Above
H14120077-044	3-106-1824	11/24/14 8:20	12/02/14	Soil	Same As Above
H14120077-045	3-107-1824	11/24/14 8:59	12/02/14	Soil	Same As Above
H14120077-046	3-107-2430	11/24/14 8:58	12/02/14	Soil	Same As Above
H14120077-047	3-107-3036	11/24/14 8:57	12/02/14	Soil	Same As Above
H14120077-048	3-109-1218	11/24/14 8:40	12/02/14	Soil	Same As Above
H14120077-049	3-109-1824	11/24/14 8:39	12/02/14	Soil	Same As Above
H14120077-050	3-109-2430	11/24/14 8:38	12/02/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120077

Report Date: 12/22/14
Date Received: 12/02/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120077-001	3-001-0612	0	0	7.6	1670	3	2810	812	1530
H14120077-002	3-001-1218	0	0	7.0	12	< 1	59	16	258
H14120077-003	3-001-1824	0	0	6.4	8	< 1	32	9	46
H14120077-004	3-002-1218	0	0	7.9	67	6	10200	695	2490
H14120077-005	3-002-1824	0	0	8.0	10	< 1	38	23	88
H14120077-006	3-002-2430	0	0	7.3	15	< 1	72	24	467
H14120077-007	3-003-1824	0	0	6.8	877	8	23400	1110	3260
H14120077-008	3-003-2430	0	0	7.4	231	13	4280	886	3720
H14120077-009	3-003-3036	0	0	7.5	8	< 1	75	17	170
H14120077-010	3-004-1218	0	0	7.6	171	3	1740	137	858
H14120077-011	3-004-1824	0	0	7.5	58	< 1	627	59	238
H14120077-012	3-004-2430	0	0	7.2	16	< 1	120	21	90
H14120077-013	3-005-1824	0	0	6.1	385	4	2270	223	1130
H14120077-014	3-005-2430	0	0	6.7	147	1	931	70	357
H14120077-015	3-005-3036	0	0	6.8	128	1	809	80	461
H14120077-016	3-006-1824	0	0	6.2	243	4	6990	222	1500
H14120077-017	3-006-2430	0	0	7.2	29	2	129	22	866
H14120077-018	3-006-3036	0	0	6.7	9	< 1	39	13	752
H14120077-019	3-007-1218	0	0	8.0	194	8	4620	251	2450
H14120077-020	3-007-1824	0	0	8.0	10	< 1	84	11	106
H14120077-021	3-007-2430	0	0	7.7	11	< 1	90	17	93
H14120077-022	3-012-4854	0	0	7.4	14	1	11300	7	313
H14120077-023	3-012-5460	0	0	7.1	27	1	5120	22	514
H14120077-024	3-014-1824	0	0	7.4	57	6	3120	147	1820
H14120077-025	3-014-2430	0	0	7.6	6	< 1	39	14	144
H14120077-026	3-014-3036	0	0	6.3	5	< 1	32	17	81
H14120077-027	3-015-0612	0	0	7.4	32	23	6960	25	3380
H14120077-028	3-015-1218	0	0	7.6	9	< 1	62	12	237
H14120077-029	3-015-1824	0	0	7.1	32	< 1	335	35	174
H14120077-030	3-016-0612	0	0	7.6	80	20	2750	157	3530
H14120077-031	3-016-1218	0	0	7.4	5	< 1	27	11	57
H14120077-032	3-016-1824	0	0	7.5	5	< 1	21	10	55
H14120077-033	3-017-0006	0	0	8.2	588	7	3320	475	1900
H14120077-034	3-017-0612	0	0	7.7	12	< 1	42	16	122
H14120077-035	3-017-1218	0	0	7.3	7	< 1	24	13	59
H14120077-036	3-018-4248	0	0	6.9	500	17	6860	386	4020
H14120077-037	3-018-4854	0	0	7.4	354	13	2430	291	3570
H14120077-038	3-018-5460	0	0	6.6	43	2	465	92	437
H14120077-039	3-026-4854	0	0	7.2	471	24	4820	588	6190
H14120077-040	3-026-5460	0	0	7.4	519	21	5260	560	6420

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120077

Report Date: 12/22/14
Date Received: 12/02/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120077-041	3-106-0612	0	0	7.6	928	12	7670	493	2870
H14120077-042	3-106-1218	0	0	7.8	37	< 1	243	25	225
H14120077-043	3-106-1218D	0	0	7.7	20	< 1	87	17	383
H14120077-044	3-106-1824	0	0	7.7	14	< 1	80	16	93
H14120077-045	3-107-1824	0	0	7.8	57	2	523	30	3580
H14120077-046	3-107-2430	0	0	7.6	10	< 1	35	10	251
H14120077-047	3-107-3036	0	0	7.5	8	< 1	38	11	55
H14120077-048	3-109-1218	0	0	7.6	1470	11	9620	634	3300
H14120077-049	3-109-1824	0	0	7.9	37	< 1	88	21	225
H14120077-050	3-109-2430	0	0	8.1	10	< 1	38	17	127

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141219A		
Lab ID: ICV_1_141217_1		Initial Calibration Verification Standard							12/18/14 11:04	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141217_1		Initial Calibration Verification Standard							12/18/14 11:37	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_141218_1		Continuing Calibration Verification Standard							12/19/14 07:06	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141218_1		Continuing Calibration Verification Standard							12/19/14 07:07	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141218_1		Initial Calibration Verification Standard							12/19/14 07:08	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141218_1		Continuing Calibration Verification Standard							12/19/14 07:20	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141218_1		Continuing Calibration Verification Standard							12/19/14 07:28	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141218_1		Continuing Calibration Verification Standard							12/19/14 07:42	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141218_1		Continuing Calibration Verification Standard							12/19/14 07:43	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141218_1		Initial Calibration Verification Standard							12/19/14 07:44	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141218_1		Continuing Calibration Verification Standard							12/19/14 07:54	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141218_1		Continuing Calibration Verification Standard							12/19/14 08:07	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141217_1		Initial Calibration Verification Standard							12/18/14 07:46	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27382
Lab ID: LCS-27382		Laboratory Control Sample				Run: SOIL PH METER_141219A			12/19/14 07:09	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H14120077-010ADUP		Sample Duplicate				Run: SOIL PH METER_141219A			12/19/14 07:19	
pH, sat. paste		7.58	s.u.	0.10				0.1	30	
Lab ID: H14120077-020ADUP		Sample Duplicate				Run: SOIL PH METER_141219A			12/19/14 07:28	
pH, sat. paste		7.96	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27382
Lab ID: H14120077-025ADUP		Sample Duplicate				Run: SOIL PH METER_141219A				12/19/14 07:33
pH, sat. paste		7.59	s.u.	0.10				0.4	30	
Method: ASAM10-3.2										Batch: 27383
Lab ID: LCS-27383		Laboratory Control Sample				Run: SOIL PH METER_141219A				12/19/14 07:45
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H14120077-030ADUP		Sample Duplicate				Run: SOIL PH METER_141219A				12/19/14 07:50
pH, sat. paste		7.66	s.u.	0.10				0.3	30	
Lab ID: H14120077-040ADUP		Sample Duplicate				Run: SOIL PH METER_141219A				12/19/14 08:02
pH, sat. paste		7.40	s.u.	0.10				0.7	30	
Lab ID: H14120077-050ADUP		Sample Duplicate				Run: SOIL PH METER_141219A				12/19/14 08:11
pH, sat. paste		8.12	s.u.	0.10				0.2	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141217A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/17/14 09:09	
Arsenic			0.780	mg/L	0.0085	98	90	110			
Cadmium			0.383	mg/L	0.0010	96	90	110			
Copper			0.788	mg/L	0.010	99	90	110			
Lead			0.757	mg/L	0.010	95	90	110			
Zinc			0.788	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/17/14 09:24	
Arsenic			0.00371	mg/L	0.0085		0	0			
Cadmium			0.00152	mg/L	0.0010		0	0			
Copper			0.00154	mg/L	0.010		0	0			
Lead			-0.0223	mg/L	0.010		0	0			
Zinc			0.00269	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/17/14 09:28	
Arsenic			0.988	mg/L	0.0085	99	80	120			
Cadmium			0.898	mg/L	0.0010	90	80	120			
Copper			0.513	mg/L	0.010	103	80	120			
Lead			0.892	mg/L	0.010	89	80	120			
Zinc			0.991	mg/L	0.010	99	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141218B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/18/14 10:20	
Arsenic			0.815	mg/L	0.0085	102	90	110			
Cadmium			0.395	mg/L	0.0010	99	90	110			
Copper			0.791	mg/L	0.010	99	90	110			
Lead			0.798	mg/L	0.010	100	90	110			
Zinc			0.805	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/18/14 10:35	
Arsenic			0.00947	mg/L	0.0085		0	0			
Cadmium			0.00310	mg/L	0.0010		0	0			
Copper			-0.00357	mg/L	0.010		0	0			
Lead			-0.0174	mg/L	0.010		0	0			
Zinc			0.00349	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/18/14 10:39	
Arsenic			1.01	mg/L	0.0085	101	80	120			
Cadmium			0.925	mg/L	0.0010	92	80	120			
Copper			0.507	mg/L	0.010	101	80	120			
Lead			0.958	mg/L	0.010	96	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27286
Lab ID:	**MB-27286**	5	Method Blank				Run: ICP2-HE_141217A			12/17/14 18:10	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			5	mg/kg	0.09						
Lab ID:	**LFB-27286**	5	Laboratory Fortified Blank				Run: ICP2-HE_141217A			12/17/14 18:14	
Arsenic			45.8	mg/kg	1.0	92	80	120			
Cadmium			22.8	mg/kg	1.0	91	80	120			
Copper			48.4	mg/kg	1.0	97	80	120			
Lead			46.4	mg/kg	1.0	93	80	120			
Zinc			46.7	mg/kg	1.0	83	80	120			
Lab ID:	**LCS-27286**	5	Laboratory Control Sample				Run: ICP2-HE_141217A			12/17/14 18:25	
Arsenic			269	mg/kg	1.8	79	72.3	106.4			
Cadmium			113	mg/kg	1.0	83	73	105.1			
Copper			251	mg/kg	1.1	91	77.5	109.6			
Lead			161	mg/kg	3.1	87	75.9	108.6			
Zinc			181	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H14120077-019APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141217A			12/17/14 19:57	
Arsenic			435	mg/kg	1.9	93	75	125			
Cadmium			120	mg/kg	1.0	87	75	125			
Copper			4750	mg/kg	1.1		75	125			A
Lead			477	mg/kg	3.3	88	75	125			
Zinc			2650	mg/kg	1.0		75	125			A
Lab ID:	**H14120077-019AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141217A			12/17/14 20:01	
Arsenic			244	mg/kg	1.8	100	75	125			
Cadmium			29.1	mg/kg	1.0	86	75	125			
Copper			4640	mg/kg	1.1		75	125			A
Lead			289	mg/kg	3.2		75	125			A
Zinc			2450	mg/kg	1.0		75	125			A
Lab ID:	**H14120077-019AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141217A			12/17/14 20:04	
Arsenic			248	mg/kg	1.8	108	75	125	1.6	20	
Cadmium			30.0	mg/kg	1.0	89	75	125	3.0	20	
Copper			4510	mg/kg	1.1		75	125	2.9	20	A
Lead			298	mg/kg	3.2		75	125	3.2	20	A
Zinc			2520	mg/kg	1.0		75	125	2.8	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27287
Lab ID:	**MB-27287**	5	Method Blank				Run: ICP2-HE_141218B			12/18/14 17:47	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27287**	5	Laboratory Fortified Blank				Run: ICP2-HE_141218B			12/18/14 17:51	
Arsenic			48.3	mg/kg	1.0	97	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			
Copper			48.4	mg/kg	1.0	96	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Zinc			48.8	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27287**	5	Laboratory Control Sample				Run: ICP2-HE_141218B			12/18/14 17:55	
Arsenic			294	mg/kg	1.8	86	72.3	106.4			
Cadmium			123	mg/kg	1.0	90	73	105.1			
Copper			250	mg/kg	1.1	90	77.5	109.6			
Lead			181	mg/kg	3.2	97	75.9	108.6			
Zinc			197	mg/kg	1.0	93	74.2	109.9			
Lab ID:	**H14120077-037APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141218B			12/18/14 19:46	
Arsenic			586	mg/kg	1.8	91	75	125			
Cadmium			123	mg/kg	1.0	86	75	125			
Copper			2640	mg/kg	1.1		75	125			A
Lead			507	mg/kg	3.2	85	75	125			
Zinc			3790	mg/kg	1.0		75	125			A
Lab ID:	**H14120077-037AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141218B			12/18/14 19:49	
Arsenic			403	mg/kg	1.8		75	125			A
Cadmium			34.8	mg/kg	1.0	88	75	125			
Copper			2470	mg/kg	1.1		75	125			A
Lead			337	mg/kg	3.1		75	125			A
Zinc			3500	mg/kg	1.0		75	125			A
Lab ID:	**H14120077-037AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141218B			12/18/14 19:53	
Arsenic			396	mg/kg	1.8		75	125	1.9	20	A
Cadmium			34.1	mg/kg	1.0	85	75	125	1.9	20	
Copper			2510	mg/kg	1.1		75	125	1.6	20	A
Lead			336	mg/kg	3.1		75	125	0.1	20	A
Zinc			3540	mg/kg	1.0		75	125	1.3	20	A
Method:	**SW6010B**										Batch: 27288
Lab ID:	**MB-27288**	5	Method Blank				Run: ICP2-HE_141218B			12/18/14 19:57	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27288
Lab ID:	**MB-27288**	5	Method Blank				Run: ICP2-HE_141218B				12/18/14 19:57
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27288**	5	Laboratory Fortified Blank				Run: ICP2-HE_141218B				12/18/14 20:01
Arsenic			44.7	mg/kg	1.0	89	80	120			
Cadmium			22.0	mg/kg	1.0	88	80	120			
Copper			48.5	mg/kg	1.0	96	80	120			
Lead			43.8	mg/kg	1.0	88	80	120			
Zinc			45.8	mg/kg	1.0	91	80	120			
Lab ID:	**LCS-27288**	5	Laboratory Control Sample				Run: ICP2-HE_141218B				12/18/14 20:04
Arsenic			275	mg/kg	1.8	81	72.3	106.4			
Cadmium			114	mg/kg	1.0	84	73	105.1			
Copper			250	mg/kg	1.1	89	77.5	109.6			
Lead			176	mg/kg	3.2	95	75.9	108.6			
Zinc			186	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H14120077-050APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141218B				12/18/14 21:14
Arsenic			228	mg/kg	1.9	86	75	125			
Cadmium			109	mg/kg	1.0	85	75	125			
Copper			265	mg/kg	1.1	88	75	125			
Lead			240	mg/kg	3.3	84	75	125			
Zinc			354	mg/kg	1.0	88	75	125			
Lab ID:	**H14120077-050AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141218B				12/18/14 21:18
Arsenic			50.9	mg/kg	1.8	87	75	125			
Cadmium			21.5	mg/kg	1.0	86	75	125			
Copper			83.9	mg/kg	1.1	92	75	125			
Lead			65.6	mg/kg	3.2	83	75	125			
Zinc			177	mg/kg	1.0	99	75	125			
Lab ID:	**H14120077-050AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141218B				12/18/14 21:22
Arsenic			52.4	mg/kg	1.8	90	75	125	3.0	20	
Cadmium			20.7	mg/kg	1.0	83	75	125	3.8	20	
Copper			88.6	mg/kg	1.1	102	75	125	5.5	20	
Lead			63.1	mg/kg	3.2	78	75	125	3.8	20	
Zinc			172	mg/kg	1.0	90	75	125	2.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141218A	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/17/14 19:20	
Arsenic			0.0595	mg/L	0.0010	99	90	110			
Lead			0.0588	mg/L	0.0010	98	90	110			
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/18/14 11:33	
Arsenic			0.0600	mg/L	0.0050	100	90	110			
Lead			0.0602	mg/L	0.010	100	90	110			
Method:	**SW6020**										Batch: 27286
Lab ID:	**MB-27286**	2	Method Blank				Run: ICPMS204-B_141218A			12/18/14 05:50	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27286**	2	Laboratory Control Sample				Run: ICPMS204-B_141218A			12/18/14 05:55	
Arsenic			324	mg/kg	1.0	96	72.3	106.4			
Lead			188	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27286**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141218A			12/18/14 06:00	
Arsenic			50.6	mg/kg	1.0	101	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H14120077-019APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141218A			12/18/14 08:29	
Arsenic			2870	mg/kg	1.0	106	75	125			
Lead			2620	mg/kg	1.0	94	75	125			
Lab ID:	**H14120077-019AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141218A			12/18/14 08:34	
Arsenic			268	mg/kg	1.0		75	125			A
Lead			319	mg/kg	1.0		75	125			A
Lab ID:	**H14120077-019AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141218A			12/18/14 08:38	
Arsenic			263	mg/kg	1.0		75	125	1.9	20	A
Lead			310	mg/kg	1.0		75	125	3.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141218B		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/18/14 16:12	
Arsenic			0.0580	mg/L	0.0010	97	90	110			
Cadmium			0.0313	mg/L	0.0010	104	90	110			
Lead			0.0590	mg/L	0.0010	98	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/19/14 02:17	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0312	mg/L	0.0010	104	90	110			
Lead			0.0594	mg/L	0.0010	99	90	110			
Method:	**SW6020**									Batch: 27287	
Lab ID:	**MB-27287**	2	Method Blank				Run: ICPMS204-B_141218B			12/18/14 18:06	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27287**	2	Laboratory Control Sample				Run: ICPMS204-B_141218B			12/18/14 18:11	
Arsenic			310	mg/kg	1.0	91	72.3	106.4			
Lead			191	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-27287**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141218B			12/18/14 18:16	
Arsenic			47.4	mg/kg	1.0	95	80	120			
Lead			46.9	mg/kg	1.0	94	80	120			
Lab ID:	**H14120077-037APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141218B			12/18/14 20:23	
Arsenic			2600	mg/kg	1.0	91	75	125			
Lead			2300	mg/kg	1.0	81	75	125			
Lab ID:	**H14120077-037AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141218B			12/18/14 20:28	
Arsenic			416	mg/kg	1.0		75	125			A
Lead			353	mg/kg	1.0		75	125			A
Lab ID:	**H14120077-037AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141218B			12/18/14 20:32	
Arsenic			405	mg/kg	1.0		75	125	2.8	20	A
Lead			335	mg/kg	1.0		75	125	5.1	20	A
Method:	**SW6020**									Batch: 27288	
Lab ID:	**MB-27288**	3	Method Blank				Run: ICPMS204-B_141218B			12/18/14 20:42	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27288**	3	Laboratory Control Sample				Run: ICPMS204-B_141218B			12/18/14 20:46	
Arsenic			299	mg/kg	1.0	87	72.3	106.4			
Cadmium			119	mg/kg	1.0	87	73	105.1			
Lead			179	mg/kg	1.0	96	75.9	108.6			
Lab ID:	**LFB-27288**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141218B			12/18/14 20:51	
Arsenic			46.0	mg/kg	1.0	92	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27288
Lab ID:	**LFB-27288**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141218B			12/18/14 20:51	
Cadmium			24.1	mg/kg	1.0	96	80	120			
Lead			45.7	mg/kg	1.0	91	80	120			
Lab ID:	**H14120077-050APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141218B			12/18/14 22:30	
Arsenic			2520	mg/kg	1.0	101	75	125			
Cadmium			1060	mg/kg	1.0	85	75	125			
Lead			2220	mg/kg	1.0	88	75	125			
Lab ID:	**H14120077-050AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141218B			12/18/14 22:35	
Arsenic			54.5	mg/kg	1.0	90	75	125			
Cadmium			23.0	mg/kg	1.0	91	75	125			
Lead			63.1	mg/kg	1.0	92	75	125			
Lab ID:	**H14120077-050AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141218B			12/18/14 22:39	
Arsenic			57.5	mg/kg	1.0	96	75	125	5.4	20	
Cadmium			22.7	mg/kg	1.0	90	75	125	1.1	20	
Lead			64.7	mg/kg	1.0	96	75	125	2.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141219A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/19/14 17:03	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0316	mg/L	0.0010	105	90	110			
Copper			0.0618	mg/L	0.0010	103	90	110			
Lead			0.0593	mg/L	0.0010	99	90	110			
Zinc			0.0626	mg/L	0.0010	104	90	110			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/21/14 01:03	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0311	mg/L	0.0010	104	90	110			
Copper			0.0613	mg/L	0.0010	102	90	110			
Lead			0.0596	mg/L	0.0010	99	90	110			
Zinc			0.0612	mg/L	0.0010	102	90	110			
Method:	**SW6020**										Batch: 27431
Lab ID:	**MB-27431**	5	Method Blank				Run: ICPMS204-B_141219A			12/20/14 15:32	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			0.9	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			5	mg/kg	4						
Lab ID:	**LCS-27431**	5	Laboratory Control Sample				Run: ICPMS204-B_141219A			12/20/14 15:37	
Arsenic			327	mg/kg	1.0	90	72.3	106.4			
Cadmium			140	mg/kg	1.0	97	73	105.1			
Copper			291	mg/kg	1.0	98	77.5	109.6			
Lead			205	mg/kg	1.0	104	75.9	108.6			
Zinc			231	mg/kg	3.7	101	74.2	109.9			
Lab ID:	**LFB-27431**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141219A			12/20/14 15:42	
Arsenic			48.9	mg/kg	1.0	98	80	120			
Cadmium			26.6	mg/kg	1.0	106	80	120			
Copper			52.6	mg/kg	1.0	103	80	120			
Lead			50.0	mg/kg	1.0	100	80	120			
Zinc			56.2	mg/kg	3.5	103	80	120			
Lab ID:	**H14120077-023AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/20/14 18:26	
Arsenic			67.3	mg/kg	1.0	86	75	125			
Cadmium			24.5	mg/kg	1.0	98	75	125			
Copper			4860	mg/kg	1.0		75	125			A
Lead			65.9	mg/kg	1.0	91	75	125			
Zinc			529	mg/kg	3.3		75	125			A
Lab ID:	**H14120077-023AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/20/14 18:31	
Arsenic			69.1	mg/kg	1.0	90	75	125	2.6	20	
Cadmium			24.9	mg/kg	1.0	101	75	125	1.5	20	
Copper			5000	mg/kg	1.0		75	125	2.8	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120077

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**										Batch: 27431
Lab ID: **H14120077-023AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/20/14 18:31	
Lead		65.7	mg/kg	1.0	92	75	125	0.3	20	
Zinc		543	mg/kg	3.3		75	125	2.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14120077

Login completed by: Tracy L. Lorash
Date Received: 12/2/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 12/10/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection time on COC for sample #44 is 820 - sample bag has 0819. Logged in with time from COC.
Cooler 1 was received at 1.7°C, Cooler 2 at 0.3°C. Samples were not received on ice. TI 12/2/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120077

SAMPLE ID C3.2	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-001-0612	11/24/14	1236	Soil	A	B		1
3-001-1218	11/24/14	1235	Soil	A	B		1
3-001-1824	11/24/14	1234	Soil	A	B		1
3-002-1218	11/24/14	1150	Soil	A	B		1
3-002-1824	11/24/14	1149	Soil	A	B		1
3-002-2430	11/24/14	1148	Soil	A	B		1
3-003-1824	11/24/14	1134	Soil	A	B		1
3-003-2430	11/24/14	1133	Soil	A	B		1
3-003-3036	11/24/14	1132	Soil	A	B		1
3-004-1218	11/24/14	1115	Soil	A	B		1
3-004-1824	11/24/14	1114	Soil	A	B		1
3-004-2430	11/24/14	1113	Soil	A	B		1
3-005-1824	11/24/14	1054	Soil	A	B		1
3-005-2430	11/24/14	1053	Soil	A	B		1
3-005-3036	11/24/14	1052	Soil	A	B		1
3-006-1824	11/24/14	1019	Soil	A	B		1
3-006-2430	11/24/14	1018	Soil	A	B		1
3-006-3036	11/24/14	1017	Soil	A	B		1
3-007-1218	11/24/14	1000	Soil	A	B		1
3-007-1824	11/24/14	959	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) Erin M Ford	(1)	(2)	(2)
Date/Time: 12/2/14 1640	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	C3.1 = 1.7 TB 3.2 = 0.3 TCC	hand 12/2/14 1840

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120077

SAMPLE ID	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-007-2430	11/24/14	958	Soil	A	B		1
3-012-4854	11/24/14	1345	Soil	A	B		1
3-012-5460	11/24/14	1344	Soil	A	B		1
3-014-1824	11/24/14	1249	Soil	A	B		1
3-014-2430	11/24/14	1248	Soil	A	B		1
3-014-3036	11/24/14	1247	Soil	A	B		1
3-015-0612	11/24/14	1306	Soil	A	B		1
3-015-1218	11/24/14	1305	Soil	A	B		1
3-015-1824	11/24/14	1304	Soil	A	B		1
3-016-0612 C3.1	11/24/14	1346	Soil	A	B		1
3-016-1218	11/24/14	1345	Soil	A	B		1
3-016-1824	11/24/14	1344	Soil	A	B		1
3-017-0006	11/24/14	1417	Soil	A	B		1
3-017-0612	11/24/14	1416	Soil	A	B		1
3-017-1218	11/24/14	1415	Soil	A	B		1
3-018-4248	11/24/14	1435	Soil	A	B		1
3-018-4854	11/24/14	1450	Soil	A	B		1
3-018-5460	11/24/14	1449	Soil	A	B		1
3-026-4854	11/24/14	1615	Soil	A	B		1

C3.2

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/2/14 1640	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C3.1 = 1.7 C3.2 0.37	TB ice hand 12/2/14 1640

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120077

SAMPLE ID C31	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-026-5460	11/24/14	1614	Soil	A	B		1
3-106-0612	11/24/14	822	Soil	A	B		1
3-106-1218	11/24/14	820	Soil	A	B		1
3-106-1218D	11/24/14	821	Soil	A	B		1
3-106-1824	11/24/14	820	Soil	A	B		1
3-107-1824	11/24/14	859	Soil	A	B		1
3-107-2430	11/24/14	858	Soil	A	B		1
3-107-3036	11/24/14	857	Soil	A	B		1
3-109-1218	11/24/14	840	Soil	A	B		1
3-109-1824	11/24/14	839	Soil	A	B		1
3-109-2430	11/24/14	838	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/2/14 1640	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C3.1=1.7 C3.2=0.37 TB onice hand	12/2/14 16:40

ANALYTICAL SUMMARY REPORT

December 22, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120076

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 47 samples for MT DEQ-Federal Superfund on 12/2/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120076-001	3-020-4248	11/26/14 10:15	12/02/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120076-002	3-020-4854	11/26/14 10:45	12/02/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120076-003	3-020-5460	11/26/14 10:44	12/02/14	Soil	Same As Above
H14120076-004	3-026N-1218	11/26/14 8:25	12/02/14	Soil	Same As Above
H14120076-005	3-026N-1824	11/26/14 8:24	12/02/14	Soil	Same As Above
H14120076-006	3-026N-2430	11/26/14 8:23	12/02/14	Soil	Same As Above
H14120076-007	3-026N2-0006	11/26/14 9:23	12/02/14	Soil	Same As Above
H14120076-008	3-026N2-0612	11/26/14 9:22	12/02/14	Soil	Same As Above
H14120076-009	3-031-4248	11/26/14 10:00	12/02/14	Soil	Same As Above
H14120076-010	3-031-4854	11/26/14 11:01	12/02/14	Soil	Same As Above
H14120076-011	3-031-5460	11/26/14 11:00	12/02/14	Soil	Same As Above
H14120076-012	3-039N-0006	11/26/14 8:07	12/02/14	Soil	Same As Above
H14120076-013	3-039N-0612	11/26/14 8:06	12/02/14	Soil	Same As Above
H14120076-014	3-040-0612	11/26/14 11:26	12/02/14	Soil	Same As Above
H14120076-015	3-040-1218	11/26/14 11:25	12/02/14	Soil	Same As Above
H14120076-016	3-040-1824	11/26/14 11:24	12/02/14	Soil	Same As Above
H14120076-017	3-045N2-0006	11/26/14 9:03	12/02/14	Soil	Same As Above
H14120076-018	3-045N2-0612	11/26/14 9:02	12/02/14	Soil	Same As Above
H14120076-019	3-045N2-1218	11/26/14 9:00	12/02/14	Soil	Same As Above
H14120076-020	3-045N2-1218D	11/26/14 9:01	12/02/14	Soil	Same As Above
H14120076-021	3-048-0612	11/26/14 11:52	12/02/14	Soil	Same As Above
H14120076-022	3-048-1218	11/26/14 11:50	12/02/14	Soil	Same As Above
H14120076-023	3-048-1218D	11/26/14 11:51	12/02/14	Soil	Same As Above
H14120076-024	3-048-1824	11/26/14 11:49	12/02/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120076-025	3-052-0612	11/26/14 14:31	12/02/14	Soil	Same As Above
H14120076-026	3-052-1218	11/26/14 14:30	12/02/14	Soil	Same As Above
H14120076-027	3-052-1824	11/26/14 14:29	12/02/14	Soil	Same As Above
H14120076-028	3-053-3642	11/26/14 12:11	12/02/14	Soil	Same As Above
H14120076-029	3-053-4248	11/26/14 12:10	12/02/14	Soil	Same As Above
H14120076-030	3-053-4854	11/26/14 12:55	12/02/14	Soil	Same As Above
H14120076-031	3-054-3036	11/26/14 12:42	12/02/14	Soil	Same As Above
H14120076-032	3-054-3642	11/26/14 12:41	12/02/14	Soil	Same As Above
H14120076-033	3-054-4248	11/26/14 12:40	12/02/14	Soil	Same As Above
H14120076-034	3-059-1824	11/26/14 14:49	12/02/14	Soil	Same As Above
H14120076-035	3-059-2430	11/26/14 14:48	12/02/14	Soil	Same As Above
H14120076-036	3-059-3036	11/26/14 14:47	12/02/14	Soil	Same As Above
H14120076-037	3-060-4248	11/26/14 14:00	12/02/14	Soil	Same As Above
H14120076-038	3-060-4854	11/26/14 14:15	12/02/14	Soil	Same As Above
H14120076-039	3-060-5460	11/26/14 14:14	12/02/14	Soil	Same As Above
H14120076-040	3-061-3036	11/26/14 13:27	12/02/14	Soil	Same As Above
H14120076-041	3-061-3642	11/26/14 13:26	12/02/14	Soil	Same As Above
H14120076-042	3-061-4248	11/26/14 13:25	12/02/14	Soil	Same As Above
H14120076-043	3-062-1218	11/26/14 13:10	12/02/14	Soil	Same As Above
H14120076-044	3-062-1824	11/26/14 13:09	12/02/14	Soil	Same As Above
H14120076-045	3-068-0612	11/26/14 15:04	12/02/14	Soil	Same As Above
H14120076-046	3-068-1218	11/26/14 15:03	12/02/14	Soil	Same As Above
H14120076-047	3-068-1824	11/26/14 15:02	12/02/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120076

Report Date: 12/22/14
Date Received: 12/02/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120076-001	3-020-4248	0	0	7.2	255	9	1790	374	2380
H14120076-002	3-020-4854	0	0	7.2	254	10	1890	296	3040
H14120076-003	3-020-5460	0	0	7.3	178	12	1710	198	3240
H14120076-004	3-026N-1218	0	0	7.7	40	13	2100	19	3200
H14120076-005	3-026N-1824	0	0	7.8	14	< 1	71	15	249
H14120076-006	3-026N-2430	0	0	7.7	8	< 1	44	20	91
H14120076-007	3-026N2-0006	0	0	8.2	149	3	675	120	708
H14120076-008	3-026N2-0612	0	0	7.9	24	< 1	75	18	104
H14120076-009	3-031-4248	0	0	7.4	48	2	6140	21	444
H14120076-010	3-031-4854	0	0	7.5	27	2	2760	13	342
H14120076-011	3-031-5460	0	0	7.6	22	2	1920	26	275
H14120076-012	3-039N-0006	0	0	7.8	276	4	1700	191	994
H14120076-013	3-039N-0612	0	0	8.1	103	1	538	77	319
H14120076-014	3-040-0612	0	0	6.8	13	5	8050	25	1480
H14120076-015	3-040-1218	0	0	6.9	7	< 1	972	8	330
H14120076-016	3-040-1824	0	0	7.0	10	< 1	2190	11	243
H14120076-017	3-045N2-0006	0	0	8.1	597	5	2800	543	1570
H14120076-018	3-045N2-0612	0	0	8.0	86	1	627	74	394
H14120076-019	3-045N2-1218	0	0	7.7	21	< 1	193	28	141
H14120076-020	3-045N2-1218D	0	0	7.6	11	< 1	67	17	100
H14120076-021	3-048-0612	0	0	7.7	436	6	5300	215	2270
H14120076-022	3-048-1218	0	0	7.9	35	< 1	368	26	231
H14120076-023	3-048-1218D	0	0	7.9	23	< 1	158	15	144
H14120076-024	3-048-1824	0	0	7.8	13	< 1	78	12	93
H14120076-025	3-052-0612	0	0	7.3	244	3	3220	179	978
H14120076-026	3-052-1218	0	0	7.8	12	2	294	19	372
H14120076-027	3-052-1824	0	0	7.4	6	< 1	87	12	115
H14120076-028	3-053-3642	0	0	7.1	33	3	3830	11	330
H14120076-029	3-053-4248	0	0	7.3	26	1	1990	18	263
H14120076-030	3-053-4854	0	0	7.3	6	< 1	1900	15	356
H14120076-031	3-054-3036	0	0	6.8	274	4	1660	241	1700
H14120076-032	3-054-3642	0	0	7.0	282	7	2050	198	1490
H14120076-033	3-054-4248	0	0	7.0	241	6	1630	175	1280
H14120076-034	3-059-1824	0	0	6.8	12	1	2480	17	455
H14120076-035	3-059-2430	0	0	6.6	6	1	247	14	442
H14120076-036	3-059-3036	0	0	7.2	9	2	1490	11	101
H14120076-037	3-060-4248	0	0	7.0	65	2	1620	203	742
H14120076-038	3-060-4854	0	0	7.0	136	4	4710	601	1150
H14120076-039	3-060-5460	0	0	7.5	71	7	1620	177	784
H14120076-040	3-061-3036	0	0	7.0	297	6	5670	236	1200

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120076

Report Date: 12/22/14
Date Received: 12/02/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120076-041	3-061-3642	0	0	7.0	383	6	4540	248	1240
H14120076-042	3-061-4248	0	0	7.1	940	8	6700	680	4570
H14120076-043	3-062-1218	0	0	7.0	444	2	1940	291	663
H14120076-044	3-062-1824	0	0	6.8	561	2	2480	327	720
H14120076-045	3-068-0612	0	0	7.8	327	7	6740	224	2310
H14120076-046	3-068-1218	0	0	7.3	11	2	1840	15	366
H14120076-047	3-068-1824	0	0	7.4	16	1	1380	14	230

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120076

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141219A		
Lab ID: CCV_1_141217_1		Continuing Calibration Verification Standard							12/18/14 11:03	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141217_1		Continuing Calibration Verification Standard							12/18/14 11:03	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141217_1		Initial Calibration Verification Standard							12/18/14 11:04	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141217_1		Continuing Calibration Verification Standard							12/18/14 11:15	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141217_1		Continuing Calibration Verification Standard							12/18/14 11:23	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141217_1		Continuing Calibration Verification Standard							12/18/14 11:36	
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141217_1		Continuing Calibration Verification Standard							12/18/14 11:36	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141217_1		Initial Calibration Verification Standard							12/18/14 11:37	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141217_1		Continuing Calibration Verification Standard							12/18/14 11:47	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141217_1		Continuing Calibration Verification Standard							12/18/14 11:57	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141218_1		Initial Calibration Verification Standard							12/19/14 07:08	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141218_1		Initial Calibration Verification Standard							12/19/14 07:44	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141217_1		Initial Calibration Verification Standard							12/18/14 07:46	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27380
Lab ID: LCS-27380		Laboratory Control Sample				Run: SOIL PH METER_141219A			12/18/14 11:05	
pH, sat. paste		7.61	s.u.	0.10	102	95	105			
Lab ID: H14120076-010ADUP		Sample Duplicate				Run: SOIL PH METER_141219A			12/18/14 11:14	
pH, sat. paste		7.52	s.u.	0.10				0.1	30	
Lab ID: H14120076-020ADUP		Sample Duplicate				Run: SOIL PH METER_141219A			12/18/14 11:23	
pH, sat. paste		7.56	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120076

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27380
Lab ID: H14120076-025ADUP		Sample Duplicate				Run: SOIL PH METER_141219A				12/18/14 11:27
pH, sat. paste		7.32	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 27381
Lab ID: LCS-27381		Laboratory Control Sample				Run: SOIL PH METER_141219A				12/18/14 11:37
pH, sat. paste		7.66	s.u.	0.10	102	95	105			
Lab ID: H14120076-030ADUP		Sample Duplicate				Run: SOIL PH METER_141219A				12/18/14 11:43
pH, sat. paste		7.32	s.u.	0.10				0.3	30	
Lab ID: H14120076-040ADUP		Sample Duplicate				Run: SOIL PH METER_141219A				12/18/14 11:52
pH, sat. paste		7.01	s.u.	0.10				0.1	30	
Lab ID: H14120076-047ADUP		Sample Duplicate				Run: SOIL PH METER_141219A				12/18/14 11:59
pH, sat. paste		7.34	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120076

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141217A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/17/14 09:09	
Arsenic			0.780	mg/L	0.0085	98	90	110			
Cadmium			0.383	mg/L	0.0010	96	90	110			
Copper			0.788	mg/L	0.010	99	90	110			
Lead			0.757	mg/L	0.010	95	90	110			
Zinc			0.788	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/17/14 09:24	
Arsenic			0.00371	mg/L	0.0085		0	0			
Cadmium			0.00152	mg/L	0.0010		0	0			
Copper			0.00154	mg/L	0.010		0	0			
Lead			-0.0223	mg/L	0.010		0	0			
Zinc			0.00269	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/17/14 09:28	
Arsenic			0.988	mg/L	0.0085	99	80	120			
Cadmium			0.898	mg/L	0.0010	90	80	120			
Copper			0.513	mg/L	0.010	103	80	120			
Lead			0.892	mg/L	0.010	89	80	120			
Zinc			0.991	mg/L	0.010	99	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120076

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27274
Lab ID:	**MB-27274**	5	Method Blank				Run: ICP2-HE_141217A			12/17/14 14:00	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.01	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27274**	5	Laboratory Fortified Blank				Run: ICP2-HE_141217A			12/17/14 14:04	
Arsenic			46.5	mg/kg	1.0	93	80	120			
Cadmium			23.1	mg/kg	1.0	92	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			45.7	mg/kg	1.0	91	80	120			
Zinc			47.1	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27274**	5	Laboratory Control Sample				Run: ICP2-HE_141217A			12/17/14 14:08	
Arsenic			270	mg/kg	1.7	81	72.3	106.4			
Cadmium			114	mg/kg	1.0	86	73	105.1			
Copper			247	mg/kg	1.1	91	77.5	109.6			
Lead			169	mg/kg	3.1	93	75.9	108.6			
Zinc			183	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H14120076-020APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141217A			12/17/14 15:50	
Arsenic			215	mg/kg	1.8	81	75	125			
Cadmium			96.5	mg/kg	1.0	76	75	125			
Copper			283	mg/kg	1.1	85	75	125			
Lead			206	mg/kg	3.2	78	75	125			
Zinc			303	mg/kg	1.0	80	75	125			
Lab ID:	**H14120076-020AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141217A			12/17/14 15:54	
Arsenic			46.2	mg/kg	1.8	76	75	125			
Cadmium			18.9	mg/kg	1.0	75	75	125			
Copper			111	mg/kg	1.1	89	75	125			
Lead			46.5	mg/kg	3.1	76	75	125			
Zinc			137	mg/kg	1.0	75	75	125			
Lab ID:	**H14120076-020AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141217A			12/17/14 15:58	
Arsenic			49.5	mg/kg	1.8	83	75	125	6.9	20	
Cadmium			19.3	mg/kg	1.0	77	75	125	1.9	20	
Copper			111	mg/kg	1.1	88	75	125	0.7	20	
Lead			47.5	mg/kg	3.1	79	75	125	2.0	20	
Zinc			142	mg/kg	1.0	86	75	125	3.7	20	
Method:	**SW6010B**										Batch: 27284
Lab ID:	**MB-27284**	5	Method Blank				Run: ICP2-HE_141217A			12/17/14 16:01	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120076

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27284
Lab ID:	**MB-27284**	5	Method Blank				Run: ICP2-HE_141217A			12/17/14 16:01	
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27284**	5	Laboratory Fortified Blank				Run: ICP2-HE_141217A			12/17/14 16:05	
Arsenic			44.2	mg/kg	1.0	88	80	120			
Cadmium			21.7	mg/kg	1.0	87	80	120			
Copper			48.0	mg/kg	1.0	95	80	120			
Lead			42.6	mg/kg	1.0	85	80	120			
Zinc			45.3	mg/kg	1.0	90	80	120			
Lab ID:	**LCS-27284**	5	Laboratory Control Sample				Run: ICP2-HE_141217A			12/17/14 16:09	
Arsenic			269	mg/kg	1.8	80	72.3	106.4			
Cadmium			113	mg/kg	1.0	84	73	105.1			
Copper			253	mg/kg	1.1	92	77.5	109.6			
Lead			162	mg/kg	3.1	89	75.9	108.6			
Zinc			182	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120076-037APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141217A			12/17/14 18:00	
Arsenic			303	mg/kg	1.9	93	75	125			
Cadmium			118	mg/kg	1.0	90	75	125			
Copper			1860	mg/kg	1.1		75	125			A
Lead			431	mg/kg	3.3	89	75	125			
Zinc			983	mg/kg	1.0	94	75	125			
Lab ID:	**H14120076-037AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141217A			12/17/14 18:03	
Arsenic			108	mg/kg	1.8	88	75	125			
Cadmium			25.0	mg/kg	1.0	90	75	125			
Copper			1590	mg/kg	1.1		75	125			A
Lead			231	mg/kg	3.2		75	125			A
Zinc			751	mg/kg	1.0		75	125			A
Lab ID:	**H14120076-037AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141217A			12/17/14 18:07	
Arsenic			108	mg/kg	1.8	86	75	125	0.7	20	
Cadmium			25.9	mg/kg	1.0	94	75	125	3.9	20	
Copper			1580	mg/kg	1.1		75	125	0.2	20	A
Lead			246	mg/kg	3.2		75	125	6.5	20	A
Zinc			776	mg/kg	1.0		75	125	3.4	20	A
Method:	**SW6010B**										Batch: 27285
Lab ID:	**MB-27285**	5	Method Blank				Run: ICP2-HE_141217A			12/17/14 12:13	
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120076

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27285
Lab ID:	**LFB-27285**	5	Laboratory Fortified Blank				Run: ICP2-HE_141217A				12/17/14 12:24
Arsenic			47.1	mg/kg	1.0	93	80	120			
Cadmium			22.8	mg/kg	1.0	91	80	120			
Copper			49.2	mg/kg	1.0	97	80	120			
Lead			44.9	mg/kg	1.0	90	80	120			
Zinc			47.8	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27285**	5	Laboratory Control Sample				Run: ICP2-HE_141217A				12/17/14 12:28
Arsenic			268	mg/kg	1.8	79	72.3	106.4			
Cadmium			111	mg/kg	1.0	83	73	105.1			
Copper			246	mg/kg	1.1	89	77.5	109.6			
Lead			160	mg/kg	3.1	87	75.9	108.6			
Zinc			182	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120076-047APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141217A				12/17/14 13:42
Arsenic			231	mg/kg	1.8	85	75	125			
Cadmium			109	mg/kg	1.0	84	75	125			
Copper			1610	mg/kg	1.1		75	125			A
Lead			221	mg/kg	3.3	83	75	125			
Zinc			449	mg/kg	1.0	86	75	125			
Lab ID:	**H14120076-047AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141217A				12/17/14 13:45
Arsenic			59.7	mg/kg	1.8	94	75	125			
Cadmium			23.4	mg/kg	1.0	89	75	125			
Copper			1420	mg/kg	1.1		75	125			A
Lead			54.1	mg/kg	3.2	92	75	125			
Zinc			284	mg/kg	1.0		75	125			A
Lab ID:	**H14120076-047AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141217A				12/17/14 13:49
Arsenic			58.0	mg/kg	1.8	91	75	125	2.8	20	
Cadmium			23.5	mg/kg	1.0	89	75	125	0.3	20	
Copper			1430	mg/kg	1.1		75	125	0.9	20	A
Lead			56.5	mg/kg	3.2	96	75	125	4.4	20	
Zinc			284	mg/kg	1.0		75	125	0.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120076

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141218A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/17/14 19:20	
Arsenic			0.0595	mg/L	0.0010	99	90	110			
Cadmium			0.0313	mg/L	0.0010	104	90	110			
Lead			0.0588	mg/L	0.0010	98	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/18/14 11:33	
Arsenic			0.0600	mg/L	0.0050	100	90	110			
Cadmium			0.0312	mg/L	0.0010	104	90	110			
Lead			0.0602	mg/L	0.010	100	90	110			
Method:	**SW6020**									Batch: 27274	
Lab ID:	**MB-27274**	2	Method Blank				Run: ICPMS204-B_141218A			12/17/14 22:31	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27274**	2	Laboratory Control Sample				Run: ICPMS204-B_141218A			12/17/14 22:35	
Arsenic			317	mg/kg	1.0	95	72.3	106.4			
Lead			186	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27274**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141218A			12/17/14 22:40	
Arsenic			49.4	mg/kg	1.0	99	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Lab ID:	**H14120076-020APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141218A			12/18/14 00:52	
Arsenic			2620	mg/kg	1.0	106	75	125			
Lead			2440	mg/kg	1.0	98	75	125			
Lab ID:	**H14120076-020AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141218A			12/18/14 00:56	
Arsenic			60.6	mg/kg	1.0	100	75	125			
Lead			62.8	mg/kg	1.0	92	75	125			
Lab ID:	**H14120076-020AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141218A			12/18/14 01:01	
Arsenic			58.0	mg/kg	1.0	95	75	125	4.5	20	
Lead			62.0	mg/kg	1.0	91	75	125	1.2	20	
Method:	**SW6020**									Batch: 27284	
Lab ID:	**MB-27284**	3	Method Blank				Run: ICPMS204-B_141218A			12/18/14 01:20	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			0.3	mg/kg	0.2						
Lab ID:	**LCS-27284**	3	Laboratory Control Sample				Run: ICPMS204-B_141218A			12/18/14 01:25	
Arsenic			316	mg/kg	1.0	94	72.3	106.4			
Cadmium			123	mg/kg	1.0	92	73	105.1			
Lead			188	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27284**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141218A			12/18/14 01:30	
Arsenic			51.0	mg/kg	1.0	102	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120076

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 27284	
Lab ID:	**LFB-27284**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141218A			12/18/14 01:30	
Cadmium			24.1	mg/kg	1.0	96	80	120			
Lead			47.5	mg/kg	1.0	94	80	120			
Lab ID:	**H14120076-037APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141218A			12/18/14 03:33	
Arsenic			2570	mg/kg	1.0	100	75	125			
Cadmium			1110	mg/kg	1.0	88	75	125			
Lead			2550	mg/kg	1.0	94	75	125			
Lab ID:	**H14120076-037AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141218A			12/18/14 03:37	
Arsenic			118	mg/kg	1.0	88	75	125			
Cadmium			25.4	mg/kg	1.0	92	75	125			
Lead			246	mg/kg	1.0		75	125			A
Lab ID:	**H14120076-037AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141218A			12/18/14 03:42	
Arsenic			113	mg/kg	1.0	77	75	125	4.3	20	
Cadmium			24.8	mg/kg	1.0	90	75	125	2.2	20	
Lead			246	mg/kg	1.0		75	125	0.0	20	A
Method:	**SW6020**									Batch: 27285	
Lab ID:	**MB-27285**	2	Method Blank				Run: ICPMS204-B_141218A			12/18/14 03:52	
Arsenic			ND	mg/kg	0.3						
Lead			0.3	mg/kg	0.2						
Lab ID:	**LCS-27285**	2	Laboratory Control Sample				Run: ICPMS204-B_141218A			12/18/14 03:56	
Arsenic			318	mg/kg	1.0	94	72.3	106.4			
Lead			191	mg/kg	1.0	104	75.9	108.6			
Lab ID:	**LFB-27285**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141218A			12/18/14 04:01	
Arsenic			50.5	mg/kg	1.0	101	80	120			
Lead			48.8	mg/kg	1.0	97	80	120			
Lab ID:	**H14120076-047APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141218A			12/18/14 05:12	
Arsenic			2490	mg/kg	1.0	100	75	125			
Lead			2250	mg/kg	1.0	90	75	125			
Lab ID:	**H14120076-047AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141218A			12/18/14 05:17	
Arsenic			65.3	mg/kg	1.0	98	75	125			
Lead			60.6	mg/kg	1.0	94	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120076

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141219A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/19/14 17:03	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0316	mg/L	0.0010	105	90	110			
Copper			0.0618	mg/L	0.0010	103	90	110			
Lead			0.0593	mg/L	0.0010	99	90	110			
Zinc			0.0626	mg/L	0.0010	104	90	110			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/21/14 01:03	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0311	mg/L	0.0010	104	90	110			
Copper			0.0613	mg/L	0.0010	102	90	110			
Lead			0.0596	mg/L	0.0010	99	90	110			
Zinc			0.0612	mg/L	0.0010	102	90	110			
Method:	**SW6020**										Batch: 27431
Lab ID:	**MB-27431**	5	Method Blank				Run: ICPMS204-B_141219A			12/20/14 15:32	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			0.9	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			5	mg/kg	4						
Lab ID:	**LCS-27431**	5	Laboratory Control Sample				Run: ICPMS204-B_141219A			12/20/14 15:37	
Arsenic			327	mg/kg	1.0	90	72.3	106.4			
Cadmium			140	mg/kg	1.0	97	73	105.1			
Copper			291	mg/kg	1.0	98	77.5	109.6			
Lead			205	mg/kg	1.0	104	75.9	108.6			
Zinc			231	mg/kg	3.7	101	74.2	109.9			
Lab ID:	**LFB-27431**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141219A			12/20/14 15:42	
Arsenic			48.9	mg/kg	1.0	98	80	120			
Cadmium			26.6	mg/kg	1.0	106	80	120			
Copper			52.6	mg/kg	1.0	103	80	120			
Lead			50.0	mg/kg	1.0	100	80	120			
Zinc			56.2	mg/kg	3.5	103	80	120			
Lab ID:	**H14120040-062APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141219A			12/20/14 17:48	
Arsenic			3290	mg/kg	1.0	93	75	125			
Cadmium			1060	mg/kg	1.0	81	75	125			
Copper			12300	mg/kg	1.0		75	125			A
Lead			2710	mg/kg	1.0	77	75	125			
Zinc			4380	mg/kg	3.7	88	75	125			
Lab ID:	**H14120040-062AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/20/14 17:52	
Arsenic			937	mg/kg	1.0		75	125			A
Cadmium			33.1	mg/kg	1.0	96	75	125			
Copper			10700	mg/kg	1.0		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120076

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**										Batch: 27431
Lab ID: **H14120040-062AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/20/14 17:52	
Lead		762	mg/kg	1.0		75	125			A
Zinc		2150	mg/kg	3.6		75	125			A
Lab ID: **H14120040-062AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/20/14 17:57	
Arsenic		916	mg/kg	1.0		75	125	2.3	20	A
Cadmium		32.5	mg/kg	1.0	92	75	125	1.8	20	
Copper		10600	mg/kg	1.0		75	125	1.4	20	A
Lead		748	mg/kg	1.0		75	125	1.8	20	A
Zinc		2120	mg/kg	3.8		75	125	1.3	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120076

Login completed by: Tracy L. Lorash

Date Received: 12/2/2014

Reviewed by: BL2000\rwilliams

Received by: AHN

Reviewed Date: 12/10/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 0.8°C, Cooler 2 at 0.2°C. Samples were not received on ice. TI 12/2/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120076

SAMPLE ID C2.1	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-020-4248	11/26/2014	1015	Soil	A	B		1
3-020-4854	11/26/2014	1045	Soil	A	B		1
3-020-5460	11/26/2014	1044	Soil	A	B		1
3-026N-1218	11/26/2014	825	Soil	A	B		1
3-026N-1824	11/26/2014	824	Soil	A	B		1
3-026N-2430	11/26/2014	823	Soil	A	B		1
3-026N2-0006	11/26/2014	923	Soil	A	B		1
3-026N2-0612	11/26/2014	922	Soil	A	B		1
3-031-4248	11/26/2014	1000	Soil	A	B		1
3-031-4854	11/26/2014	1101	Soil	A	B		1
3-031-5460	11/26/2014	1100	Soil	A	B		1
3-039N-0006	11/26/2014	807	Soil	A	B		1
3-039N-0612	11/26/2014	806	Soil	A	B		1
3-040-0612	11/26/2014	1126	Soil	A	B		1
3-040-1218	11/26/2014	1125	Soil	A	B		1
3-040-1824	11/26/2014	1124	Soil	A	B		1
3-045N2-0006	11/26/2014	903	Soil	A	B		1
3-045N2-0612	11/26/2014	902	Soil	A	B		1
3-045N2-1218	11/26/2014	900	Soil	A	B		1
3-045N2-1218D	11/26/2014	901	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/2/14 1640	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C2.1=0.8 C2.2=0.2 TB otrc hand	12/2/14 16:40

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120076

SAMPLE ID	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-048-0612	11/26/2014	1152	Soil	A	B		1
3-048-1218	11/26/2014	1150	Soil	A	B		1
3-048-1218D	11/26/2014	1151	Soil	A	B		1
3-048-1824	11/26/2014	1149	Soil	A	B		1
3-052-0612	11/26/2014	1431	Soil	A	B		1
3-052-1218	11/26/2014	1430	Soil	A	B		1
3-052-1824	11/26/2014	1429	Soil	A	B		1
3-053-3642	11/26/2014	1211	Soil	A	B		1
~~3-054-0006~~	~~11/26/2014~~	~~1247~~	~~Soil~~	~~A~~	~~B~~	Remove kw	1
3-053-4248	11/26/2014	1210	Soil	A	B		1
3-053-4854	11/26/2014	1255	Soil	A	B		1
3-054-3036	11/26/2014	1242	Soil	A	B		1
3-054-3642	11/26/2014	1241	Soil	A	B		1
3-054-4248	11/26/2014	1240	Soil	A	B		1
3-059-1824	11/26/2014	1449	Soil	A	B		1
3-059-2430	11/26/2014	1448	Soil	A	B		1
3-059-3036	11/26/2014	1447	Soil	A	B		1
3-060-4248	11/26/2014	1400	Soil	A	B		1
3-060-4854	11/26/2014	1415	Soil	A	B		1
3-060-5460	11/26/2014	1414	Soil	A	B		1

C2.1

C2.2

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) Karin M. Zaal	(1)	(2)	(2)
Date/Time: 12/2/14 1640	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	C2.1=0.8 C2.2=0.2 TB office hand	12/2/14 16:40

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120076

SAMPLE ID C2.2	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-061-3036	11/26/2014	1327	Soil	A	B		1
3-061-3642	11/26/2014	1326	Soil	A	B		1
3-061-4248	11/26/2014	1325	Soil	A	B		1
3-062-1218	11/26/2014	1310	Soil	A	B		1
3-062-1824	11/26/2014	1309	Soil	A	B		1
3-068-0612	11/26/2014	1504	Soil	A	B		1
3-068-1218	11/26/2014	1503	Soil	A	B		1
3-068-1824	11/26/2014	1502	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/2/14 1640	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C2.1=0.8 y TB ice C2.2=0.2	hand 12/2/14 1640

ANALYTICAL SUMMARY REPORT

December 31, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120071

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 50 samples for MT DEQ-Federal Superfund on 12/2/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120071-001	3-001e-1218	11/25/14 13:10	12/02/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120071-002	3-001e-1824	11/25/14 13:09	12/02/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120071-003	3-001e-2430	11/25/14 13:08	12/02/14	Soil	Same As Above
H14120071-004	3-014e2-1218	11/25/14 13:35	12/02/14	Soil	Same As Above
H14120071-005	3-014e2-1824	11/25/14 13:34	12/02/14	Soil	Same As Above
H14120071-006	3-014e2-2430	11/25/14 13:33	12/02/14	Soil	Same As Above
H14120071-007	3-014e-3642	11/25/14 12:45	12/02/14	Soil	Same As Above
H14120071-008	3-014e-4248	11/25/14 12:46	12/02/14	Soil	Same As Above
H14120071-009	3-014e-5460	11/25/14 12:48	12/02/14	Soil	Same As Above
H14120071-010	3-027-3036	11/25/14 11:32	12/02/14	Soil	Same As Above
H14120071-011	3-027-3642	11/25/14 11:31	12/02/14	Soil	Same As Above
H14120071-012	3-027-4248	11/25/14 11:30	12/02/14	Soil	Same As Above
H14120071-013	3-027e-0612	11/25/14 14:04	12/02/14	Soil	Same As Above
H14120071-014	3-027e-1218	11/25/14 14:03	12/02/14	Soil	Same As Above
H14120071-015	3-027e-1824	11/25/14 14:02	12/02/14	Soil	Same As Above
H14120071-016	3-028-1218	11/25/14 9:55	12/02/14	Soil	Same As Above
H14120071-017	3-028-1824	11/25/14 9:54	12/02/14	Soil	Same As Above
H14120071-018	3-028-3036	11/25/14 9:52	12/02/14	Soil	Same As Above
H14120071-019	3-028-2430	11/25/14 9:53	12/02/14	Soil	Same As Above
H14120071-020	3-029-0612	11/25/14 9:31	12/02/14	Soil	Same As Above
H14120071-021	3-029-1218	11/25/14 9:30	12/02/14	Soil	Same As Above
H14120071-022	3-029-1824	11/25/14 9:28	12/02/14	Soil	Same As Above
H14120071-023	3-030-1218	11/25/14 7:55	12/02/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120071-024	3-030-1824	11/25/14 7:54	12/02/14	Soil	Same As Above
H14120071-025	3-030-2430	11/25/14 7:53	12/02/14	Soil	Same As Above
H14120071-026	3-036-2430	11/25/14 11:03	12/02/14	Soil	Same As Above
H14120071-027	3-036-3036	11/25/14 11:02	12/02/14	Soil	Same As Above
H14120071-028	3-036-3642	11/25/14 11:01	12/02/14	Soil	Same As Above
H14120071-029	3-036e-4248	11/25/14 14:20	12/02/14	Soil	Same As Above
H14120071-030	3-036e-4854	11/25/14 14:45	12/02/14	Soil	Same As Above
H14120071-031	3-036e-5460	11/25/14 14:44	12/02/14	Soil	Same As Above
H14120071-032	3-037-2430	11/25/14 10:08	12/02/14	Soil	Same As Above
H14120071-033	3-037-3036	11/25/14 10:07	12/02/14	Soil	Same As Above
H14120071-034	3-037-3642	11/25/14 10:06	12/02/14	Soil	Same As Above
H14120071-035	3-038-1824	11/25/14 9:04	12/02/14	Soil	Same As Above
H14120071-036	3-038-2430	11/25/14 9:03	12/02/14	Soil	Same As Above
H14120071-037	3-038-3036	11/25/14 9:02	12/02/14	Soil	Same As Above
H14120071-038	3-039-3642	11/25/14 8:11	12/02/14	Soil	Same As Above
H14120071-039	3-039-4248	11/25/14 7:57	12/02/14	Soil	Same As Above
H14120071-040	3-039-5460	11/25/14 8:24	12/02/14	Soil	Same As Above
H14120071-041	3-045-5460	11/25/14 10:41	12/02/14	Soil	Same As Above
H14120071-042	3-045-6066	11/25/14 10:39	12/02/14	Soil	Same As Above
H14120071-043	3-045-6672	11/25/14 10:38	12/02/14	Soil	Same As Above
H14120071-044	3-045e-0612	11/25/14 15:02	12/02/14	Soil	Same As Above
H14120071-045	3-045e-1218	11/25/14 15:00	12/02/14	Soil	Same As Above
H14120071-046	3-045e-1218d	11/25/14 15:01	12/02/14	Soil	Same As Above
H14120071-047	3-045e-1824	11/25/14 14:59	12/02/14	Soil	Same As Above
H14120071-048	3-046-0612	11/25/14 8:51	12/02/14	Soil	Same As Above
H14120071-049	3-046-1218	11/25/14 8:50	12/02/14	Soil	Same As Above
H14120071-050	3-046-1824	11/25/14 8:49	12/02/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120071

Report Date: 12/31/14
Date Received: 12/02/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120071-001	3-001e-1218	0	0	7.6	326	14	2220	322	1700
H14120071-002	3-001e-1824	0	0	7.5	78	3	1200	241	327
H14120071-003	3-001e-2430	0	0	7.5	46	< 1	142	29	89
H14120071-004	3-014e2-1218	0	0	7.5	475	5	3700	531	2140
H14120071-005	3-014e2-1824	0	0	7.6	132	10	627	49	1930
H14120071-006	3-014e2-2430	0	0	7.4	96	2	156	15	846
H14120071-007	3-014e-3642	0	0	7.3	13	6	2730	17	919
H14120071-008	3-014e-4248	0	0	7.2	6	2	721	16	537
H14120071-009	3-014e-5460	0	0	6.9	9	< 1	73	19	124
H14120071-010	3-027-3036	0	0	7.0	383	7	2020	302	2820
H14120071-011	3-027-3642	0	0	7.2	103	5	1020	92	1440
H14120071-012	3-027-4248	0	0	7.3	244	7	2340	224	2300
H14120071-013	3-027e-0612	0	0	7.5	267	14	5980	377	3870
H14120071-014	3-027e-1218	0	0	7.7	14	< 1	101	18	116
H14120071-015	3-027e-1824	0	0	7.4	11	< 1	58	13	77
H14120071-016	3-028-1218	0	0	7.4	216	17	3090	548	3270
H14120071-017	3-028-1824	0	0	7.5	23	< 1	177	21	259
H14120071-018	3-028-3036	0	0	7.0	15	< 1	102	18	81
H14120071-019	3-028-2430	0	0	7.4	9	< 1	66	13	73
H14120071-020	3-029-0612	0	0	7.4	175	5	2880	206	1460
H14120071-021	3-029-1218	0	0	7.1	11	2	67	13	643
H14120071-022	3-029-1824	0	0	7.1	12	2	120	11	240
H14120071-023	3-030-1218	0	0	7.1	216	21	14900	533	6380
H14120071-024	3-030-1824	0	0	6.7	3	< 1	20	7	195
H14120071-025	3-030-2430	0	0	6.5	4	< 1	30	11	113
H14120071-026	3-036-2430	0	0	7.2	28	26	678	23	3080
H14120071-027	3-036-3036	0	0	7.2	20	3	52	25	1600
H14120071-028	3-036-3642	0	0	6.7	14	< 1	43	44	296
H14120071-029	3-036e-4248	0	0	6.6	114	5	2100	109	2340
H14120071-030	3-036e-4854	0	0	6.7	34	15	288	26	1970
H14120071-031	3-036e-5460	0	0	6.8	129	19	1170	111	2010
H14120071-032	3-037-2430	0	0	6.0	14	5	3670	18	1280
H14120071-033	3-037-3036	0	0	6.4	3	3	1180	6	437
H14120071-034	3-037-3642	0	0	7.0	4	7	707	9	990
H14120071-035	3-038-1824	0	0	7.3	1830	10	15100	1570	3090
H14120071-036	3-038-2430	0	0	7.3	17	< 1	109	19	293
H14120071-037	3-038-3036	0	0	6.7	8	< 1	27	11	55
H14120071-038	3-039-3642	0	0	7.1	347	20	2640	391	4870
H14120071-039	3-039-4248	0	0	7.1	404	50	3460	405	9290
H14120071-040	3-039-5460	0	0	7.1	337	17	3010	441	6440

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120071

Report Date: 12/31/14
Date Received: 12/02/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120071-041	3-045-5460	0	0	7.4	473	105	5330	741	9730
H14120071-042	3-045-6066	0	0	7.3	323	26	2670	379	6950
H14120071-043	3-045-6672	0	0	7.2	240	16	1730	329	3370
H14120071-044	3-045e-0612	0	0	7.3	20	26	11900	37	3850
H14120071-045	3-045e-1218	0	0	7.3	8	< 1	146	17	196
H14120071-046	3-045e-1218d	0	0	7.4	9	< 1	71	16	623
H14120071-047	3-045e-1824	0	0	7.0	7	< 1	41	17	88
H14120071-048	3-046-0612	0	0	6.5	1630	5	4650	787	2880
H14120071-049	3-046-1218	0	0	7.8	228	6	2060	116	1440
H14120071-050	3-046-1824	0	0	7.8	13	< 1	97	16	82

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_141217A	
Lab ID: CCV_1_141215_1		Continuing Calibration Verification Standard							12/16/14 08:06	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141215_1		Continuing Calibration Verification Standard							12/16/14 08:07	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141215_1		Initial Calibration Verification Standard							12/16/14 08:08	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141215_1		Continuing Calibration Verification Standard							12/16/14 08:27	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141215_1		Continuing Calibration Verification Standard							12/16/14 08:38	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141215_1		Continuing Calibration Verification Standard							12/16/14 08:53	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141215_1		Continuing Calibration Verification Standard							12/16/14 08:54	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141215_1		Initial Calibration Verification Standard							12/16/14 08:54	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141215_1		Continuing Calibration Verification Standard							12/16/14 09:07	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141215_1		Continuing Calibration Verification Standard							12/16/14 09:23	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141215_1		Initial Calibration Verification Standard							12/16/14 09:59	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141216_1		Initial Calibration Verification Standard							12/17/14 07:18	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141216_1		Initial Calibration Verification Standard							12/17/14 07:43	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27378
Lab ID: LCS-27378		Laboratory Control Sample				Run: SOIL PH METER_141217A			12/16/14 08:11	
pH, sat. paste		7.71	s.u.	0.10	103	95	105			
Lab ID: H14120071-010ADUP		Sample Duplicate				Run: SOIL PH METER_141217A			12/16/14 08:23	
pH, sat. paste		6.99	s.u.	0.10				0.3	30	
Lab ID: H14120071-020ADUP		Sample Duplicate				Run: SOIL PH METER_141217A			12/16/14 08:37	
pH, sat. paste		7.40	s.u.	0.10				0.4	30	
Lab ID: H14120071-025ADUP		Sample Duplicate				Run: SOIL PH METER_141217A			12/16/14 08:44	
pH, sat. paste		6.54	s.u.	0.10				0.2	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27378
Lab ID: H14120071-025ADUP		Sample Duplicate				Run: SOIL PH METER_141217A			12/16/14 08:44	
Method: ASAM10-3.2										Batch: 27379
Lab ID: LCS-27379		Laboratory Control Sample				Run: SOIL PH METER_141217A			12/16/14 08:55	
pH, sat. paste		7.72	s.u.	0.10	103	95	105			
Lab ID: H14120071-030ADUP		Sample Duplicate				Run: SOIL PH METER_141217A			12/16/14 09:00	
pH, sat. paste		6.70	s.u.	0.10				0.4	30	
Lab ID: H14120071-040ADUP		Sample Duplicate				Run: SOIL PH METER_141217A			12/16/14 09:19	
pH, sat. paste		7.06	s.u.	0.10				1.1	30	
Lab ID: H14120071-050ADUP		Sample Duplicate				Run: SOIL PH METER_141217A			12/16/14 09:27	
pH, sat. paste		7.75	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141210B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/10/14 08:56	
Arsenic			0.770	mg/L	0.0085	96	90	110			
Cadmium			0.385	mg/L	0.0010	96	90	110			
Copper			0.784	mg/L	0.010	98	90	110			
Lead			0.769	mg/L	0.010	96	90	110			
Zinc			0.788	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/10/14 09:11	
Arsenic			0.00487	mg/L	0.0085		0	0			
Cadmium			0.00217	mg/L	0.0010		0	0			
Copper			0.00449	mg/L	0.010		0	0			
Lead			-0.0112	mg/L	0.010		0	0			
Zinc			0.00231	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/10/14 09:15	
Arsenic			0.987	mg/L	0.0085	99	80	120			
Cadmium			0.917	mg/L	0.0010	92	80	120			
Copper			0.512	mg/L	0.010	102	80	120			
Lead			0.936	mg/L	0.010	94	80	120			
Zinc			0.996	mg/L	0.010	100	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141211A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/11/14 08:59	
Arsenic			0.765	mg/L	0.0085	96	90	110			
Cadmium			0.380	mg/L	0.0010	95	90	110			
Copper			0.800	mg/L	0.010	100	90	110			
Lead			0.769	mg/L	0.010	96	90	110			
Zinc			0.778	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/11/14 09:14	
Arsenic			0.00229	mg/L	0.0085		0	0			
Cadmium			0.00256	mg/L	0.0010		0	0			
Copper			0.00167	mg/L	0.010		0	0			
Lead			-0.0172	mg/L	0.010		0	0			
Zinc			0.00223	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/11/14 09:18	
Arsenic			0.997	mg/L	0.0085	100	80	120			
Cadmium			0.934	mg/L	0.0010	93	80	120			
Copper			0.513	mg/L	0.010	103	80	120			
Lead			0.962	mg/L	0.010	96	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_141215A	
Lab ID:	**ICV**		Initial Calibration Verification Standard							12/15/14 11:36	
Lead			0.811	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							12/15/14 11:51	
Lead			-0.00143	mg/L	0.010		0	0			
Lab ID:	**ICSAB**		Interference Check Sample AB							12/15/14 11:55	
Lead			0.905	mg/L	0.010	90	80	120			
Method:	**E200.7**									Analytical Run: ICP2-HE_141218B	
Lab ID:	**ICV**	3	Initial Calibration Verification Standard							12/18/14 10:20	
Copper			0.791	mg/L	0.010	99	90	110			
Lead			0.798	mg/L	0.010	100	90	110			
Zinc			0.805	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	3	Interference Check Sample A							12/18/14 10:35	
Copper			-0.00357	mg/L	0.010		0	0			
Lead			-0.0174	mg/L	0.010		0	0			
Zinc			0.00349	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	3	Interference Check Sample AB							12/18/14 10:39	
Copper			0.507	mg/L	0.010	101	80	120			
Lead			0.958	mg/L	0.010	96	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27271	
Lab ID:	**MB-27271**	5	Method Blank				Run: ICP2-HE_141210B			12/10/14 12:40	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27271**	5	Laboratory Fortified Blank				Run: ICP2-HE_141210B			12/10/14 13:17	
Arsenic			46.0	mg/kg	1.0	92	80	120			
Cadmium			22.6	mg/kg	1.0	90	80	120			
Copper			49.4	mg/kg	1.0	99	80	120			
Lead			45.4	mg/kg	1.0	91	80	120			
Zinc			47.4	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27271**	5	Laboratory Control Sample				Run: ICP2-HE_141210B			12/10/14 13:21	
Arsenic			260	mg/kg	1.8	76	72.3	106.4			
Cadmium			110	mg/kg	1.0	80	73	105.1			
Copper			255	mg/kg	1.1	91	77.5	109.6			
Lead			164	mg/kg	3.2	88	75.9	108.6			
Zinc			177	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H14120071-019APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141210B			12/10/14 14:52	
Arsenic			225	mg/kg	1.8	87	75	125			
Cadmium			104	mg/kg	1.0	83	75	125			
Copper			297	mg/kg	1.1	92	75	125			
Lead			214	mg/kg	3.2	80	75	125			
Zinc			293	mg/kg	1.0	88	75	125			
Lab ID:	**H14120071-019AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141210B			12/10/14 14:56	
Arsenic			49.5	mg/kg	1.7	85	75	125			
Cadmium			21.0	mg/kg	1.0	87	75	125			
Copper			110	mg/kg	1.1	93	75	125			
Lead			55.6	mg/kg	3.1	87	75	125			
Zinc			117	mg/kg	1.0	90	75	125			
Lab ID:	**H14120071-019AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141210B			12/10/14 15:00	
Arsenic			49.0	mg/kg	1.7	84	75	125	0.9	20	
Cadmium			20.5	mg/kg	1.0	85	75	125	2.7	20	
Copper			103	mg/kg	1.1	78	75	125	6.6	20	
Lead			55.4	mg/kg	3.1	86	75	125	0.5	20	
Zinc			112	mg/kg	1.0	80	75	125	4.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27273	
Lab ID:	**MB-27273**	5	Method Blank				Run: ICP2-HE_141211A			12/11/14 13:26	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			2	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27273**	5	Laboratory Fortified Blank				Run: ICP2-HE_141211A			12/11/14 13:30	
Arsenic			48.7	mg/kg	1.0	97	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			49.1	mg/kg	1.0	97	80	120			
Lead			47.7	mg/kg	1.0	92	80	120			
Zinc			49.3	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27273**	5	Laboratory Control Sample				Run: ICP2-HE_141211A			12/11/14 13:34	
Arsenic			271	mg/kg	1.8	77	72.3	106.4			
Cadmium			115	mg/kg	1.0	82	73	105.1			
Copper			250	mg/kg	1.1	87	77.5	109.6			
Lead			170	mg/kg	3.2	88	75.9	108.6			
Zinc			184	mg/kg	1.0	84	74.2	109.9			
Lab ID:	**H14120071-050APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141211A			12/11/14 14:36	
Arsenic			234	mg/kg	1.9	85	75	125			
Cadmium			106	mg/kg	1.0	81	75	125			
Copper			325	mg/kg	1.2	87	75	125			
Lead			231	mg/kg	3.3	81	75	125			
Zinc			307	mg/kg	1.0	85	75	125			
Lab ID:	**H14120071-050AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141211A			12/11/14 14:39	
Arsenic			58.2	mg/kg	1.8	93	75	125			
Cadmium			21.3	mg/kg	1.0	84	75	125			
Copper			132	mg/kg	1.1	70	75	125			S
Lead			61.3	mg/kg	3.2	87	75	125			
Zinc			133	mg/kg	1.0	100	75	125			

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.

Lab ID:	**H14120071-050AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141211A			12/11/14 14:51	
Arsenic			59.6	mg/kg	1.8	95	75	125	2.5	20	
Cadmium			22.3	mg/kg	1.0	87	75	125	4.3	20	
Copper			127	mg/kg	1.1	59	75	125	4.0	20	S
Lead			62.4	mg/kg	3.2	88	75	125	1.7	20	
Zinc			130	mg/kg	1.0	94	75	125	1.9	20	

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27273	
Lab ID:	**MB-27273**	5	Method Blank				Run: ICP2-HE_141215A			12/15/14 18:37	
Arsenic			0.4	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**H14120071-050AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141215A			12/15/14 19:13	
Arsenic			55.4	mg/kg	1.8	86	75	125			
Cadmium			20.7	mg/kg	1.0	81	75	125			
Copper			137	mg/kg	1.1	77	75	125			
Lead			65.6	mg/kg	3.2	88	75	125			
Zinc			128	mg/kg	1.0	93	75	125			
Lab ID:	**H14120071-050AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141215A			12/15/14 19:17	
Arsenic			57.7	mg/kg	1.8	90	75	125	4.2	20	
Cadmium			21.2	mg/kg	1.0	82	75	125	2.0	20	
Copper			125	mg/kg	1.1	53	75	125	8.8	20	S
Lead			59.5	mg/kg	3.2	76	75	125	9.6	20	
Zinc			126	mg/kg	1.0	88	75	125	1.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27272
Lab ID:	**MB-27272**	3	Method Blank				Run: ICP2-HE_141218B			12/18/14 15:53	
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27272**	3	Laboratory Fortified Blank				Run: ICP2-HE_141218B			12/18/14 15:57	
Copper			48.0	mg/kg	1.0	95	80	120			
Lead			45.8	mg/kg	1.0	92	80	120			
Zinc			47.2	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27272**	3	Laboratory Control Sample				Run: ICP2-HE_141218B			12/18/14 16:01	
Copper			262	mg/kg	1.0	101	77.5	109.6			
Lead			182	mg/kg	2.9	105	75.9	108.6			
Zinc			195	mg/kg	1.0	99	74.2	109.9			
Lab ID:	**H14120071-037APDS**	3	Post Digestion/Distillation Spike				Run: ICP2-HE_141218B			12/18/14 17:29	
Copper			270	mg/kg	1.2	93	75	125			
Lead			250	mg/kg	3.3	89	75	125			
Zinc			299	mg/kg	1.0	93	75	125			
Lab ID:	**H14120071-037AMS**	3	Sample Matrix Spike				Run: ICP2-HE_141218B			12/18/14 17:32	
Copper			74.2	mg/kg	1.1	93	75	125			
Lead			54.9	mg/kg	3.2	75	75	125			
Zinc			99.0	mg/kg	1.0	86	75	125			
Lab ID:	**H14120071-037AMSD**	3	Sample Matrix Spike Duplicate				Run: ICP2-HE_141218B			12/18/14 17:36	
Copper			76.0	mg/kg	1.1	97	75	125	2.4	20	
Lead			57.7	mg/kg	3.2	81	75	125	5.0	20	
Zinc			109	mg/kg	1.0	104	75	125	9.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141211A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/11/14 10:26	
Arsenic			0.0582	mg/L	0.0010	97	90	110			
Cadmium			0.0312	mg/L	0.0010	104	90	110			
Lead			0.0592	mg/L	0.0010	99	90	110			
Method:	**SW6020**									Batch: 27271	
Lab ID:	**MB-27271**	3	Method Blank				Run: ICPMS204-B_141211A			12/11/14 17:29	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27271**	3	Laboratory Control Sample				Run: ICPMS204-B_141211A			12/11/14 17:34	
Arsenic			310	mg/kg	1.0	90	72.3	106.4			
Cadmium			129	mg/kg	1.0	95	73	105.1			
Lead			188	mg/kg	1.0	101	75.9	108.6			
Lab ID:	**LFB-27271**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141211A			12/11/14 17:38	
Arsenic			48.6	mg/kg	1.0	97	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Lead			47.5	mg/kg	1.0	95	80	120			
Lab ID:	**H14120071-019APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141211A			12/11/14 18:48	
Arsenic			2390	mg/kg	1.0	98	75	125			
Cadmium			1100	mg/kg	1.0	91	75	125			
Lead			2200	mg/kg	1.0	90	75	125			
Lab ID:	**H14120071-019AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141211A			12/11/14 18:52	
Arsenic			58.1	mg/kg	1.0	102	75	125			
Cadmium			24.4	mg/kg	1.0	100	75	125			
Lead			60.3	mg/kg	1.0	97	75	125			
Lab ID:	**H14120071-019AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141211A			12/11/14 18:56	
Arsenic			55.1	mg/kg	1.0	96	75	125	5.3	20	
Cadmium			23.8	mg/kg	1.0	98	75	125	2.3	20	
Lead			59.0	mg/kg	1.0	95	75	125	2.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141218A		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/17/14 19:20	
Arsenic			0.0595	mg/L	0.0010	99	90	110			
Cadmium			0.0313	mg/L	0.0010	104	90	110			
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/18/14 11:33	
Arsenic			0.0600	mg/L	0.0050	100	90	110			
Cadmium			0.0312	mg/L	0.0010	104	90	110			
Method:	**SW6020**										Batch: 27272
Lab ID:	**MB-27272**	2	Method Blank				Run: ICPMS204-B_141218A			12/17/14 19:55	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lab ID:	**LCS-27272**	2	Laboratory Control Sample				Run: ICPMS204-B_141218A			12/17/14 20:00	
Arsenic			337	mg/kg	1.0	106	72.3	106.4			
Cadmium			133	mg/kg	1.0	105	73	105.1			
Lab ID:	**LFB-27272**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141218A			12/17/14 20:04	
Arsenic			49.3	mg/kg	1.0	99	80	120			
Cadmium			25.0	mg/kg	1.0	100	80	120			
Lab ID:	**H14120071-037APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141218A			12/17/14 22:12	
Arsenic			2420	mg/kg	1.0	95	75	125			
Cadmium			1060	mg/kg	1.0	83	75	125			
Lab ID:	**H14120071-037AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141218A			12/17/14 22:16	
Arsenic			57.0	mg/kg	1.0	97	75	125			
Cadmium			23.5	mg/kg	1.0	91	75	125			
Lab ID:	**H14120071-037AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141218A			12/17/14 22:21	
Arsenic			57.2	mg/kg	1.0	97	75	125	0.3	20	
Cadmium			24.1	mg/kg	1.0	94	75	125	2.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141222B		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/22/14 16:53	
Arsenic			0.0599	mg/L	0.0010	100	90	110			
Lead			0.0596	mg/L	0.0010	99	90	110			
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/23/14 03:09	
Arsenic			0.0585	mg/L	0.0010	98	90	110			
Lead			0.0593	mg/L	0.0010	99	90	110			
Method:	**SW6020**										Batch: 27273
Lab ID:	**MB-27273**	2	Method Blank				Run: ICPMS204-B_141222B			12/23/14 03:42	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LFB-27273**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141222B			12/23/14 03:47	
Arsenic			48.8	mg/kg	1.0	98	80	120			
Lead			50.7	mg/kg	1.0	101	80	120			
Lab ID:	**LCS-27273**	2	Laboratory Control Sample				Run: ICPMS204-B_141222B			12/23/14 04:01	
Arsenic			309	mg/kg	1.0	88	72.3	106.4			
Lead			189	mg/kg	1.0	99	75.9	108.6			
Lab ID:	**H14120071-050APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141222B			12/23/14 04:35	
Arsenic			142	mg/kg	1.0	101	75	125			
Lead			142	mg/kg	1.0	99	75	125			
Lab ID:	**H14120071-050AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141222B			12/23/14 04:40	
Arsenic			63.2	mg/kg	1.0	99	75	125			
Lead			65.8	mg/kg	1.0	99	75	125			
Lab ID:	**H14120071-050AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141222B			12/23/14 05:04	
Arsenic			63.0	mg/kg	1.0	97	75	125	0.3	20	
Lead			65.6	mg/kg	1.0	98	75	125	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/31/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120071

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**									Analytical Run: ICPMS204-B_141224B	
Lab ID: **ICV STD**		Initial Calibration Verification Standard							12/24/14 17:10	
Lead		0.0569	mg/L	0.0010	95	90	110			
Lab ID: **ICV STD**		Initial Calibration Verification Standard							12/24/14 23:54	
Lead		0.0574	mg/L	0.0010	96	90	110			
Method: **SW6020**									Batch: 27451	
Lab ID: **MB-27451**		Method Blank				Run: ICPMS204-B_141224B			12/24/14 20:38	
Lead		ND	mg/kg	0.2						
Lab ID: **LFB-27451**		Laboratory Fortified Blank				Run: ICPMS204-B_141224B			12/24/14 20:43	
Lead		45.3	mg/kg	1.0	91	80	120			
Lab ID: **LCS-27451**		Laboratory Control Sample				Run: ICPMS204-B_141224B			12/24/14 20:58	
Lead		184	mg/kg	1.0	94	75.9	108.6			
Lab ID: **H14120071-022APDS**		Post Digestion/Distillation Spike				Run: ICPMS204-B_141224B			12/24/14 21:17	
Lead		2400	mg/kg	1.0	94	75	125			
Lab ID: **H14120071-022AMS**		Sample Matrix Spike				Run: ICPMS204-B_141224B			12/24/14 21:40	
Lead		60.0	mg/kg	1.0	94	75	125			
Lab ID: **H14120071-022AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS204-B_141224B			12/24/14 21:45	
Lead		60.9	mg/kg	1.0	96	75	125	1.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14120071

Login completed by: Tracy L. Lorash
Date Received: 12/2/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 12/11/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection time on COC for sample #22 is 9:28 - bag has 9:29. Logged in with time from COC.
Collection time on COC for sample #39 is 7:57 - bag has 8:10. Logged in with time from COC.
Cooler 1 was received at 1.8°C, Cooler 2 at 1.6°C. Samples were not received on ice. TI 12/3/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120071

SAMPLE ID CL1	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-001e-1218	11/25/14	1310	Soil	A	B		1
3-001e-1824	11/25/14	1309	Soil	A	B		1
3-001e-2430	11/25/14	1308	Soil	A	B		1
3-014e2-1218	11/25/14	1335	Soil	A	B		1
3-014e2-1824	11/25/14	1334	Soil	A	B		1
3-014e2-2430	11/25/14	1333	Soil	A	B		1
3-014e-3642	11/25/14	1245	Soil	A	B		1
3-014e-4248	11/25/14	1246	Soil	A	B		1
3-014e-5460	11/25/14	1248	Soil	A	B		1
3-027-3036	11/25/14	1132	Soil	A	B		1
3-027-3642	11/25/14	1131	Soil	A	B		1
3-027-4248	11/25/14	1130	Soil	A	B		1
3-027e-0612	11/25/14	1404	Soil	A	B		1
3-027e-1218	11/25/14	1403	Soil	A	B		1
3-027e-1824	11/25/14	1402	Soil	A	B		1
3-028-1218	11/25/14	955	Soil	A	B		1
3-028-1824	11/25/14	954	Soil	A	B		1
3-028-3036	11/25/14	952	Soil	A	B		1
3-028-2430	11/25/14	953	Soil	A	B		1
3-029-0612	11/25/14	931	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/2/14 1640	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] CL1 = 1.8 CL2 = 1.6 TB Ice hand	12/2/14 16:40

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120071

SAMPLE ID	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-029-1218	11/25/14	930	Soil	A	B		1
3-029-1824	11/25/14	928	Soil	A	B		1
3-030-1218	11/25/14	755	Soil	A	B		1
3-030-1824	11/25/14	754	Soil	A	B		1
3-030-2430	11/25/14	753	Soil	A	B		1
3-036-2430	11/25/14	1103	Soil	A	B		1
3-036-3036	11/25/14	1102	Soil	A	B		1
3-036-3642	11/25/14	1101	Soil	A	B		1
3-036e-4248	11/25/14	1420	Soil	A	B		1
3-036e-4854	11/25/14	1445	Soil	A	B		1
3-036e-5460	11/25/14	1444	Soil	A	B		1
3-037-2430	11/25/14	1008	Soil	A	B		1
3-037-3036	11/25/14	1007	Soil	A	B		1
3-037-3642	11/25/14	1006	Soil	A	B		1
3-038-1824	11/25/14	904	Soil	A	B		1
3-038-2430	11/25/14	903	Soil	A	B		1
3-038-3036	11/25/14	902	Soil	A	B		1
3-039-3642	11/25/14	811	Soil	A	B		1
3-039-4248	11/25/14	757	Soil	A	B		1
3-039-5460	11/25/14	824	Soil	A	B		1

C1.1

C1.2

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature] Date/Time: 12/2/14 1640

Received By (sign): (1) Date/Time:

Relinquished By (sign): (2) Date/Time:

Received By (sign): (2) Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

C1.1 = 1.8
C2.2 = 1.6 > 18 overhead

Date/Time: 12/2/14 1640

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H1412 0671

SAMPLE ID CL2	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
'3-045-5460	11/25/2014	1041	Soil	A	B		1
'3-045-6066	11/25/2014	1039	Soil	A	B		1
'3-045-6672	11/25/2014	1038	Soil	A	B		1
3-045e-0612	11/25/2014	1502	Soil	A	B		1
3-045e-1218	11/25/2014	1500	Soil	A	B		1
3-045e-1218d	11/25/2014	1501	Soil	A	B		1
3-045e-1824	11/25/2014	1459	Soil	A	B		1
'3-046-0612	11/25/2014	851	Soil	A	B		1
'3-046-1218	11/25/2014	850	Soil	A	B		1
'3-046-1824	11/25/2014	849	Soil	A	B		1
							1
							1
							1
							1
							1
							1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/2/14 1640	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] CL1=2.8 CL2=16 TB @ rec lab	12/2/14 1640

COC112514KM pg 1-3.xls

ANALYTICAL SUMMARY REPORT

December 22, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120040

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 64 samples for MT DEQ-Federal Superfund on 12/1/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120040-001	3-329e2-0006	11/19/14 9:37	12/01/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120040-002	3-329e2-0612	11/19/14 9:36	12/01/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120040-003	3-329w-1824	11/19/14 7:59	12/01/14	Soil	Same As Above
H14120040-004	3-329w-2430	11/19/14 7:58	12/01/14	Soil	Same As Above
H14120040-005	3-329w-3036	11/19/14 7:57	12/01/14	Soil	Same As Above
H14120040-006	3-343e-0612	11/19/14 7:32	12/01/14	Soil	Same As Above
H14120040-007	3-343e-1218	11/19/14 7:31	12/01/14	Soil	Same As Above
H14120040-008	3-343e-1824	11/19/14 7:30	12/01/14	Soil	Same As Above
H14120040-009	3-343e2-0006	11/19/14 9:23	12/01/14	Soil	Same As Above
H14120040-010	3-343e2-0612	11/19/14 9:22	12/01/14	Soil	Same As Above
H14120040-011	3-343e2-1218	11/19/14 9:21	12/01/14	Soil	Same As Above
H14120040-012	3-343w-0006	11/19/14 8:23	12/01/14	Soil	Same As Above
H14120040-013	3-343w-0612	11/19/14 8:22	12/01/14	Soil	Same As Above
H14120040-014	3-343w-1218	11/19/14 8:21	12/01/14	Soil	Same As Above
H14120040-015	3-354-0612	11/19/14 8:41	12/01/14	Soil	Same As Above
H14120040-016	3-354-1218	11/19/14 8:40	12/01/14	Soil	Same As Above
H14120040-017	3-354-1824	11/19/14 8:39	12/01/14	Soil	Same As Above
H14120040-018	3-355-0612	11/19/14 15:02	12/01/14	Soil	Same As Above
H14120040-019	3-355-1218	11/19/14 15:00	12/01/14	Soil	Same As Above
H14120040-020	3-355-1218d	11/19/14 15:01	12/01/14	Soil	Same As Above
H14120040-021	3-355-1824	11/19/14 14:59	12/01/14	Soil	Same As Above
H14120040-022	3-363-4248	11/19/14 8:55	12/01/14	Soil	Same As Above
H14120040-023	3-363-4854	11/19/14 9:05	12/01/14	Soil	Same As Above
H14120040-024	3-363-5460	11/19/14 9:04	12/01/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120040-025	3-363e-0006	11/19/14 9:57	12/01/14	Soil	Same As Above
H14120040-026	3-363e-0612	11/19/14 9:56	12/01/14	Soil	Same As Above
H14120040-027	3-363e-1218	11/19/14 9:55	12/01/14	Soil	Same As Above
H14120040-028	3-363w-1824	11/19/14 11:49	12/01/14	Soil	Same As Above
H14120040-029	3-363w-2430	11/19/14 11:48	12/01/14	Soil	Same As Above
H14120040-030	3-363w-3036	11/19/14 11:47	12/01/14	Soil	Same As Above
H14120040-031	3-364-0612	11/19/14 14:46	12/01/14	Soil	Same As Above
H14120040-032	3-364-1218	11/19/14 14:45	12/01/14	Soil	Same As Above
H14120040-033	3-370-1824	11/19/14 10:24	12/01/14	Soil	Same As Above
H14120040-034	3-370-1824d	11/19/14 10:25	12/01/14	Soil	Same As Above
H14120040-035	3-370-2430	11/19/14 10:23	12/01/14	Soil	Same As Above
H14120040-036	3-370-3036	11/19/14 10:22	12/01/14	Soil	Same As Above
H14120040-037	3-370e-0006	11/19/14 12:56	12/01/14	Soil	Same As Above
H14120040-038	3-370e-0612	11/19/14 12:55	12/01/14	Soil	Same As Above
H14120040-039	3-370e-1612d	11/19/14 12:54	12/01/14	Soil	Same As Above
H14120040-040	3-370e-1218	11/19/14 12:53	12/01/14	Soil	Cancelled Sample
H14120040-041	3-370n-0612	11/19/14 12:29	12/01/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120040-042	3-370n-1218	11/19/14 12:28	12/01/14	Soil	Same As Above
H14120040-043	3-370n-1824	11/19/14 12:27	12/01/14	Soil	Same As Above
H14120040-044	3-371-3036	11/19/14 10:47	12/01/14	Soil	Same As Above
H14120040-045	3-371-3642	11/19/14 10:46	12/01/14	Soil	Same As Above
H14120040-046	3-371-4248	11/19/14 10:45	12/01/14	Soil	Same As Above
H14120040-047	3-371n-0006	11/19/14 13:27	12/01/14	Soil	Same As Above
H14120040-048	3-371n-0612	11/19/14 13:26	12/01/14	Soil	Same As Above
H14120040-049	3-371n-1218	11/19/14 13:25	12/01/14	Soil	Same As Above
H14120040-050	3-372-2430	11/19/14 11:23	12/01/14	Soil	Same As Above
H14120040-051	3-372-3036	11/19/14 11:22	12/01/14	Soil	Same As Above
H14120040-052	3-372-3642	11/19/14 11:21	12/01/14	Soil	Same As Above
H14120040-053	3-372n-0006	11/19/14 13:45	12/01/14	Soil	Same As Above
H14120040-054	3-372n-0612	11/19/14 13:44	12/01/14	Soil	Same As Above
H14120040-055	3-372n-1218	11/19/14 13:43	12/01/14	Soil	Same As Above
H14120040-056	3-377-1218	11/19/14 14:10	12/01/14	Soil	Same As Above
H14120040-057	3-377-1824	11/19/14 14:09	12/01/14	Soil	Same As Above
H14120040-058	3-377-2430	11/19/14 14:08	12/01/14	Soil	Same As Above
H14120040-059	3-377e-0612	11/19/14 15:32	12/01/14	Soil	Same As Above
H14120040-060	3-377e-1218	11/19/14 15:31	12/01/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120040-061	3-377e-1824	11/19/14 15:30	12/01/14	Soil	Same As Above
H14120040-062	3-377n-0612	11/19/14 15:22	12/01/14	Soil	Same As Above
H14120040-063	3-377n-1218	11/19/14 15:21	12/01/14	Soil	Same As Above
H14120040-064	3-377n-1824	11/19/14 15:20	12/01/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120040

Report Date: 12/22/14
Date Received: 12/01/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120040-001	3-329e2-0006	0	0	7.7	27	< 1	104	16	109
H14120040-002	3-329e2-0612	0	0	8.0	15	< 1	26	12	60
H14120040-003	3-329w-1824	0	0	7.6	16	2	327	19	840
H14120040-004	3-329w-2430	0	0	7.4	15	< 1	69	20	178
H14120040-005	3-329w-3036	0	0	7.6	14	< 1	66	17	87
H14120040-006	3-343e-0612	0	0	6.7	1980	5	5740	756	2250
H14120040-007	3-343e-1218	0	0	7.5	1130	10	12300	1200	3720
H14120040-008	3-343e-1824	0	0	7.8	34	2	253	20	1120
H14120040-009	3-343e2-0006	0	0	7.9	181	9	1910	215	1530
H14120040-010	3-343e2-0612	0	0	7.8	23	< 1	104	16	122
H14120040-011	3-343e2-1218	0	0	7.6	26	< 1	44	10	47
H14120040-012	3-343w-0006	0	0	7.8	965	5	4280	653	1520
H14120040-013	3-343w-0612	0	0	7.8	278	7	2720	256	1880
H14120040-014	3-343w-1218	0	0	7.7	32	< 1	189	20	257
H14120040-015	3-354-0612	0	0	7.5	499	2	1220	395	671
H14120040-016	3-354-1218	0	0	7.9	21	< 1	43	14	97
H14120040-017	3-354-1824	0	0	7.7	21	< 1	40	13	67
H14120040-018	3-355-0612	0	0	7.9	190	2	967	180	691
H14120040-019	3-355-1218	0	0	8.0	27	< 1	98	19	104
H14120040-020	3-355-1218d	0	0	7.9	30	< 1	105	18	97
H14120040-021	3-355-1824	0	0	7.8	6	< 1	20	8	41
H14120040-022	3-363-4248	0	0	6.5	136	< 1	56	22	1830
H14120040-023	3-363-4854	0	0	5.4	61	< 1	27	10	691
H14120040-024	3-363-5460	0	0	5.3	27	< 1	51	15	277
H14120040-025	3-363e-0006	0	0	7.6	431	8	3800	573	2070
H14120040-026	3-363e-0612	0	0	7.6	28	< 1	73	16	104
H14120040-027	3-363e-1218	0	0	7.7	19	< 1	45	14	83
H14120040-028	3-363w-1824	0	0	7.0	29	3	3420	16	414
H14120040-029	3-363w-2430	0	0	7.6	14	2	677	10	480
H14120040-030	3-363w-3036	0	0	7.8	16	< 1	77	9	213
H14120040-031	3-364-0612	0	0	7.9	10	< 1	38	8	62
H14120040-032	3-364-1218	0	0	7.8	8	< 1	30	7	45
H14120040-033	3-370-1824	0	0	7.2	32	8	25500	14	2180
H14120040-034	3-370-1824d	0	0	7.4	29	21	12100	14	2290
H14120040-035	3-370-2430	0	0	7.7	28	27	1520	14	2170
H14120040-036	3-370-3036	0	0	7.6	33	5	275	14	1230
H14120040-037	3-370e-0006	0	0	7.5	620	8	4900	537	2430
H14120040-038	3-370e-0612	0	0	7.6	24	< 1	132	23	129
H14120040-039	3-370e-1612d	0	0	7.5	21	< 1	124	19	137
H14120040-041	3-370n-0612	0	0	7.6	27	< 1	157	29	206

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120040

Report Date: 12/22/14
Date Received: 12/01/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120040-042	3-370n-1218	0	0	7.6	88	< 1	489	92	325
H14120040-043	3-370n-1824	0	0	7.3	14	< 1	78	23	93
H14120040-044	3-371-3036	0	0	6.8	87	17	1910	23	2490
H14120040-045	3-371-3642	0	0	6.2	42	4	292	17	1500
H14120040-046	3-371-4248	0	0	7.0	65	3	490	38	872
H14120040-047	3-371n-0006	0	0	7.8	456	7	3680	375	1750
H14120040-048	3-371n-0612	0	0	7.8	84	2	632	71	361
H14120040-049	3-371n-1218	0	0	7.6	18	< 1	71	12	68
H14120040-050	3-372-2430	0	0	7.0	23	3	272	14	1830
H14120040-051	3-372-3036	0	0	7.3	13	1	87	12	1180
H14120040-052	3-372-3642	0	0	7.2	28	1	1640	19	676
H14120040-053	3-372n-0006	0	0	7.8	406	6	2150	294	1450
H14120040-054	3-372n-0612	0	0	7.5	19	< 1	60	15	79
H14120040-055	3-372n-1218	0	0	7.5	10	< 1	38	12	66
H14120040-056	3-377-1218	0	0	7.1	971	9	9410	1020	2190
H14120040-057	3-377-1824	0	0	6.6	50	2	162	28	719
H14120040-058	3-377-2430	0	0	6.9	11	< 1	71	18	245
H14120040-059	3-377e-0612	0	0	7.4	467	5	2790	315	1340
H14120040-060	3-377e-1218	0	0	7.4	10	< 1	42	14	76
H14120040-061	3-377e-1824	0	0	7.5	6	< 1	27	12	59
H14120040-062	3-377n-0612	0	0	7.1	874	8	10700	708	2090
H14120040-063	3-377n-1218	0	0	7.2	31	6	423	16	1270
H14120040-064	3-377n-1824	0	0	7.3	15	1	120	10	642

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141212A		
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard								12/11/14 08:28
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard								12/10/14 07:24
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard								12/10/14 08:03
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard								12/11/14 09:05
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_141211_1		Continuing Calibration Verification Standard								12/12/14 09:51
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141211_1		Continuing Calibration Verification Standard								12/12/14 09:52
pH, sat. paste		3.92	s.u.	0.10	98	97.5	102.5			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard								12/12/14 09:52
pH, sat. paste		9.98	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141211_1		Continuing Calibration Verification Standard								12/12/14 10:02
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141211_1		Continuing Calibration Verification Standard								12/12/14 10:12
pH, sat. paste		6.92	s.u.	0.10	99	98.6	101.4			
Lab ID: CCV1_1_141211_1		Continuing Calibration Verification Standard								12/12/14 10:12
pH, sat. paste		3.94	s.u.	0.10	99	97.5	102.5			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard								12/12/14 10:13
pH, sat. paste		10.0	s.u.	0.10	101	99	101			
Lab ID: CCV_3_141211_1		Continuing Calibration Verification Standard								12/12/14 10:22
pH, sat. paste		6.92	s.u.	0.10	99	98.6	101.4			
Lab ID: CCV_1_141211_1		Continuing Calibration Verification Standard								12/12/14 10:33
pH, sat. paste		6.93	s.u.	0.10	99	98.6	101.4			
Lab ID: CCV1_1_141211_1		Continuing Calibration Verification Standard								12/12/14 10:33
pH, sat. paste		3.94	s.u.	0.10	99	97.5	102.5			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard								12/12/14 10:34
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141211_1		Continuing Calibration Verification Standard								12/12/14 10:42
pH, sat. paste		6.94	s.u.	0.10	99	98.6	101.4			
Lab ID: CCV_4_141211_1		Continuing Calibration Verification Standard								12/12/14 10:51
pH, sat. paste		6.92	s.u.	0.10	99	98.6	101.4			

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141212A		
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 09:35	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 08:37	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 07:12	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 07:51	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27333
Lab ID: LCS-27333		Laboratory Control Sample				Run: SOIL PH METER_141212A			12/12/14 09:53	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H14120040-010ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/12/14 10:01	
pH, sat. paste		7.58	s.u.	0.10				3.2	30	
Lab ID: H14120040-020ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/12/14 10:09	
pH, sat. paste		7.93	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27334
Lab ID: LCS-27334		Laboratory Control Sample				Run: SOIL PH METER_141212A			12/12/14 10:14	
pH, sat. paste		7.69	s.u.	0.10	103	95	105			
Lab ID: H14120040-030ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/12/14 10:22	
pH, sat. paste		7.76	s.u.	0.10				0.4	30	
Lab ID: H14120040-041ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/12/14 10:30	
pH, sat. paste		7.55	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 27335
Lab ID: LCS-27335		Laboratory Control Sample				Run: SOIL PH METER_141212A			12/12/14 10:34	
pH, sat. paste		7.60	s.u.	0.10	102	95	105			
Lab ID: H14120040-050ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/12/14 10:41	
pH, sat. paste		6.98	s.u.	0.10				0.1	30	
Lab ID: H14120040-060ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/12/14 10:50	
pH, sat. paste		7.38	s.u.	0.10				0.5	30	
Lab ID: H14120040-064ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/12/14 10:54	
pH, sat. paste		7.27	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141216B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/16/14 09:53	
Arsenic			0.819	mg/L	0.0085	102	90	110			
Cadmium			0.397	mg/L	0.0010	99	90	110			
Copper			0.800	mg/L	0.010	100	90	110			
Lead			0.781	mg/L	0.010	98	90	110			
Zinc			0.814	mg/L	0.010	102	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/16/14 10:07	
Arsenic			-0.000580	mg/L	0.0085		0	0			
Cadmium			0.00340	mg/L	0.0010		0	0			
Copper			0.00134	mg/L	0.010		0	0			
Lead			-0.0190	mg/L	0.010		0	0			
Zinc			0.00366	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/16/14 10:12	
Arsenic			0.996	mg/L	0.0085	100	80	120			
Cadmium			0.927	mg/L	0.0010	93	80	120			
Copper			0.506	mg/L	0.010	101	80	120			
Lead			0.918	mg/L	0.010	92	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27267
Lab ID:	**MB-27267**	5	Method Blank				Run: ICP2-HE_141216B				12/16/14 12:55
Arsenic			ND	mg/kg	0.4						
Cadmium			0.03	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27267**	5	Laboratory Fortified Blank				Run: ICP2-HE_141216B				12/16/14 13:06
Arsenic			46.1	mg/kg	1.0	92	80	120			
Cadmium			23.1	mg/kg	1.0	92	80	120			
Copper			49.6	mg/kg	1.0	98	80	120			
Lead			44.9	mg/kg	1.0	90	80	120			
Zinc			47.9	mg/kg	1.0	93	80	120			
Lab ID:	**LCS-27267**	5	Laboratory Control Sample				Run: ICP2-HE_141216B				12/16/14 13:10
Arsenic			277	mg/kg	1.8	79	72.3	106.4			
Cadmium			118	mg/kg	1.0	84	73	105.1			
Copper			257	mg/kg	1.1	90	77.5	109.6			
Lead			174	mg/kg	3.2	91	75.9	108.6			
Zinc			192	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H14120040-019APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141216B				12/16/14 15:08
Arsenic			263	mg/kg	2.0	87	75	125			
Cadmium			111	mg/kg	1.0	80	75	125			
Copper			351	mg/kg	1.2	92	75	125			
Lead			242	mg/kg	3.5	80	75	125			
Zinc			342	mg/kg	1.0	87	75	125			
Lab ID:	**H14120040-019AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141216B				12/16/14 15:12
Arsenic			72.5	mg/kg	1.9	91	75	125			
Cadmium			22.5	mg/kg	1.0	84	75	125			
Copper			148	mg/kg	1.2	96	75	125			
Lead			65.1	mg/kg	3.4	82	75	125			
Zinc			150	mg/kg	1.0	86	75	125			
Lab ID:	**H14120040-019AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141216B				12/16/14 15:16
Arsenic			72.0	mg/kg	1.9	90	75	125	0.7	20	
Cadmium			22.8	mg/kg	1.0	85	75	125	1.2	20	
Copper			148	mg/kg	1.2	96	75	125	0.1	20	
Lead			65.2	mg/kg	3.4	83	75	125	0.1	20	
Zinc			152	mg/kg	1.0	90	75	125	1.2	20	
Method:	**SW6010B**										Batch: 27268
Lab ID:	**MB-27268**	5	Method Blank				Run: ICP2-HE_141216B				12/16/14 15:20
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27268
Lab ID:	**MB-27268**	5	Method Blank				Run: ICP2-HE_141216B			12/16/14 15:20	
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27268**	5	Laboratory Fortified Blank				Run: ICP2-HE_141216B			12/16/14 15:23	
Arsenic			46.1	mg/kg	1.0	92	80	120			
Cadmium			22.9	mg/kg	1.0	92	80	120			
Copper			47.9	mg/kg	1.0	95	80	120			
Lead			45.2	mg/kg	1.0	90	80	120			
Zinc			47.7	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27268**	5	Laboratory Control Sample				Run: ICP2-HE_141216B			12/16/14 15:27	
Arsenic			284	mg/kg	1.9	78	72.3	106.4			
Cadmium			118	mg/kg	1.0	81	73	105.1			
Copper			261	mg/kg	1.2	87	77.5	109.6			
Lead			173	mg/kg	3.4	87	75.9	108.6			
Zinc			192	mg/kg	1.0	85	74.2	109.9			
Lab ID:	**H14120040-037APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141216B			12/16/14 16:56	
Arsenic			845	mg/kg	1.8	90	75	125			
Cadmium			114	mg/kg	1.0	85	75	125			
Copper			5070	mg/kg	1.1		75	125			A
Lead			762	mg/kg	3.2	90	75	125			
Zinc			2680	mg/kg	1.0		75	125			A
Lab ID:	**H14120040-037AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141216B			12/16/14 16:59	
Arsenic			672	mg/kg	1.7		75	125			A
Cadmium			28.5	mg/kg	1.0	86	75	125			
Copper			4900	mg/kg	1.1		75	125			A
Lead			594	mg/kg	3.1		75	125			A
Zinc			2520	mg/kg	1.0		75	125			A
Lab ID:	**H14120040-037AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141216B			12/16/14 17:03	
Arsenic			694	mg/kg	1.7		75	125	3.2	20	A
Cadmium			28.8	mg/kg	1.0	87	75	125	1.1	20	
Copper			4950	mg/kg	1.1		75	125	0.9	20	A
Lead			616	mg/kg	3.1		75	125	3.6	20	A
Zinc			2590	mg/kg	1.0		75	125	2.4	20	A
Method:	**SW6010B**										Batch: 27269
Lab ID:	**MB-27269**	5	Method Blank				Run: ICP2-HE_141216B			12/16/14 17:14	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.6	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27269
Lab ID:	**LFB-27269**	5	Laboratory Fortified Blank				Run: ICP2-HE_141216B			12/16/14 17:18	
Arsenic			48.3	mg/kg	1.0	97	80	120			
Cadmium			23.4	mg/kg	1.0	94	80	120			
Copper			49.5	mg/kg	1.0	98	80	120			
Lead			47.2	mg/kg	1.0	94	80	120			
Zinc			48.2	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27269**	5	Laboratory Control Sample				Run: ICP2-HE_141216B			12/16/14 17:21	
Arsenic			279	mg/kg	1.8	80	72.3	106.4			
Cadmium			116	mg/kg	1.0	83	73	105.1			
Copper			255	mg/kg	1.1	89	77.5	109.6			
Lead			176	mg/kg	3.2	92	75.9	108.6			
Zinc			189	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120040-057APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141216B			12/16/14 19:20	
Arsenic			278	mg/kg	1.9	85	75	125			
Cadmium			118	mg/kg	1.0	86	75	125			
Copper			396	mg/kg	1.2	87	75	125			
Lead			251	mg/kg	3.4	83	75	125			
Zinc			952	mg/kg	1.0	87	75	125			
Lab ID:	**H14120040-057AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141216B			12/16/14 19:24	
Arsenic			95.3	mg/kg	1.9	88	75	125			
Cadmium			25.0	mg/kg	1.0	87	75	125			
Copper			207	mg/kg	1.1	88	75	125			
Lead			73.2	mg/kg	3.3	85	75	125			
Zinc			771	mg/kg	1.0		75	125			A
Lab ID:	**H14120040-057AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141216B			12/16/14 19:27	
Arsenic			93.7	mg/kg	1.9	84	75	125	1.7	20	
Cadmium			24.7	mg/kg	1.0	86	75	125	1.3	20	
Copper			208	mg/kg	1.1	89	75	125	0.4	20	
Lead			64.7	mg/kg	3.3	69	75	125	12	20	S
Zinc			754	mg/kg	1.0		75	125	2.2	20	A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.

Method:	**SW6010B**										Batch: 27270
Lab ID:	**MB-27270**	5	Method Blank				Run: ICP2-HE_141216B			12/16/14 19:31	
Arsenic			ND	mg/kg	0.4						
Cadmium			0.03	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27270**	5	Laboratory Fortified Blank				Run: ICP2-HE_141216B			12/16/14 19:35	
Arsenic			45.7	mg/kg	1.0	91	80	120			
Cadmium			22.8	mg/kg	1.0	91	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27270
Lab ID:	**LFB-27270**	5	Laboratory Fortified Blank				Run: ICP2-HE_141216B			12/16/14 19:35	
Copper			48.1	mg/kg	1.0	96	80	120			
Lead			44.6	mg/kg	1.0	89	80	120			
Zinc			47.0	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27270**	5	Laboratory Control Sample				Run: ICP2-HE_141216B			12/16/14 19:39	
Arsenic			282	mg/kg	1.8	81	72.3	106.4			
Cadmium			121	mg/kg	1.0	88	73	105.1			
Copper			249	mg/kg	1.1	88	77.5	109.6			
Lead			176	mg/kg	3.2	93	75.9	108.6			
Zinc			195	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120040-064APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141216B			12/16/14 20:16	
Arsenic			244	mg/kg	1.8	90	75	125			
Cadmium			116	mg/kg	1.0	90	75	125			
Copper			356	mg/kg	1.1	92	75	125			
Lead			241	mg/kg	3.2	90	75	125			
Zinc			865	mg/kg	1.0	87	75	125			
Lab ID:	**H14120040-064AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141216B			12/16/14 20:19	
Arsenic			60.0	mg/kg	1.8	93	75	125			
Cadmium			24.3	mg/kg	1.0	93	75	125			
Copper			169	mg/kg	1.1	98	75	125			
Lead			54.1	mg/kg	3.1	88	75	125			
Zinc			702	mg/kg	1.0		75	125			A
Lab ID:	**H14120040-064AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141216B			12/16/14 20:23	
Arsenic			60.3	mg/kg	1.8	93	75	125	0.5	20	
Cadmium			24.8	mg/kg	1.0	95	75	125	2.4	20	
Copper			165	mg/kg	1.1	91	75	125	2.1	20	
Lead			55.6	mg/kg	3.1	91	75	125	2.8	20	
Zinc			698	mg/kg	1.0		75	125	0.5	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141216A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/16/14 14:10	
Arsenic			0.0596	mg/L	0.0010	99	90	110			
Cadmium			0.0313	mg/L	0.0010	104	90	110			
Lead			0.0602	mg/L	0.0010	100	90	110			
Method:	**SW6020**									Batch: 27267	
Lab ID:	**MB-27267**	2	Method Blank				Run: ICPMS204-B_141216A			12/16/14 15:48	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27267**	2	Laboratory Control Sample				Run: ICPMS204-B_141216A			12/16/14 15:53	
Arsenic			322	mg/kg	1.0	92	72.3	106.4			
Lead			199	mg/kg	1.0	105	75.9	108.6			
Lab ID:	**LFB-27267**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141216A			12/16/14 15:57	
Arsenic			50.6	mg/kg	1.0	101	80	120			
Lead			49.6	mg/kg	1.0	99	80	120			
Lab ID:	**H14120040-019APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141216A			12/16/14 18:04	
Arsenic			2760	mg/kg	1.0	103	75	125			
Lead			2640	mg/kg	1.0	98	75	125			
Lab ID:	**H14120040-019AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141216A			12/16/14 18:08	
Arsenic			76.0	mg/kg	1.0	93	75	125			
Lead			67.9	mg/kg	1.0	93	75	125			
Lab ID:	**H14120040-019AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141216A			12/16/14 18:13	
Arsenic			76.6	mg/kg	1.0	95	75	125	0.8	20	
Lead			69.5	mg/kg	1.0	96	75	125	2.3	20	
Method:	**SW6020**									Batch: 27268	
Lab ID:	**MB-27268**	3	Method Blank				Run: ICPMS204-B_141216A			12/16/14 18:22	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27268**	3	Laboratory Control Sample				Run: ICPMS204-B_141216A			12/16/14 18:26	
Arsenic			320	mg/kg	1.0	88	72.3	106.4			
Cadmium			121	mg/kg	1.0	83	73	105.1			
Lead			197	mg/kg	1.0	99	75.9	108.6			
Lab ID:	**LFB-27268**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141216A			12/16/14 18:31	
Arsenic			50.0	mg/kg	1.0	100	80	120			
Cadmium			23.5	mg/kg	1.0	94	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H14120040-037APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141216A			12/16/14 20:29	
Arsenic			3250	mg/kg	1.0	106	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 27268	
Lab ID:	**H14120040-037APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141216A			12/16/14 20:29	
Cadmium			959	mg/kg	1.0	78	75	125			
Lead			2640	mg/kg	1.0	85	75	125			
Lab ID:	**H14120040-037AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141216A			12/16/14 20:33	
Arsenic			706	mg/kg	1.0		75	125			A
Cadmium			27.3	mg/kg	1.0	80	75	125			
Lead			609	mg/kg	1.0		75	125			A
Lab ID:	**H14120040-037AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141216A			12/16/14 20:37	
Arsenic			735	mg/kg	1.0		75	125	3.9	20	A
Cadmium			28.4	mg/kg	1.0	85	75	125	4.1	20	
Lead			627	mg/kg	1.0		75	125	2.9	20	A
Method:	**SW6020**									Batch: 27269	
Lab ID:	**MB-27269**	2	Method Blank				Run: ICPMS204-B_141216A			12/16/14 20:55	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27269**	2	Laboratory Control Sample				Run: ICPMS204-B_141216A			12/16/14 21:00	
Arsenic			318	mg/kg	1.0	91	72.3	106.4			
Lead			194	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27269**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141216A			12/16/14 21:05	
Arsenic			50.1	mg/kg	1.0	100	80	120			
Lead			48.3	mg/kg	1.0	97	80	120			
Lab ID:	**H14120040-057APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141216A			12/16/14 23:12	
Arsenic			2650	mg/kg	1.0	100	75	125			
Lead			2250	mg/kg	1.0	85	75	125			
Lab ID:	**H14120040-057AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141216A			12/16/14 23:16	
Arsenic			104	mg/kg	1.0	87	75	125			
Lead			72.5	mg/kg	1.0	85	75	125			
Lab ID:	**H14120040-057AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141216A			12/16/14 23:21	
Arsenic			104	mg/kg	1.0	87	75	125	0.0	20	
Lead			72.0	mg/kg	1.0	84	75	125	0.6	20	
Method:	**SW6020**									Batch: 27270	
Lab ID:	**MB-27270**	2	Method Blank				Run: ICPMS204-B_141216A			12/16/14 23:30	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27270**	2	Laboratory Control Sample				Run: ICPMS204-B_141216A			12/16/14 23:35	
Arsenic			316	mg/kg	1.0	91	72.3	106.4			
Lead			193	mg/kg	1.0	102	75.9	108.6			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27270
Lab ID:	**LFB-27270**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141216A				12/16/14 23:39
Arsenic			49.4	mg/kg	1.0	99	80	120			
Lead			48.4	mg/kg	1.0	97	80	120			
Lab ID:	**H14120040-064APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141216A				12/17/14 00:30
Arsenic			2650	mg/kg	1.0	106	75	125			
Lead			2350	mg/kg	1.0	95	75	125			
Lab ID:	**H14120040-064AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141216A				12/17/14 00:34
Arsenic			66.3	mg/kg	1.0	104	75	125			
Lead			59.0	mg/kg	1.0	99	75	125			
Lab ID:	**H14120040-064AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141216A				12/17/14 00:38
Arsenic			62.8	mg/kg	1.0	97	75	125	5.4	20	
Lead			55.7	mg/kg	1.0	92	75	125	5.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141219A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard								12/19/14 17:03
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0316	mg/L	0.0010	105	90	110			
Copper			0.0618	mg/L	0.0010	103	90	110			
Lead			0.0593	mg/L	0.0010	99	90	110			
Zinc			0.0626	mg/L	0.0010	104	90	110			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard								12/21/14 01:03
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0311	mg/L	0.0010	104	90	110			
Copper			0.0613	mg/L	0.0010	102	90	110			
Lead			0.0596	mg/L	0.0010	99	90	110			
Zinc			0.0612	mg/L	0.0010	102	90	110			
Method:	**SW6020**										Batch: 27431
Lab ID:	**MB-27431**	5	Method Blank				Run: ICPMS204-B_141219A				12/20/14 15:32
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			0.9	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			5	mg/kg	4						
Lab ID:	**LCS-27431**	5	Laboratory Control Sample				Run: ICPMS204-B_141219A				12/20/14 15:37
Arsenic			327	mg/kg	1.0	90	72.3	106.4			
Cadmium			140	mg/kg	1.0	97	73	105.1			
Copper			291	mg/kg	1.0	98	77.5	109.6			
Lead			205	mg/kg	1.0	104	75.9	108.6			
Zinc			231	mg/kg	3.7	101	74.2	109.9			
Lab ID:	**LFB-27431**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141219A				12/20/14 15:42
Arsenic			48.9	mg/kg	1.0	98	80	120			
Cadmium			26.6	mg/kg	1.0	106	80	120			
Copper			52.6	mg/kg	1.0	103	80	120			
Lead			50.0	mg/kg	1.0	100	80	120			
Zinc			56.2	mg/kg	3.5	103	80	120			
Lab ID:	**H14120040-062APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141219A				12/20/14 17:48
Arsenic			3290	mg/kg	1.0	93	75	125			
Cadmium			1060	mg/kg	1.0	81	75	125			
Copper			12300	mg/kg	1.0		75	125			A
Lead			2710	mg/kg	1.0	77	75	125			
Zinc			4380	mg/kg	3.7	88	75	125			
Lab ID:	**H14120040-062AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A				12/20/14 17:52
Arsenic			937	mg/kg	1.0		75	125			A
Cadmium			33.1	mg/kg	1.0	96	75	125			
Copper			10700	mg/kg	1.0		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/22/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120040

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6020**										Batch: 27431
Lab ID: **H14120040-062AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141219A			12/20/14 17:52	
Lead		762	mg/kg	1.0		75	125			A
Zinc		2150	mg/kg	3.6		75	125			A
Lab ID: **H14120040-062AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141219A			12/20/14 17:57	
Arsenic		916	mg/kg	1.0		75	125	2.3	20	A
Cadmium		32.5	mg/kg	1.0	92	75	125	1.8	20	
Copper		10600	mg/kg	1.0		75	125	1.4	20	A
Lead		748	mg/kg	1.0		75	125	1.8	20	A
Zinc		2120	mg/kg	3.8		75	125	1.3	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14120040

Login completed by: Tracy L. Lorash
Date Received: 12/1/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 12/5/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection time on COC for sample #38 is 12:55 - bag has 1254. Logged in with time from COC.
Collection time on COC for sample #39 is 12:54 - bag has 1255. Logged in with time from COC.
Sample 3-370e-1218 was not received in the laboratory. Per Erin, it will be submitted at a later date.
Sample 3-370e-1824 collected 11/19/14 @ 1252 was received in the laboratory, but is not on the COC. Per Erin, we are not to analyze.
Cooler 1 was received at 3.2°C, Cooler 2 at 4.0°C, Tote was received at 0.6. Samples were not received on ice. TI 12/3/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120040

SAMPLE ID	tote	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-329e2-0006		11/19/14	9:37	Soil	A	B		1
3-329e2-0612		11/19/14	9:36	Soil	A	B		1
3-329w-1824		11/19/14	7:59	Soil	A	B		1
3-329w-2430		11/19/14	7:58	Soil	A	B		1
3-329w-3036		11/19/14	7:57	Soil	A	B		1
3-343e-0612		11/19/14	07:32	Soil	A	B		1
3-343e-1218		11/19/14	7:31	Soil	A	B		1
3-343e-1824		11/19/14	7:30	Soil	A	B		1
3-343e2-0006		11/19/14	9:23	Soil	A	B		1
3-343e2-0612		11/19/14	9:22	Soil	A	B		1
3-343e2-1218		11/19/14	9:21	Soil	A	B		1
3-343w-0006		11/19/14	8:23	Soil	A	B		1
3-343w-0612		11/19/14	8:22	Soil	A	B		1
3-343w-1218		11/19/14	8:21	Soil	A	B		1
3-354-0612		11/19/14	8:41	Soil	A	B		1
3-354-1218		11/19/14	8:40	Soil	A	B		1
3-354-1824		11/19/14	8:39	Soil	A	B		1
3-355-0612	C2	11/19/14	15:02	Soil	A	B		1
3-355-1218		11/19/14	15:00	Soil	A	B		1
3-355-1218d		11/19/14	15:01	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1630 12/1/14	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] Cl = 32 mg/L SO4 = 4.0 mg/L pH = 0.6 TB	hand 12/1/14 16:30

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120040

SAMPLE ID C2	DATE	TIME	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-355-1824	11/19/14	14:59	Soil	A	B		1
3-363-4248	11/19/14	8:55	Soil	A	B		1
3-363-4854	11/19/14	9:05	Soil	A	B		1
3-363-5460	11/19/14	9:04	Soil	A	B		1
3-363e-0006	11/19/14	9:57	Soil	A	B		1
3-363e-0612	11/19/14	9:56	Soil	A	B		1
3-363e-1218	11/19/14	9:55	Soil	A	B		1
3-363w-1824	11/19/14	11:49	Soil	A	B		1
3-363w-2430	11/19/14	11:48	Soil	A	B		1
3-363w-3036	11/19/14	11:47	Soil	A	B		1
3-364-0612	11/19/14	14:46	Soil	A	B		1
3-364-1218	11/19/14	14:45	Soil	A	B		1
3-370-1824	11/19/14	10:24	Soil	A	B		1
3-370-1824d	11/19/14	10:25	Soil	A	B		1
3-370-2430	11/19/14	10:23	Soil	A	B		1
3-370-3036	11/19/14	10:22	Soil	A	B		1
3-370e-0006	11/19/14	12:56	Soil	A	B		1
3-370e-0612	11/19/14	12:55	Soil	A	B		1
3-370e-0612d	11/19/14	12:54	Soil	A	B		1
3-370e-1218	11/19/14	12:53	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1630 12/1/14

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1 = 3.2
C2 = 4.0
Tote = 0.6
TB otce

Date/Time: 12/1/14 16:30

COC111914 pg 1-3.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120040

SAMPLE ID Cl	DATE	TIME	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-370n-0612	11/19/14	12:29	Soil	A	B		1
3-370n-1218	11/19/14	12:28	Soil	A	B		1
3-370n-1824	11/19/14	12:27	Soil	A	B		1
3-371-3036	11/19/14	10:47	Soil	A	B		1
3-371-3642	11/19/14	10:46	Soil	A	B		1
3-371-4248	11/19/14	10:45	Soil	A	B		1
3-371n-0006	11/19/14	13:27	Soil	A	B		1
3-371n-0612	11/19/14	13:26	Soil	A	B		1
3-371n-1218	11/19/14	13:25	Soil	A	B		1
3-372-2430	11/19/14	11:23	Soil	A	B		1
3-372-3036	11/19/14	11:22	Soil	A	B		1
3-372-3642	11/19/14	11:21	Soil	A	B		1
3-372n-0006	11/19/14	13:45	Soil	A	B		1
3-372n-0612	11/19/14	13:44	Soil	A	B		1
3-372n-1218	11/19/14	13:43	Soil	A	B		1
3-377-1218	11/19/14	14:10	Soil	A	B		1
3-377-1824	11/19/14	14:09	Soil	A	B		1
3-377-2430	11/19/14	14:08	Soil	A	B		1
3-377e-0612	11/19/14	15:32	Soil	A	B		1
3-377e-1218	11/19/14	15:31	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 12/1/14 1630	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] Cl = 3.2 C2 4.0 Total 0.6 TD Dice handled	12/1/14 16:30

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14120040

SAMPLE ID C1	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-377e-1824	11/19/14	15:30	Soil	A	B		1
3-377n-0612	11/19/14	15:22	Soil	A	B		1
3-377n-1218	11/19/14	15:21	Soil	A	B		1
3-377n-1824	11/19/14	15:20	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1630 12/1/14	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1 = 3.2, C2 = 48, Tote = 0.6 TB once	hand del 12/1/14 16:30

ANALYTICAL SUMMARY REPORT

December 18, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120034

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 68 samples for MT DEQ-Federal Superfund on 12/1/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120034-001	3-303-2430	11/20/14 14:23	12/01/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120034-002	3-303-3036	11/20/14 14:22	12/01/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120034-003	3-303-3642	11/20/14 14:21	12/01/14	Soil	Same As Above
H14120034-004	3-304-3036	11/20/14 15:17	12/01/14	Soil	Same As Above
H14120034-005	3-304-3642	11/20/14 15:16	12/01/14	Soil	Same As Above
H14120034-006	3-304-4248	11/20/14 15:15	12/01/14	Soil	Same As Above
H14120034-007	3-316-0006	11/20/14 14:08	12/01/14	Soil	Same As Above
H14120034-008	3-316-0612	11/20/14 14:07	12/01/14	Soil	Same As Above
H14120034-009	3-317-0006	11/20/14 13:52	12/01/14	Soil	Same As Above
H14120034-010	3-317-0612	11/20/14 13:51	12/01/14	Soil	Same As Above
H14120034-011	3-317-1218	11/20/14 13:50	12/01/14	Soil	Same As Above
H14120034-012	3-318-0006	11/20/14 13:33	12/01/14	Soil	Same As Above
H14120034-013	3-318-0612	11/20/14 13:32	12/01/14	Soil	Same As Above
H14120034-014	3-318-1218	11/20/14 13:31	12/01/14	Soil	Same As Above
H14120034-015	3-331-1218	11/20/14 11:30	12/01/14	Soil	Same As Above
H14120034-016	3-331-1824	11/20/14 11:29	12/01/14	Soil	Same As Above
H14120034-017	3-331-2430	11/20/14 11:28	12/01/14	Soil	Same As Above
H14120034-018	3-332-0006	11/20/14 11:57	12/01/14	Soil	Same As Above
H14120034-019	3-332-0612	11/20/14 11:56	12/01/14	Soil	Same As Above
H14120034-020	3-332-1218	11/20/14 11:55	12/01/14	Soil	Same As Above
H14120034-021	0		12/01/14	Soil	Cancelled Sample
H14120034-022	3-333-0006	11/20/14 12:38	12/01/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120034-023	3-333-0612	11/20/14 12:37	12/01/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120034-024	3-333-1218	11/20/14 12:35	12/01/14	Soil	Same As Above
H14120034-025	3-333-1218d	11/20/14 12:36	12/01/14	Soil	Same As Above
H14120034-026	3-333w-0006	11/20/14 15:03	12/01/14	Soil	Same As Above
H14120034-027	3-333w-0612	11/20/14 15:02	12/01/14	Soil	Same As Above
H14120034-028	3-345-1824	11/20/14 11:14	12/01/14	Soil	Same As Above
H14120034-029	3-345-2430	11/20/14 11:13	12/01/14	Soil	Same As Above
H14120034-030	3-345-3036	11/20/14 11:12	12/01/14	Soil	Same As Above
H14120034-031	3-346-1218	11/20/14 10:25	12/01/14	Soil	Same As Above
H14120034-032	3-346-1824	11/20/14 10:24	12/01/14	Soil	Same As Above
H14120034-033	3-346-2430	11/20/14 10:23	12/01/14	Soil	Same As Above
H14120034-034	3-347-0612	11/20/14 10:51	12/01/14	Soil	Same As Above
H14120034-035	3-347-1218	11/20/14 10:50	12/01/14	Soil	Same As Above
H14120034-036	3-347-1824	11/20/14 10:49	12/01/14	Soil	Same As Above
H14120034-037	3-357-0006	11/20/14 7:52	12/01/14	Soil	Same As Above
H14120034-038	3-357-0612	11/20/14 7:51	12/01/14	Soil	Same As Above
H14120034-039	3-357-1218	11/20/14 7:50	12/01/14	Soil	Same As Above
H14120034-040	3-358-0612	11/20/14 10:11	12/01/14	Soil	Same As Above
H14120034-041	3-358-1218	11/20/14 10:10	12/01/14	Soil	Same As Above
H14120034-042	3-358-1824	11/20/14 10:09	12/01/14	Soil	Same As Above
H14120034-043	3-358n-0006	11/20/14 13:08	12/01/14	Soil	Same As Above
H14120034-044	3-358n-0612	11/20/14 13:07	12/01/14	Soil	Same As Above
H14120034-045	3-358n-1218	11/20/14 13:06	12/01/14	Soil	Same As Above
H14120034-046	3-358w-0006	11/20/14 12:58	12/01/14	Soil	Same As Above
H14120034-047	3-358w-0612	11/20/14 12:57	12/01/14	Soil	Same As Above
H14120034-048	3-358w-1218	11/20/14 12:56	12/01/14	Soil	Same As Above
H14120034-049	3-358w2-0006	11/20/14 14:48	12/01/14	Soil	Same As Above
H14120034-050	3-358w2-0612	11/20/14 14:47	12/01/14	Soil	Same As Above
H14120034-051	3-358w2-1218	11/20/14 14:46	12/01/14	Soil	Same As Above
H14120034-052	3-365-0006	11/20/14 7:32	12/01/14	Soil	Same As Above
H14120034-053	3-365-0612	11/20/14 7:31	12/01/14	Soil	Same As Above
H14120034-054	3-374-0006	11/20/14 8:17	12/01/14	Soil	Same As Above
H14120034-055	3-374-0612	11/20/14 8:16	12/01/14	Soil	Same As Above
H14120034-056	3-381-1218	11/20/14 8:40	12/01/14	Soil	Same As Above
H14120034-057	3-381-1218d	11/20/14 8:41	12/01/14	Soil	Same As Above
H14120034-058	3-381-1824	11/20/14 8:39	12/01/14	Soil	Same As Above
H14120034-059	3-381-2430	11/20/14 8:38	12/01/14	Soil	Same As Above
H14120034-060	3-381w-0006	11/20/14 9:48	12/01/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14120034-061	3-381w-0612	11/20/14 9:47	12/01/14	Soil	Same As Above
H14120034-062	3-381w-1218	11/20/14 9:46	12/01/14	Soil	Same As Above
H14120034-063	3-384-3036	11/20/14 8:57	12/01/14	Soil	Same As Above
H14120034-064	3-384-3642	11/20/14 8:56	12/01/14	Soil	Same As Above
H14120034-065	3-384-4248	11/20/14 8:55	12/01/14	Soil	Same As Above
H14120034-066	3-390-1824	11/20/14 9:24	12/01/14	Soil	Same As Above
H14120034-067	3-390-2430	11/20/14 9:23	12/01/14	Soil	Same As Above
H14120034-068	3-390-3036	11/20/14 9:22	12/01/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120034

Report Date: 12/18/14
Date Received: 12/01/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120034-001	3-303-2430	0	0	7.3	2200	22	20500	1120	6010
H14120034-002	3-303-3036	0	0	5.9	28	< 1	77	15	119
H14120034-003	3-303-3642	0	0	7.0	6	< 1	43	14	62
H14120034-004	3-304-3036	0	0	7.0	261	5	1570	231	1480
H14120034-005	3-304-3642	0	0	7.3	368	7	2830	358	2260
H14120034-006	3-304-4248	0	0	7.4	188	3	1130	142	1080
H14120034-007	3-316-0006	0	0	8.4	156	2	643	137	643
H14120034-008	3-316-0612	0	0	8.3	34	< 1	54	11	60
H14120034-009	3-317-0006	0	0	7.5	1160	10	6470	819	2650
H14120034-010	3-317-0612	0	0	7.3	55	2	124	27	778
H14120034-011	3-317-1218	0	0	7.4	30	< 1	42	19	161
H14120034-012	3-318-0006	0	0	7.6	607	5	3100	747	1820
H14120034-013	3-318-0612	0	0	7.6	15	< 1	62	21	146
H14120034-014	3-318-1218	0	0	7.6	12	< 1	68	17	64
H14120034-015	3-331-1218	0	0	7.8	15	< 1	138	24	140
H14120034-016	3-331-1824	0	0	7.6	9	< 1	50	22	77
H14120034-017	3-331-2430	0	0	7.6	5	< 1	25	11	54
H14120034-018	3-332-0006	0	0	7.9	494	4	2190	409	1240
H14120034-019	3-332-0612	0	0	7.9	77	5	1130	76	1390
H14120034-020	3-332-1218	0	0	8.0	10	< 1	64	15	106
H14120034-022	3-333-0006	0	0	7.7	1290	10	9340	1060	2870
H14120034-023	3-333-0612	0	0	7.8	67	9	1420	57	2460
H14120034-024	3-333-1218	0	0	7.6	16	< 1	103	21	317
H14120034-025	3-333-1218d	0	0	7.5	26	< 1	267	46	454
H14120034-026	3-333w-0006	0	0	8.1	171	3	283	62	241
H14120034-027	3-333w-0612	0	0	7.9	29	< 1	63	12	63
H14120034-028	3-345-1824	0	0	7.8	38	3	594	21	888
H14120034-029	3-345-2430	0	0	7.7	22	< 1	29	15	177
H14120034-030	3-345-3036	0	0	7.7	24	< 1	38	8	177
H14120034-031	3-346-1218	0	0	6.8	2980	18	18100	1690	3970
H14120034-032	3-346-1824	0	0	7.1	53	< 1	100	26	165
H14120034-033	3-346-2430	0	0	7.8	7	< 1	25	12	75
H14120034-034	3-347-0612	0	0	7.7	939	6	4510	877	2010
H14120034-035	3-347-1218	0	0	7.8	27	< 1	132	35	139
H14120034-036	3-347-1824	0	0	7.8	17	< 1	61	18	105
H14120034-037	3-357-0006	0	0	8.1	344	4	1680	283	1350
H14120034-038	3-357-0612	0	0	8.4	21	< 1	35	9	56
H14120034-039	3-357-1218	0	0	8.4	10	< 1	24	9	46
H14120034-040	3-358-0612	0	0	7.5	486	6	3200	363	1280
H14120034-041	3-358-1218	0	0	7.5	50	4	247	28	809

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120034

Report Date: 12/18/14
Date Received: 12/01/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120034-042	3-358-1824	0	0	7.3	34	1	71	23	441
H14120034-043	3-358n-0006	0	0	7.0	886	4	3280	648	1210
H14120034-044	3-358n-0612	0	0	7.4	56	2	472	67	579
H14120034-045	3-358n-1218	0	0	7.5	12	< 1	504	9	393
H14120034-046	3-358w-0006	0	0	7.3	904	8	6040	596	2200
H14120034-047	3-358w-0612	0	0	7.8	54	1	308	34	366
H14120034-048	3-358w-1218	0	0	7.7	12	< 1	38	13	78
H14120034-049	3-358w2-0006	0	0	7.7	481	7	2690	443	2020
H14120034-050	3-358w2-0612	0	0	7.8	57	3	735	72	682
H14120034-051	3-358w2-1218	0	0	7.9	32	< 1	143	26	165
H14120034-052	3-365-0006	0	0	8.1	198	3	594	111	586
H14120034-053	3-365-0612	0	0	8.1	10	< 1	28	7	53
H14120034-054	3-374-0006	0	0	8.0	150	3	327	72	331
H14120034-055	3-374-0612	0	0	8.1	66	< 1	47	16	78
H14120034-056	3-381-1218	0	0	7.9	472	6	2360	377	1640
H14120034-057	3-381-1218d	0	0	8.0	911	6	5040	667	1720
H14120034-058	3-381-1824	0	0	7.8	85	2	191	34	620
H14120034-059	3-381-2430	0	0	7.6	35	< 1	57	17	280
H14120034-060	3-381w-0006	0	0	7.9	258	6	1060	248	1000
H14120034-061	3-381w-0612	0	0	8.2	52	< 1	92	23	114
H14120034-062	3-381w-1218	0	0	8.0	16	< 1	79	23	109
H14120034-063	3-384-3036	0	0	6.9	58	5	341	16	1220
H14120034-064	3-384-3642	0	0	7.5	36	< 1	669	10	162
H14120034-065	3-384-4248	0	0	7.5	16	< 1	716	7	134
H14120034-066	3-390-1824	0	0	7.0	17	6	1630	15	1110
H14120034-067	3-390-2430	0	0	7.0	13	3	2990	12	652
H14120034-068	3-390-3036	0	0	7.3	14	2	323	13	519

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141212A		
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard								12/11/14 08:28
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_141210_1		Continuing Calibration Verification Standard								12/10/14 07:23
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141210_1		Continuing Calibration Verification Standard								12/10/14 07:24
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard								12/10/14 07:24
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141210_1		Continuing Calibration Verification Standard								12/10/14 07:33
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141210_1		Continuing Calibration Verification Standard								12/10/14 07:41
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141210_1		Continuing Calibration Verification Standard								12/10/14 08:02
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141210_1		Continuing Calibration Verification Standard								12/10/14 08:02
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard								12/10/14 08:03
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141210_1		Continuing Calibration Verification Standard								12/10/14 08:10
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141210_1		Continuing Calibration Verification Standard								12/10/14 08:19
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141210_1		Continuing Calibration Verification Standard								12/11/14 09:04
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141210_1		Continuing Calibration Verification Standard								12/11/14 09:04
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard								12/11/14 09:05
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141210_1		Continuing Calibration Verification Standard								12/11/14 09:13
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141210_1		Continuing Calibration Verification Standard								12/11/14 09:22
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard								12/12/14 09:52
pH, sat. paste		9.98	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141212A		
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 10:13	
pH, sat. paste		10.0	s.u.	0.10	101	99	101			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 10:34	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 09:35	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 08:37	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 07:12	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 07:51	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27330
Lab ID: LCS-27330		Laboratory Control Sample				Run: SOIL PH METER_141212A			12/10/14 07:25	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14120034-010ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/10/14 07:33	
pH, sat. paste		7.36	s.u.	0.10				0.3	30	
Lab ID: H14120034-020ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/10/14 07:40	
pH, sat. paste		8.04	s.u.	0.10				0.2	30	
Lab ID: H14120034-023ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/10/14 07:43	
pH, sat. paste		7.77	s.u.	0.10				0.0	30	
Method: ASAM10-3.2										Batch: 27331
Lab ID: LCS-27331		Laboratory Control Sample				Run: SOIL PH METER_141212A			12/10/14 08:04	
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14120034-030ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/10/14 08:09	
pH, sat. paste		7.73	s.u.	0.10				0.4	30	
Lab ID: H14120034-040ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/10/14 08:18	
pH, sat. paste		7.52	s.u.	0.10				0.3	30	
Lab ID: H14120034-046ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/10/14 08:23	
pH, sat. paste		7.33	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27332
Lab ID: LCS-27332		Laboratory Control Sample				Run: SOIL PH METER_141212A			12/11/14 09:06	
pH, sat. paste		7.61	s.u.	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27332
Lab ID: H14120034-050ADUP	Sample Duplicate					Run: SOIL PH METER_141212A			12/11/14 09:09	
pH, sat. paste		7.86	s.u.	0.10				0.1	30	
Lab ID: H14120034-060ADUP	Sample Duplicate					Run: SOIL PH METER_141212A			12/11/14 09:16	
pH, sat. paste		7.95	s.u.	0.10				0.3	30	
Lab ID: H14120034-068ADUP	Sample Duplicate					Run: SOIL PH METER_141212A			12/11/14 09:24	
pH, sat. paste		7.31	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141212B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/12/14 08:38	
Arsenic			0.815	mg/L	0.0085	102	90	110			
Cadmium			0.402	mg/L	0.0010	100	90	110			
Copper			0.784	mg/L	0.010	98	90	110			
Lead			0.782	mg/L	0.010	98	90	110			
Zinc			0.824	mg/L	0.010	103	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/12/14 08:53	
Arsenic			0.00247	mg/L	0.0085		0	0			
Cadmium			-0.000210	mg/L	0.0010		0	0			
Copper			0.00887	mg/L	0.010		0	0			
Lead			-0.0796	mg/L	0.010		0	0			
Zinc			0.000520	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/12/14 08:57	
Arsenic			0.946	mg/L	0.0085	95	80	120			
Cadmium			0.876	mg/L	0.0010	88	80	120			
Copper			0.495	mg/L	0.010	99	80	120			
Lead			0.815	mg/L	0.010	81	80	120			
Zinc			0.962	mg/L	0.010	96	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141215A		
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							12/15/14 11:36	
Arsenic			0.801	mg/L	0.0085	100	90	110			
Lead			0.811	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							12/15/14 11:51	
Arsenic			-0.00158	mg/L	0.0085		0	0			
Lead			-0.00143	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	2	Interference Check Sample AB							12/15/14 11:55	
Arsenic			0.973	mg/L	0.0085	97	80	120			
Lead			0.905	mg/L	0.010	90	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27263	
Lab ID:	**MB-27263**	5	Method Blank				Run: ICP2-HE_141212B			12/12/14 10:39	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27263**	5	Laboratory Fortified Blank				Run: ICP2-HE_141212B			12/12/14 10:42	
Arsenic			44.9	mg/kg	1.0	90	80	120			
Cadmium			21.7	mg/kg	1.0	87	80	120			
Copper			48.9	mg/kg	1.0	98	80	120			
Lead			42.4	mg/kg	1.0	85	80	120			
Zinc			46.2	mg/kg	1.0	92	80	120			
Lab ID:	**LCS-27263**	5	Laboratory Control Sample				Run: ICP2-HE_141212B			12/12/14 10:46	
Arsenic			255	mg/kg	1.8	74	72.3	106.4			
Cadmium			106	mg/kg	1.0	78	73	105.1			
Copper			241	mg/kg	1.1	86	77.5	109.6			
Lead			149	mg/kg	3.2	80	75.9	108.6			
Zinc			178	mg/kg	1.0	83	74.2	109.9			
Lab ID:	**H14120034-019AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141212B			12/12/14 12:21	
Arsenic			124	mg/kg	1.9	90	75	125			
Cadmium			27.3	mg/kg	1.0	84	75	125			
Copper			1170	mg/kg	1.1		75	125			A
Lead			101	mg/kg	3.3	80	75	125			
Zinc			1400	mg/kg	1.0		75	125			A
Lab ID:	**H14120034-019AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141212B			12/12/14 12:59	
Arsenic			130	mg/kg	1.9	100	75	125	4.5	20	
Cadmium			28.7	mg/kg	1.0	89	75	125	4.9	20	
Copper			1160	mg/kg	1.2		75	125	0.7	20	A
Lead			105	mg/kg	3.4	87	75	125	3.9	20	
Zinc			1390	mg/kg	1.0		75	125	1.0	20	A
Method:	**SW6010B**									Batch: 27264	
Lab ID:	**MB-27264**	5	Method Blank				Run: ICP2-HE_141212B			12/12/14 13:02	
Arsenic			0.4	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27264**	5	Laboratory Fortified Blank				Run: ICP2-HE_141212B			12/12/14 13:06	
Arsenic			48.1	mg/kg	1.0	95	80	120			
Cadmium			23.6	mg/kg	1.0	95	80	120			
Copper			49.1	mg/kg	1.0	98	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27264
Lab ID:	**LFB-27264**	5	Laboratory Fortified Blank				Run: ICP2-HE_141212B				12/12/14 13:06
Lead			45.9	mg/kg	1.0	92	80	120			
Zinc			48.4	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27264**	5	Laboratory Control Sample				Run: ICP2-HE_141212B				12/12/14 13:10
Arsenic			286	mg/kg	1.7	83	72.3	106.4			
Cadmium			119	mg/kg	1.0	87	73	105.1			
Copper			262	mg/kg	1.0	94	77.5	109.6			
Lead			175	mg/kg	2.9	94	75.9	108.6			
Zinc			192	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H14120034-038AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141212B				12/12/14 14:42
Arsenic			69.5	mg/kg	1.8	97	75	125			
Cadmium			22.5	mg/kg	1.0	90	75	125			
Copper			82.4	mg/kg	1.1	94	75	125			
Lead			48.6	mg/kg	3.2	97	75	125			
Zinc			102	mg/kg	1.0	92	75	125			
Lab ID:	**H14120034-038AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141212B				12/12/14 14:46
Arsenic			69.4	mg/kg	1.8	97	75	125	0.1	20	
Cadmium			21.7	mg/kg	1.0	87	75	125	3.9	20	
Copper			83.5	mg/kg	1.1	96	75	125	1.4	20	
Lead			48.1	mg/kg	3.2	96	75	125	1.2	20	
Zinc			98.9	mg/kg	1.0	85	75	125	3.4	20	
Method:	**SW6010B**										Batch: 27265
Lab ID:	**MB-27265**	5	Method Blank				Run: ICP2-HE_141212B				12/12/14 14:50
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27265**	5	Laboratory Fortified Blank				Run: ICP2-HE_141212B				12/12/14 14:53
Arsenic			47.8	mg/kg	1.0	96	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			48.4	mg/kg	1.0	97	80	120			
Lead			46.0	mg/kg	1.0	92	80	120			
Zinc			47.9	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27265**	5	Laboratory Control Sample				Run: ICP2-HE_141212B				12/12/14 14:57
Arsenic			276	mg/kg	1.7	80	72.3	106.4			
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			257	mg/kg	1.1	92	77.5	109.6			
Lead			169	mg/kg	3.1	90	75.9	108.6			
Zinc			184	mg/kg	1.0	86	74.2	109.9			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27265
Lab ID:	**H14120034-057AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141212B			12/12/14 17:06	
Arsenic			902	mg/kg	1.7		75	125			A
Cadmium			28.2	mg/kg	1.0	90	75	125			
Copper			4980	mg/kg	1.1		75	125			A
Lead			668	mg/kg	3.1		75	125			A
Zinc			1680	mg/kg	1.0		75	125			A
Lab ID:	**H14120034-057AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141212B			12/12/14 17:10	
Arsenic			928	mg/kg	1.7		75	125	2.9	20	A
Cadmium			28.2	mg/kg	1.0	90	75	125	0.0	20	
Copper			5140	mg/kg	1.1		75	125	3.1	20	A
Lead			684	mg/kg	3.1		75	125	2.4	20	A
Zinc			1740	mg/kg	1.0		75	125	3.6	20	A
Method:	**SW6010B**										Batch: 27266
Lab ID:	**MB-27266**	5	Method Blank				Run: ICP2-HE_141212B			12/12/14 17:14	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27266**	5	Laboratory Fortified Blank				Run: ICP2-HE_141212B			12/12/14 17:17	
Arsenic			46.6	mg/kg	1.0	93	80	120			
Cadmium			23.1	mg/kg	1.0	92	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			46.6	mg/kg	1.0	93	80	120			
Zinc			48.1	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27266**	5	Laboratory Control Sample				Run: ICP2-HE_141212B			12/12/14 17:21	
Arsenic			281	mg/kg	1.7	82	72.3	106.4			
Cadmium			119	mg/kg	1.0	87	73	105.1			
Copper			254	mg/kg	1.0	91	77.5	109.6			
Lead			168	mg/kg	3.0	90	75.9	108.6			
Zinc			194	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14120034-068AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141212B			12/12/14 18:20	
Arsenic			53.8	mg/kg	1.7	83	75	125			
Cadmium			24.2	mg/kg	1.0	93	75	125			
Copper			365	mg/kg	1.1		75	125			A
Lead			63.4	mg/kg	3.1	104	75	125			
Zinc			555	mg/kg	1.0		75	125			A
Lab ID:	**H14120034-068AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141212B			12/12/14 18:24	
Arsenic			58.8	mg/kg	1.7	94	75	125	9.0	20	
Cadmium			24.0	mg/kg	1.0	93	75	125	0.8	20	
Copper			357	mg/kg	1.0		75	125	2.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B										Batch: 27266
Lab ID: H14120034-068AMSD	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141212B			12/12/14 18:24	
Lead		54.4	mg/kg	3.0	86	75	125	15	20	
Zinc		555	mg/kg	1.0		75	125	0.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27264	
Lab ID:	**MB-27264**	5	Method Blank				Run: ICP2-HE_141215A			12/15/14 14:46	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**H14120034-038AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141215A			12/15/14 16:20	
Arsenic			69.6	mg/kg	1.8	96	75	125			
Cadmium			21.6	mg/kg	1.0	86	75	125			
Copper			83.9	mg/kg	1.1	95	75	125			
Lead			55.7	mg/kg	3.2	92	75	125			
Zinc			101	mg/kg	1.0	96	75	125			
Lab ID:	**H14120034-038AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141215A			12/15/14 16:23	
Arsenic			67.5	mg/kg	1.8	91	75	125	3.1	20	
Cadmium			21.3	mg/kg	1.0	85	75	125	1.4	20	
Copper			83.1	mg/kg	1.1	94	75	125	1.0	20	
Lead			52.9	mg/kg	3.2	86	75	125	5.1	20	
Zinc			98.7	mg/kg	1.0	92	75	125	2.0	20	
Method:	**SW6010B**									Batch: 27265	
Lab ID:	**MB-27265**	5	Method Blank				Run: ICP2-HE_141215A			12/15/14 16:27	
Arsenic			0.6	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			0.7	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Method:	**SW6010B**									Batch: 27266	
Lab ID:	**MB-27266**	5	Method Blank				Run: ICP2-HE_141215A			12/15/14 17:34	
Arsenic			0.5	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**H14120034-068AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141215A			12/15/14 18:29	
Arsenic			58.6	mg/kg	1.7	90	75	125			
Cadmium			23.0	mg/kg	1.0	87	75	125			
Copper			362	mg/kg	1.1		75	125			A
Lead			57.3	mg/kg	3.1	92	75	125			
Zinc			535	mg/kg	1.0		75	125			A
Lab ID:	**H14120034-068AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141215A			12/15/14 18:33	
Arsenic			54.8	mg/kg	1.7	83	75	125	6.8	20	
Cadmium			22.7	mg/kg	1.0	87	75	125	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6010B**										Batch: 27266
Lab ID: **H14120034-068AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141215A			12/15/14 18:33	
Copper		362	mg/kg	1.0		75	125	0.0	20	A
Lead		60.7	mg/kg	3.0	100	75	125	5.7	20	
Zinc		526	mg/kg	1.0		75	125	1.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141212A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/12/14 09:34	
Arsenic			0.0607	mg/L	0.0010	101	90	110			
Cadmium			0.0318	mg/L	0.0010	106	90	110			
Lead			0.0598	mg/L	0.0010	100	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/13/14 00:46	
Arsenic			0.0597	mg/L	0.0010	99	90	110			
Cadmium			0.0314	mg/L	0.0010	105	90	110			
Lead			0.0597	mg/L	0.0010	99	90	110			
Method:	**SW6020**										Batch: 27263
Lab ID:	**MB-27263**	2	Method Blank				Run: ICPMS204-B_141212A			12/12/14 15:34	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27263**	2	Laboratory Control Sample				Run: ICPMS204-B_141212A			12/12/14 15:39	
Arsenic			305	mg/kg	1.0	89	72.3	106.4			
Lead			185	mg/kg	1.0	99	75.9	108.6			
Lab ID:	**LFB-27263**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141212A			12/12/14 15:43	
Arsenic			48.9	mg/kg	1.0	98	80	120			
Lead			49.5	mg/kg	1.0	99	80	120			
Lab ID:	**H14120034-019AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141212A			12/12/14 18:04	
Arsenic			128	mg/kg	1.0	83	75	125			
Lead			111	mg/kg	1.0	82	75	125			
Lab ID:	**H14120034-019AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141212A			12/12/14 18:09	
Arsenic			128	mg/kg	1.0	81	75	125	0.2	20	
Lead			110	mg/kg	1.0	79	75	125	0.9	20	
Method:	**SW6020**										Batch: 27264
Lab ID:	**MB-27264**	2	Method Blank				Run: ICPMS204-B_141212A			12/12/14 18:27	
Arsenic			ND	mg/kg	0.3						
Lead			0.3	mg/kg	0.2						
Lab ID:	**LCS-27264**	2	Laboratory Control Sample				Run: ICPMS204-B_141212A			12/12/14 18:32	
Arsenic			313	mg/kg	1.0	91	72.3	106.4			
Lead			193	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-27264**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141212A			12/12/14 18:36	
Arsenic			48.2	mg/kg	1.0	96	80	120			
Lead			47.0	mg/kg	1.0	93	80	120			
Lab ID:	**H14120034-038AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141212A			12/12/14 20:45	
Arsenic			67.5	mg/kg	1.0	95	75	125			
Lead			55.6	mg/kg	1.0	94	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 27264	
Lab ID:	**H14120034-038AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141212A			12/12/14 20:50	
Arsenic			66.7	mg/kg	1.0	93	75	125	1.2	20	
Lead			54.0	mg/kg	1.0	90	75	125	2.9	20	
Method:	**SW6020**									Batch: 27265	
Lab ID:	**MB-27265**	3	Method Blank				Run: ICPMS204-B_141212A			12/12/14 20:59	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27265**	3	Laboratory Control Sample				Run: ICPMS204-B_141212A			12/12/14 21:04	
Arsenic			304	mg/kg	1.0	89	72.3	106.4			
Cadmium			125	mg/kg	1.0	91	73	105.1			
Lead			186	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-27265**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141212A			12/12/14 21:08	
Arsenic			49.0	mg/kg	1.0	98	80	120			
Cadmium			24.3	mg/kg	1.0	97	80	120			
Lead			46.8	mg/kg	1.0	94	80	120			
Lab ID:	**H14120034-057AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141212A			12/12/14 23:22	
Arsenic			938	mg/kg	1.0		75	125			A
Cadmium			29.8	mg/kg	1.0	95	75	125			
Lead			675	mg/kg	1.0		75	125			A
Lab ID:	**H14120034-057AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141212A			12/12/14 23:27	
Arsenic			960	mg/kg	1.0		75	125	2.3	20	A
Cadmium			30.0	mg/kg	1.0	96	75	125	1.0	20	
Lead			691	mg/kg	1.0		75	125	2.3	20	A
Method:	**SW6020**									Batch: 27266	
Lab ID:	**MB-27266**	2	Method Blank				Run: ICPMS204-B_141212A			12/12/14 10:56	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27266**	2	Laboratory Control Sample				Run: ICPMS204-B_141212A			12/12/14 11:01	
Arsenic			330	mg/kg	1.0	96	72.3	106.4			
Lead			198	mg/kg	1.0	106	75.9	108.6			
Lab ID:	**LFB-27266**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141212A			12/12/14 11:06	
Arsenic			50.2	mg/kg	1.0	100	80	120			
Lead			50.0	mg/kg	1.0	100	80	120			
Lab ID:	**H14120181-001AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141212A			12/12/14 11:29	
Arsenic			51.2	mg/kg	1.0	102	75	125			
Lead			52.4	mg/kg	1.0	98	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/18/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120034

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 27266
Lab ID: H14120181-001AMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141212A			12/12/14 11:34	
Arsenic		51.8	mg/kg	1.0	104	75	125	1.1	20	
Lead		51.7	mg/kg	1.0	96	75	125	1.3	20	
Lab ID: H14120034-068AMS	2	Sample Matrix Spike				Run: ICPMS204-B_141212A			12/12/14 15:20	
Arsenic		62.5	mg/kg	1.0	100	75	125			
Lead		60.2	mg/kg	1.0	98	75	125			
Lab ID: H14120034-068AMSD	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141212A			12/12/14 15:25	
Arsenic		62.8	mg/kg	1.0	102	75	125	0.6	20	
Lead		61.1	mg/kg	1.0	101	75	125	1.6	20	
Method: SW6020										Analytical Run: ICPMS204-B_141216A
Lab ID: ICV STD	2	Initial Calibration Verification Standard							12/16/14 14:10	
Arsenic		0.0596	mg/L	0.0010	99	90	110			
Lead		0.0602	mg/L	0.0010	100	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120034

Login completed by: Tracy L. Lorash
Date Received: 12/1/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 12/4/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	°C See coimments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection time on COC for sample 23 is 12:37 - bag has 13:37. Logged in with time from COC.
Collection time on COC for sample 25 is 12:36 - bag has 13:36. Logged in with time from COC.
Cooler 1 was received at 4.0°C, Cooler 2 at 4.2°C. Samples were not received on ice. TI 12/2/14

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H141200034

SAMPLE ID C2	DATE	TIME	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-303-2430	11/20/14	14:23	Soil	A	B		1
3-303-3036	11/20/14	14:22	Soil	A	B		1
3-303-3642	11/20/14	14:21	Soil	A	B		1
3-304-3036	11/20/14	15:17	Soil	A	B		1
3-304-3642	11/20/14	15:16	Soil	A	B		1
3-304-4248	11/20/14	15:15	Soil	A	B		1
3-316-0006	11/20/14	14:08	Soil	A	B		1
3-316-0612	11/20/14	14:07	Soil	A	B		1
3-317-0006	11/20/14	13:52	Soil	A	B		1
3-317-0612	11/20/14	13:51	Soil	A	B		1
3-317-1218	11/20/14	13:50	Soil	A	B		1
3-318-0006	11/20/14	13:33	Soil	A	B		1
3-318-0612	11/20/14	13:32	Soil	A	B		1
3-318-1218	11/20/14	13:31	Soil	A	B		1
3-331-1218	11/20/14	11:30	Soil	A	B		1
3-331-1824	11/20/14	11:29	Soil	A	B		1
3-331-2430	11/20/14	11:28	Soil	A	B		1
3-332-0006	11/20/14	11:57	Soil	A	B		1
3-332-0612	11/20/14	11:56	Soil	A	B		1
3-332-1218	11/20/14	11:55	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature] Date/Time: 1630 12/1/14

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) _____ Date/Time:

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] Date/Time: 12/1/14 16:30

hand 124.0 TB
C2 11.2 OTCR

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120034

SAMPLE ID	DATE	TIME	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
C2							
3-333-0006	11/20/14	12:38	Soil	A	B		1
3-333-0612	11/20/14	12:37	Soil	A	B		1
3-333-1218	11/20/14	12:35	Soil	A	B		1
3-333-1218d	11/20/14	12:36	Soil	A	B		1
3-333w-0006	11/20/14	15:03	Soil	A	B		1
3-333w-0612	11/20/14	15:02	Soil	A	B		1
3-345-1824	11/20/14	11:14	Soil	A	B		1
3-345-2430	11/20/14	11:13	Soil	A	B		1
3-345-3036	11/20/14	11:12	Soil	A	B		1
3-346-1218	11/20/14	10:25	Soil	A	B		1
3-346-1824	11/20/14	10:24	Soil	A	B		1
3-346-2430	11/20/14	10:23	Soil	A	B		1
3-347-0612	11/20/14	10:51	Soil	A	B		1
3-347-1218	11/20/14	10:50	Soil	A	B		1
3-347-1824	11/20/14	10:49	Soil	A	B		1
C1							
3-357-0006	11/20/14	7:52	Soil	A	B		1
3-357-0612	11/20/14	7:51	Soil	A	B		1
3-357-1218	11/20/14	7:50	Soil	A	B		1
3-358-0612	11/20/14	10:11	Soil	A	B		1
3-358-1218	11/20/14	10:10	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1630 12/1/14

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): hand del [signature]
C1: 4.0 C2: 4.2 TR ice

Date/Time: 12/1/14 16:30

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120034

SAMPLE ID C1	DATE	TIME	SAMPLE MEDIA	Analyses A	Analyses B	REMARKS	PRES. USED
3-358-1824	11/20/14	10:09	Soil	A	B		1
3-358n-0006	11/20/14	13:08	Soil	A	B		1
3-358n-0612	11/20/14	13:07	Soil	A	B		1
3-358n-1218	11/20/14	13:06	Soil	A	B		1
3-358w-0006	11/20/14	12:58	Soil	A	B		1
3-358w-0612	11/20/14	12:57	Soil	A	B		1
3-358w-1218	11/20/14	12:56	Soil	A	B		1
3-358w2-0006	11/20/14	14:48	Soil	A	B		1
3-358w2-0612	11/20/14	14:47	Soil	A	B		1
3-358w2-1218	11/20/14	14:46	Soil	A	B		1
3-365-0006	11/20/14	7:32	Soil	A	B		1
3-365-0612	11/20/14	7:31	Soil	A	B		1
3-374-0006	11/20/14	8:17	Soil	A	B		1
3-374-0612	11/20/14	8:16	Soil	A	B		1
3-381-1218	11/20/14	8:40	Soil	A	B		1
3-381-1218d	11/20/14	8:41	Soil	A	B		1
3-381-1824	11/20/14	8:39	Soil	A	B		1
3-381-2430	11/20/14	8:38	Soil	A	B		1
3-381w-0006	11/20/14	9:48	Soil	A	B		1
3-381w-0612	11/20/14	9:47	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1630 12/1/14

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

hand C1=4.0 C2=4.2 ice TB

Date/Time: 12/1/14 16:30

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14120034

SAMPLE ID	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-381w-1218	11/20/14	9:46	Soil	A	B		1
3-384-3036	11/20/14	8:57	Soil	A	B		1
3-384-3642	11/20/14	8:56	Soil	A	B		1
3-384-4248	11/20/14	8:55	Soil	A	B		1
3-390-1824	11/20/14	9:24	Soil	A	B		1
3-390-2430	11/20/14	9:23	Soil	A	B		1
3-390-3036	11/20/14	9:22	Soil	A	B		1
							1
							1
							1
							1
							1
							1
							1
							1
							1
							1
							1
							1
							1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) Erin M Landa	(1)	(2)	(2)
Date/Time: 1630 12/1/14	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	C1=4.0 C2=4.2 TB	hand del 12/1/14 16:30

ANALYTICAL SUMMARY REPORT

December 13, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14120033

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 18 samples for MT DEQ-Federal Superfund on 12/1/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14120033-001	3-124-1824	11/21/14 9:44	12/01/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14120033-002	3-124-2430	11/21/14 9:43	12/01/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14120033-003	3-124-3036	11/21/14 9:42	12/01/14	Soil	Same As Above
H14120033-004	3-266-1218	11/21/14 8:35	12/01/14	Soil	Same As Above
H14120033-005	3-266-1824	11/21/14 8:34	12/01/14	Soil	Same As Above
H14120033-006	3-266-2430	11/21/14 8:33	12/01/14	Soil	Same As Above
H14120033-007	3-267-2430	11/21/14 8:58	12/01/14	Soil	Same As Above
H14120033-008	3-267-3036	11/21/14 8:57	12/01/14	Soil	Same As Above
H14120033-009	3-267-3642	11/21/14 8:56	12/01/14	Soil	Same As Above
H14120033-010	3-287-3642	11/21/14 8:11	12/01/14	Soil	Same As Above
H14120033-011	3-287-4248	11/21/14 8:10	12/01/14	Soil	Same As Above
H14120033-012	3-288-1218	11/21/14 7:50	12/01/14	Soil	Same As Above
H14120033-013	3-288-1218d	11/21/14 7:51	12/01/14	Soil	Same As Above
H14120033-014	3-288-1824	11/21/14 7:49	12/01/14	Soil	Same As Above
H14120033-015	3-288-2430	11/21/14 7:48	12/01/14	Soil	Same As Above
H14120033-016	3-305-0006	11/21/14 7:32	12/01/14	Soil	Same As Above
H14120033-017	3-305-0612	11/21/14 7:31	12/01/14	Soil	Same As Above
H14120033-018	3-305-1218	11/21/14 7:30	12/01/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

ANALYTICAL SUMMARY REPORT

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14120033

Report Date: 12/13/14
Date Received: 12/01/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14120033-001	3-124-1824	0	0	7.1	401	2	407	261	625
H14120033-002	3-124-2430	0	0	7.7	232	5	2230	135	1400
H14120033-003	3-124-3036	0	0	7.5	125	1	875	82	403
H14120033-004	3-266-1218	0	0	7.5	1220	15	8930	735	4310
H14120033-005	3-266-1824	0	0	7.2	2310	23	17900	1370	5560
H14120033-006	3-266-2430	0	0	7.0	48	< 1	285	38	226
H14120033-007	3-267-2430	0	0	6.9	74	2	3960	35	503
H14120033-008	3-267-3036	0	0	7.0	38	3	2100	15	529
H14120033-009	3-267-3642	0	0	7.3	21	2	340	13	513
H14120033-010	3-287-3642	0	0	7.4	56	< 1	330	31	786
H14120033-011	3-287-4248	0	0	7.6	30	2	252	41	451
H14120033-012	3-288-1218	0	0	7.7	299	5	2100	308	1670
H14120033-013	3-288-1218d	0	0	7.8	320	5	1820	252	1580
H14120033-014	3-288-1824	0	0	7.4	116	3	543	101	799
H14120033-015	3-288-2430	0	0	7.3	32	< 1	80	12	162
H14120033-016	3-305-0006	0	0	7.8	403	4	1880	319	1140
H14120033-017	3-305-0612	0	0	8.1	36	< 1	201	26	133
H14120033-018	3-305-1218	0	0	8.0	17	< 1	69	10	65

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/13/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120033

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141212A		
Lab ID: CCV_1_141210_1		Continuing Calibration Verification Standard							12/11/14 08:27	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141210_1		Continuing Calibration Verification Standard							12/11/14 08:27	
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 08:28	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141210_1		Continuing Calibration Verification Standard							12/11/14 08:38	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/10/14 07:24	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/10/14 08:03	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 09:05	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 09:52	
pH, sat. paste		9.98	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 10:13	
pH, sat. paste		10.0	s.u.	0.10	101	99	101			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 10:34	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 09:35	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141211_1		Initial Calibration Verification Standard							12/12/14 08:37	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 07:12	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141210_1		Initial Calibration Verification Standard							12/11/14 07:51	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27329
Lab ID: LCS-27329		Laboratory Control Sample				Run: SOIL PH METER_141212A			12/11/14 08:28	
pH, sat. paste		7.67	s.u.	0.10	103	95	105			
Lab ID: H14120033-010ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/11/14 08:37	
pH, sat. paste		7.45	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/13/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120033

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27329
Lab ID: H14120033-018ADUP		Sample Duplicate				Run: SOIL PH METER_141212A			12/11/14 08:43	
pH, sat. paste		8.03	s.u.	0.10				0.2	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/13/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120033

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141210B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/10/14 08:56	
Arsenic			0.770	mg/L	0.0085	96	90	110			
Cadmium			0.385	mg/L	0.0010	96	90	110			
Copper			0.784	mg/L	0.010	98	90	110			
Lead			0.769	mg/L	0.010	96	90	110			
Zinc			0.788	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/10/14 09:11	
Arsenic			0.00487	mg/L	0.0085		0	0			
Cadmium			0.00217	mg/L	0.0010		0	0			
Copper			0.00449	mg/L	0.010		0	0			
Lead			-0.0112	mg/L	0.010		0	0			
Zinc			0.00231	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/10/14 09:15	
Arsenic			0.987	mg/L	0.0085	99	80	120			
Cadmium			0.917	mg/L	0.0010	92	80	120			
Copper			0.512	mg/L	0.010	102	80	120			
Lead			0.936	mg/L	0.010	94	80	120			
Zinc			0.996	mg/L	0.010	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/13/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120033

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27262
Lab ID:	**MB-27262**	5	Method Blank				Run: ICP2-HE_141210B				12/10/14 10:53
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.8	mg/kg	0.09						
Lab ID:	**LFB-27262**	5	Laboratory Fortified Blank				Run: ICP2-HE_141210B				12/10/14 10:56
Arsenic			46.5	mg/kg	1.0	93	80	120			
Cadmium			22.6	mg/kg	1.0	90	80	120			
Copper			49.8	mg/kg	1.0	99	80	120			
Lead			45.8	mg/kg	1.0	92	80	120			
Zinc			47.4	mg/kg	1.0	93	80	120			
Lab ID:	**LCS-27262**	5	Laboratory Control Sample				Run: ICP2-HE_141210B				12/10/14 11:00
Arsenic			280	mg/kg	1.7	82	72.3	106.4			
Cadmium			114	mg/kg	1.0	83	73	105.1			
Copper			252	mg/kg	1.0	90	77.5	109.6			
Lead			174	mg/kg	3.0	93	75.9	108.6			
Zinc			187	mg/kg	1.0	87	74.2	109.9			
Lab ID:	**H14120033-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141210B				12/10/14 12:32
Arsenic			66.5	mg/kg	1.8	103	75	125			
Cadmium			21.9	mg/kg	1.0	88	75	125			
Copper			121	mg/kg	1.1	104	75	125			
Lead			52.4	mg/kg	3.2	85	75	125			
Zinc			114	mg/kg	1.0	98	75	125			
Lab ID:	**H14120033-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141210B				12/10/14 12:36
Arsenic			62.1	mg/kg	1.8	95	75	125	6.9	20	
Cadmium			21.2	mg/kg	1.0	85	75	125	3.5	20	
Copper			114	mg/kg	1.1	91	75	125	5.4	20	
Lead			54.3	mg/kg	3.2	89	75	125	3.5	20	
Zinc			107	mg/kg	1.0	84	75	125	6.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/13/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14120033

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141211A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/11/14 10:26	
Arsenic			0.0582	mg/L	0.0010	97	90	110			
Cadmium			0.0312	mg/L	0.0010	104	90	110			
Lead			0.0592	mg/L	0.0010	99	90	110			
Method:	**SW6020**									Batch: 27262	
Lab ID:	**MB-27262**	3	Method Blank				Run: ICPMS204-B_141211A			12/11/14 14:31	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			0.3	mg/kg	0.2						
Lab ID:	**LCS-27262**	3	Laboratory Control Sample				Run: ICPMS204-B_141211A			12/11/14 14:36	
Arsenic			314	mg/kg	1.0	92	72.3	106.4			
Cadmium			129	mg/kg	1.0	95	73	105.1			
Lead			188	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-27262**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141211A			12/11/14 14:40	
Arsenic			49.1	mg/kg	1.0	98	80	120			
Cadmium			25.1	mg/kg	1.0	100	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Lab ID:	**H14120033-018AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141211A			12/11/14 17:01	
Arsenic			80.6	mg/kg	1.0	129	75	125			S
Cadmium			28.0	mg/kg	1.0	112	75	125			
Lead			62.8	mg/kg	1.0	107	75	125			
Lab ID:	**H14120033-018AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141211A			12/11/14 17:05	
Arsenic			64.4	mg/kg	1.0	97	75	125	22	20	R
Cadmium			24.2	mg/kg	1.0	96	75	125	15	20	
Lead			55.3	mg/kg	1.0	92	75	125	13	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

R - RPD exceeds advisory limit.

S - Spike recovery outside of advisory limits.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14120033

Login completed by: Tracy L. Lorash

Date Received: 12/1/2014

Reviewed by: BL2000\rwilliams

Received by: AHN

Reviewed Date: 12/4/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	4.8°C No Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H1412 0033

SAMPLE ID	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-124-1824	11/21/14	9:44	Soil	A	B		1
3-124-2430	11/21/14	9:43	Soil	A	B		1
3-124-3036	11/21/14	9:42	Soil	A	B		1
3-266-1218	11/21/14	8:35	Soil	A	B		1
3-266-1824	11/21/14	8:34	Soil	A	B		1
3-266-2430	11/21/14	8:33	Soil	A	B		1
3-267-2430	11/21/14	8:58	Soil	A	B		1
3-267-3036	11/21/14	8:57	Soil	A	B		1
3-267-3642	11/21/14	8:56	Soil	A	B		1
3-287-3642	11/21/14	8:11	Soil	A	B		1
3-287-4248	11/21/14	8:10	Soil	A	B		1
3-288-1218	11/21/14	7:50	Soil	A	B		1
3-288-1218d	11/21/14	7:51	Soil	A	B		1
3-288-1824	11/21/14	7:49	Soil	A	B		1
3-288-2430	11/21/14	7:48	Soil	A	B		1
3-305-0006	11/21/14	7:32	Soil	A	B		1
3-305-0612	11/21/14	7:31	Soil	A	B		1
3-305-1218	11/21/14	7:30	Soil	A	B		1
							1
							1
							1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) _____ Date/Time:

Received By (sign): (1) _____ Date/Time:

Relinquished By (sign): (2) [signature] Date/Time: 1630 12/1/14

Received By (sign): (2) _____ Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 48 TB OTC

Date/Time: 12/1/14 16:30

COC112114KM pg 1.xls

ANALYTICAL SUMMARY REPORT

December 05, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110380

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 55 samples for MT DEQ-Federal Superfund on 11/20/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110380-001	3-179-3036	11/17/14 10:12	11/20/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14110380-002	3-179-3642	11/17/14 10:11	11/20/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14110380-003	3-179-4248	11/17/14 10:10	11/20/14	Soil	Same As Above
H14110380-004	3-180-1218	11/17/14 10:35	11/20/14	Soil	Same As Above
H14110380-005	3-180-1824	11/17/14 10:34	11/20/14	Soil	Same As Above
H14110380-006	3-180-2430	11/17/14 10:33	11/20/14	Soil	Same As Above
H14110380-007	3-181-3036	11/17/14 10:57	11/20/14	Soil	Same As Above
H14110380-008	3-181-3642	11/17/14 10:56	11/20/14	Soil	Same As Above
H14110380-009	3-181-4248	11/17/14 10:55	11/20/14	Soil	Same As Above
H14110380-010	3-194-3036	11/17/14 9:57	11/20/14	Soil	Same As Above
H14110380-011	3-194-3642	11/17/14 9:56	11/20/14	Soil	Same As Above
H14110380-012	3-194-4248	11/17/14 9:55	11/20/14	Soil	Same As Above
H14110380-013	3-195-4248	11/17/14 11:45	11/20/14	Soil	Same As Above
H14110380-014	3-195-4854	11/17/14 11:55	11/20/14	Soil	Same As Above
H14110380-015	3-195-5460	11/17/14 11:56	11/20/14	Soil	Same As Above
H14110380-016	3-196-4248	11/17/14 11:20	11/20/14	Soil	Same As Above
H14110380-017	3-196-4854	11/17/14 11:31	11/20/14	Soil	Same As Above
H14110380-018	3-196-5460	11/17/14 11:30	11/20/14	Soil	Same As Above
H14110380-019	3-215-3642	11/17/14 9:26	11/20/14	Soil	Same As Above
H14110380-020	3-215-4248	11/17/14 9:25	11/20/14	Soil	Same As Above
H14110380-021	3-216-1218	11/17/14 12:14	11/20/14	Soil	Same As Above
H14110380-022	3-216-1824	11/17/14 12:14	11/20/14	Soil	Same As Above
H14110380-023	3-216-2430	11/17/14 12:12	11/20/14	Soil	Same As Above
H14110380-024	3-238-1824	11/17/14 12:49	11/20/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110380-025	3-238-2430	11/17/14 12:48	11/20/14	Soil	Same As Above
H14110380-026	3-238-3036	11/17/14 12:47	11/20/14	Soil	Same As Above
H14110380-027	3-239-1218	11/17/14 12:30	11/20/14	Soil	Same As Above
H14110380-028	3-239-1824	11/17/14 12:29	11/20/14	Soil	Same As Above
H14110380-029	3-239-2430	11/17/14 12:28	11/20/14	Soil	Same As Above
H14110380-030	3-279-3642	11/17/14 14:21	11/20/14	Soil	Same As Above
H14110380-031	3-279-4248	11/17/14 14:20	11/20/14	Soil	Same As Above
H14110380-032	3-280-0612	11/17/14 13:27	11/20/14	Soil	Same As Above
H14110380-033	3-280-1218	11/17/14 13:26	11/20/14	Soil	Same As Above
H14110380-034	3-280-1824	11/17/14 13:25	11/20/14	Soil	Same As Above
H14110380-035	3-281-0612	11/17/14 15:02	11/20/14	Soil	Same As Above
H14110380-036	3-281-1218	11/17/14 15:00	11/20/14	Soil	Same As Above
H14110380-037	3-281-1218d	11/17/14 15:01	11/20/14	Soil	Same As Above
H14110380-038	3-281n-0006	11/17/14 16:29	11/20/14	Soil	Same As Above
H14110380-039	3-281n-0612	11/17/14 16:27	11/20/14	Soil	Same As Above
H14110380-040	3-282-3036	11/17/14 15:17	11/20/14	Soil	Same As Above
H14110380-041	3-282-3642	11/17/14 15:16	11/20/14	Soil	Same As Above
H14110380-042	3-282-4248	11/17/14 15:15	11/20/14	Soil	Same As Above
H14110380-043	3-282n-0006	11/17/14 16:17	11/20/14	Soil	Same As Above
H14110380-044	3-282n-0612	11/17/14 16:16	11/20/14	Soil	Same As Above
H14110380-045	3-282n-1218	11/17/14 16:15	11/20/14	Soil	Same As Above
H14110380-046	3-283-3036	11/17/14 15:47	11/20/14	Soil	Same As Above
H14110380-047	3-283-3642	11/17/14 15:46	11/20/14	Soil	Same As Above
H14110380-048	3-283-4248	11/17/14 15:45	11/20/14	Soil	Same As Above
H14110380-049	3-296-4248	11/17/14 13:55	11/20/14	Soil	Same As Above
H14110380-050	3-296-4854	11/17/14 14:10	11/20/14	Soil	Same As Above
H14110380-051	3-296-5460	11/17/14 13:57	11/20/14	Soil	Same As Above
H14110380-052	3-297-1218	11/17/14 13:35	11/20/14	Soil	Same As Above
H14110380-053	3-297-1824	11/17/14 13:34	11/20/14	Soil	Same As Above
H14110380-054	3-297-2430	11/17/14 13:33	11/20/14	Soil	Same As Above
H14110380-055	3-281-1824	11/17/14 14:59	11/20/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

ANALYTICAL SUMMARY REPORT

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110380

Report Date: 12/05/14
Date Received: 11/20/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110380-001	3-179-3036	0	0	7.0	1100	9	5440	572	3400
H14110380-002	3-179-3642	0	0	7.0	1260	12	6780	601	4160
H14110380-003	3-179-4248	0	0	7.4	817	12	4710	571	5160
H14110380-004	3-180-1218	0	0	6.2	253	5	9680	671	2590
H14110380-005	3-180-1824	0	0	7.5	17	12	1670	39	2830
H14110380-006	3-180-2430	0	0	7.4	9	< 1	52	14	107
H14110380-007	3-181-3036	0	0	7.4	301	4	1760	309	1500
H14110380-008	3-181-3642	0	0	7.7	433	4	1630	297	1200
H14110380-009	3-181-4248	0	0	7.6	355	3	1120	257	1150
H14110380-010	3-194-3036	0	0	7.3	11	< 1	4090	13	214
H14110380-011	3-194-3642	0	0	7.2	7	9	4310	10	430
H14110380-012	3-194-4248	0	0	7.1	41	6	3890	23	681
H14110380-013	3-195-4248	0	0	6.5	760	7	3420	439	3030
H14110380-014	3-195-4854	0	0	6.6	961	9	4910	499	3970
H14110380-015	3-195-5460	0	0	6.4	571	16	4600	320	3150
H14110380-016	3-196-4248	0	0	4.6	17	2	2710	19	462
H14110380-017	3-196-4854	0	0	4.9	19	1	1580	17	261
H14110380-018	3-196-5460	0	0	6.5	14	< 1	512	13	128
H14110380-019	3-215-3642	0	0	7.1	14	2	2060	16	329
H14110380-020	3-215-4248	0	0	6.9	19	2	3240	14	561
H14110380-021	3-216-1218	0	0	6.0	15	14	27300	14	4480
H14110380-022	3-216-1824	0	0	7.2	10	16	8980	11	3600
H14110380-023	3-216-2430	0	0	5.9	5	< 1	505	10	747
H14110380-024	3-238-1824	0	0	7.6	7	9	354	7	2090
H14110380-025	3-238-2430	0	0	7.1	8	4	41	8	1210
H14110380-026	3-238-3036	0	0	7.0	8	1	386	8	249
H14110380-027	3-239-1218	0	0	7.5	19	14	5250	17	3660
H14110380-028	3-239-1824	0	0	7.2	34	2	259	30	891
H14110380-029	3-239-2430	0	0	7.0	5	< 1	56	12	298
H14110380-030	3-279-3642	0	0	6.8	5	4	1110	11	545
H14110380-031	3-279-4248	0	0	7.3	5	1	73	13	929
H14110380-032	3-280-0612	0	0	6.6	543	< 1	2370	465	530
H14110380-033	3-280-1218	0	0	6.8	17	< 1	518	10	93
H14110380-034	3-280-1824	0	0	6.9	6	< 1	1070	9	128
H14110380-035	3-281-0612	0	0	6.3	143	9	16200	217	2230
H14110380-036	3-281-1218	0	0	7.3	8	7	1310	9	2660
H14110380-037	3-281-1218d	0	0	7.7	8	3	345	10	708
H14110380-038	3-281n-0006	0	0	7.6	42	< 1	179	19	259
H14110380-039	3-281n-0612	0	0	7.6	63	< 1	270	25	237
H14110380-040	3-282-3036	0	0	6.7	783	4	5700	388	1980

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110380

Report Date: 12/05/14
Date Received: 11/20/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110380-041	3-282-3642	0	0	6.8	825	8	9500	415	3630
H14110380-042	3-282-4248	0	0	7.0	1170	19	17900	678	7750
H14110380-043	3-282n-0006	0	0	7.4	127	4	1450	155	848
H14110380-044	3-282n-0612	0	0	7.5	29	< 1	124	21	136
H14110380-045	3-282n-1218	0	0	7.5	21	< 1	42	13	86
H14110380-046	3-283-3036	0	0	6.9	10	6	2350	12	1450
H14110380-047	3-283-3642	0	0	7.0	8	2	2260	11	828
H14110380-048	3-283-4248	0	0	7.4	73	1	1650	12	618
H14110380-049	3-296-4248	0	0	5.9	14	8	4980	15	961
H14110380-050	3-296-4854	0	0	5.3	18	< 1	69	6	434
H14110380-051	3-296-5460	0	0	5.0	63	2	901	26	357
H14110380-052	3-297-1218	0	0	7.1	1060	2	6140	786	744
H14110380-053	3-297-1824	0	0	7.3	21	< 1	467	9	60
H14110380-054	3-297-2430	0	0	7.4	6	< 1	391	5	71
H14110380-055	3-281-1824	0	0	7.0	5	2	1150	7	355

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110380

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141204A		
Lab ID: CCV_1_141203_1		Continuing Calibration Verification Standard							12/04/14 09:43	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141203_1		Continuing Calibration Verification Standard							12/04/14 09:45	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141203_1		Initial Calibration Verification Standard							12/04/14 09:46	
pH, sat. paste		10.0	s.u.	0.10	101	99	101			
Lab ID: CCV_3_141203_1		Continuing Calibration Verification Standard							12/04/14 10:01	
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141203_1		Continuing Calibration Verification Standard							12/04/14 10:27	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141203_1		Continuing Calibration Verification Standard							12/04/14 10:28	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141203_1		Initial Calibration Verification Standard							12/04/14 10:29	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141203_1		Continuing Calibration Verification Standard							12/04/14 10:47	
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141203_1		Continuing Calibration Verification Standard							12/04/14 11:12	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141203_1		Continuing Calibration Verification Standard							12/04/14 11:13	
pH, sat. paste		4.02	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141203_1		Initial Calibration Verification Standard							12/04/14 11:14	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141203_1		Continuing Calibration Verification Standard							12/04/14 11:29	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141203_1		Initial Calibration Verification Standard							12/04/14 08:18	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141203_1		Initial Calibration Verification Standard							12/04/14 08:57	
pH, sat. paste		10.0	s.u.	0.10	101	99	101			
Method: ASAM10-3.2										Batch: 27218
Lab ID: LCS-27218		Laboratory Control Sample				Run: SOIL PH METER_141204A			12/04/14 09:47	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H14110380-010ADUP		Sample Duplicate				Run: SOIL PH METER_141204A			12/04/14 10:00	
pH, sat. paste		7.31	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110380

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27218
Lab ID: H14110380-020ADUP		Sample Duplicate				Run: SOIL PH METER_141204A				12/04/14 10:16
pH, sat. paste		6.92	s.u.	0.10				0.6	30	
Method: ASAM10-3.2										Batch: 27219
Lab ID: LCS-27219		Laboratory Control Sample				Run: SOIL PH METER_141204A				12/04/14 10:30
pH, sat. paste		7.61	s.u.	0.10	102	95	105			
Lab ID: H14110380-030ADUP		Sample Duplicate				Run: SOIL PH METER_141204A				12/04/14 10:46
pH, sat. paste		6.82	s.u.	0.10				0.3	30	
Lab ID: H14110380-040ADUP		Sample Duplicate				Run: SOIL PH METER_141204A				12/04/14 11:01
pH, sat. paste		6.72	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27220
Lab ID: LCS-27220		Laboratory Control Sample				Run: SOIL PH METER_141204A				12/04/14 11:15
pH, sat. paste		7.67	s.u.	0.10	103	95	105			
Lab ID: H14110380-050ADUP		Sample Duplicate				Run: SOIL PH METER_141204A				12/04/14 11:27
pH, sat. paste		5.29	s.u.	0.10				0.2	30	
Lab ID: H14110380-055ADUP		Sample Duplicate				Run: SOIL PH METER_141204A				12/04/14 11:35
pH, sat. paste		6.96	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110380

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141204A		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							12/04/14 10:07	
Arsenic			0.0594	mg/L	0.0010	99	90	110			
Cadmium			0.0311	mg/L	0.0010	104	90	110			
Copper			0.0610	mg/L	0.0010	102	90	110			
Lead			0.0589	mg/L	0.0010	98	90	110			
Zinc			0.0619	mg/L	0.0010	103	90	110			
Method:	**SW6020**										Batch: 27216
Lab ID:	**MB-27216**	5	Method Blank				Run: ICPMS204-B_141204A			12/04/14 17:20	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			5	mg/kg	4						
Lab ID:	**LCS-27216**	5	Laboratory Control Sample				Run: ICPMS204-B_141204A			12/04/14 17:24	
Arsenic			298	mg/kg	1.0	87	72.3	106.4			
Cadmium			120	mg/kg	1.0	88	73	105.1			
Copper			275	mg/kg	1.0	98	77.5	109.6			
Lead			184	mg/kg	1.0	99	75.9	108.6			
Zinc			211	mg/kg	3.5	97	74.2	109.9			
Lab ID:	**LFB-27216**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141204A			12/04/14 17:28	
Arsenic			47.6	mg/kg	1.0	95	80	120			
Cadmium			24.2	mg/kg	1.0	97	80	120			
Copper			50.5	mg/kg	1.0	101	80	120			
Lead			46.4	mg/kg	1.0	93	80	120			
Zinc			53.4	mg/kg	3.5	96	80	120			
Lab ID:	**H14110380-019APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141204A			12/04/14 19:27	
Arsenic			2510	mg/kg	1.0	99	75	125			
Cadmium			1170	mg/kg	1.0	93	75	125			
Copper			4280	mg/kg	1.0	88	75	125			
Lead			2360	mg/kg	1.0	93	75	125			
Zinc			2760	mg/kg	3.5	96	75	125			
Lab ID:	**H14110380-019AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141204A			12/04/14 19:31	
Arsenic			61.4	mg/kg	1.0	97	75	125			
Cadmium			24.6	mg/kg	1.0	94	75	125			
Copper			2120	mg/kg	1.0		75	125			A
Lead			60.8	mg/kg	1.0	92	75	125			
Zinc			378	mg/kg	3.4		75	125			A
Lab ID:	**H14110380-019AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141204A			12/04/14 19:36	
Arsenic			59.4	mg/kg	1.0	92	75	125	3.3	20	
Cadmium			24.0	mg/kg	1.0	91	75	125	2.5	20	
Copper			2030	mg/kg	1.0		75	125	4.3	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110380

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27216
Lab ID:	**H14110380-019AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141204A			12/04/14 19:36	
Lead			59.7	mg/kg	1.0	89	75	125	1.8	20	
Zinc			356	mg/kg	3.5		75	125	6.1	20	A
Method:	**SW6020**										Batch: 27227
Lab ID:	**MB-27227**	5	Method Blank				Run: ICPMS204-B_141204A			12/04/14 19:53	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			2	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			4	mg/kg	4						
Lab ID:	**LCS-27227**	5	Laboratory Control Sample				Run: ICPMS204-B_141204A			12/04/14 19:58	
Arsenic			291	mg/kg	1.0	85	72.3	106.4			
Cadmium			117	mg/kg	1.0	85	73	105.1			
Copper			265	mg/kg	1.0	94	77.5	109.6			
Lead			176	mg/kg	1.0	94	75.9	108.6			
Zinc			202	mg/kg	3.4	93	74.2	109.9			
Lab ID:	**LFB-27227**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141204A			12/04/14 20:02	
Arsenic			47.1	mg/kg	1.0	94	80	120			
Cadmium			24.2	mg/kg	1.0	97	80	120			
Copper			49.7	mg/kg	1.0	95	80	120			
Lead			46.2	mg/kg	1.0	92	80	120			
Zinc			53.0	mg/kg	3.5	98	80	120			
Lab ID:	**H14110380-039APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141204A			12/04/14 22:20	
Arsenic			2590	mg/kg	1.0	98	75	125			
Cadmium			1130	mg/kg	1.0	88	75	125			
Copper			2760	mg/kg	1.0	97	75	125			
Lead			2300	mg/kg	1.0	88	75	125			
Zinc			2680	mg/kg	3.6	95	75	125			
Lab ID:	**H14110380-039AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141204A			12/04/14 22:24	
Arsenic			110	mg/kg	1.0	97	75	125			
Cadmium			22.6	mg/kg	1.0	90	75	125			
Copper			328	mg/kg	1.0		75	125			A
Lead			70.8	mg/kg	1.0	94	75	125			
Zinc			276	mg/kg	3.4		75	125			A
Lab ID:	**H14110380-039AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141204A			12/04/14 22:28	
Arsenic			111	mg/kg	1.0	90	75	125	0.7	20	
Cadmium			24.7	mg/kg	1.0	90	75	125	8.5	20	
Copper			323	mg/kg	1.0		75	125	1.7	20	A
Lead			73.3	mg/kg	1.0	90	75	125	3.5	20	
Zinc			274	mg/kg	3.7		75	125	0.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110380

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 27228	
Lab ID:	**MB-27228**	5	Method Blank				Run: ICPMS204-B_141204A			12/04/14 22:33	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Zinc			5	mg/kg	4						
Lab ID:	**LCS-27228**	5	Laboratory Control Sample				Run: ICPMS204-B_141204A			12/04/14 22:37	
Arsenic			297	mg/kg	1.0	87	72.3	106.4			
Cadmium			120	mg/kg	1.0	88	73	105.1			
Copper			275	mg/kg	1.0	98	77.5	109.6			
Lead			182	mg/kg	1.0	97	75.9	108.6			
Zinc			210	mg/kg	3.6	96	74.2	109.9			
Lab ID:	**LFB-27228**	5	Laboratory Fortified Blank				Run: ICPMS204-B_141204A			12/04/14 22:41	
Arsenic			47.1	mg/kg	1.0	94	80	120			
Cadmium			23.9	mg/kg	1.0	96	80	120			
Copper			50.0	mg/kg	1.0	100	80	120			
Lead			46.2	mg/kg	1.0	92	80	120			
Zinc			53.5	mg/kg	3.5	98	80	120			
Lab ID:	**H14110380-055APDS**	5	Post Digestion/Distillation Spike				Run: ICPMS204-B_141204A			12/05/14 00:28	
Arsenic			2510	mg/kg	1.0	102	75	125			
Cadmium			1120	mg/kg	1.0	92	75	125			
Copper			3500	mg/kg	1.0	96	75	125			
Lead			2270	mg/kg	1.0	92	75	125			
Zinc			2780	mg/kg	3.4	99	75	125			
Lab ID:	**H14110380-055AMS**	5	Sample Matrix Spike				Run: ICPMS204-B_141204A			12/05/14 00:32	
Arsenic			49.4	mg/kg	1.0	95	75	125			
Cadmium			24.0	mg/kg	1.0	93	75	125			
Copper			1130	mg/kg	1.0		75	125			A
Lead			49.9	mg/kg	1.0	92	75	125			
Zinc			387	mg/kg	3.3		75	125			A
Lab ID:	**H14110380-055AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141204A			12/05/14 00:36	
Arsenic			55.6	mg/kg	1.0	93	75	125	12	20	
Cadmium			27.3	mg/kg	1.0	92	75	125	13	20	
Copper			1070	mg/kg	1.0		75	125	5.8	20	A
Lead			55.7	mg/kg	1.0	90	75	125	11	20	
Zinc			375	mg/kg	3.8		75	125	3.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14110380

Login completed by: Tracy L. Lorash
Date Received: 11/20/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 11/24/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

No collection date on page 2 of the COC. Logged in with date from sample bags.
Collection time on COC for 3-216-1218 is 1214 - sample bag has 1215. Logged in with time from COC.
Collection time on COC for 3-216-2430 is 1212 - sample bag has 1213. Logged in with time from COC.
Collection time on COC for 3-296-5460 is 1357 - sample bag has 1409. Logged in with time from COC.
Cooler 1 was received at 2.1°C, Cooler 2 at 1.9°C. Samples were not received on wet ice. TI 11/21/14

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:
111714-2
Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: M. Peters H14110380

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-216-1218	1214		Soil	A	B		1
3-216-1824	1214		Soil	A	B		1
3-216-2430	1212		Soil	A	B		1
3-238-1824	1249		Soil	A	B		1
3-238-2430	1248		Soil	A	B		1
3-238-3036	1247		Soil	A	B		1
3-239-1218	1230		Soil	A	B		1
3-239-1824	1229		Soil	A	B		1
3-239-2430	1228		Soil	A	B		1
3-279-3642	1421		Soil	A	B		1
3-279-4248	1420		Soil	A	B		1
3-280-0612	1327		Soil	A	B		1
3-280-1218	1326		Soil	A	B		1
3-280-1824	1325		Soil	A	B		1
3-281-0612	1502		Soil	A	B		1
3-281-1218	1500		Soil	A	B		1
3-281-1218d	1501		Soil	A	B		1
3-281n-0006	1629		Soil	A	B		1
3-281n-0612	1627		Soil	A	B		1
3-282-3036	1517		Soil	A	B		1

C1

C2

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 11/20/14 1617	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1=2.1 C2=1.9	11/20/14 16:17

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:
111714-1
Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: M. Peters H14110380

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-179-3036	1012	11/17/14	Soil	A	B		1
3-179-3642	1011	11/17/14	Soil	A	B		1
3-179-4248	1010	11/17/14	Soil	A	B		1
3-180-1218	1035	11/17/14	Soil	A	B		1
3-180-1824	1034	11/17/14	Soil	A	B		1
3-180-2430	1033	11/17/14	Soil	A	B		1
3-181-3036	1057	11/17/14	Soil	A	B		1
3-181-3642	1056	11/17/14	Soil	A	B		1
3-181-4248	1055	11/17/14	Soil	A	B		1
3-194-3036	957	11/17/14	Soil	A	B		1
3-194-3642	956	11/17/14	Soil	A	B		1
3-194-4248	955	11/17/14	Soil	A	B		1
3-195-4248	1145	11/17/14	Soil	A	B		1
3-195-4854	1155	11/17/14	Soil	A	B		1
3-195-5460	1156	11/17/14	Soil	A	B		1
3-196-4248	1120	11/17/14	Soil	A	B		1
3-196-4854	1131	11/17/14	Soil	A	B		1
3-196-5460	1130	11/17/14	Soil	A	B		1
3-215-3642	926	11/17/14	Soil	A	B		1
3-215-4248	925	11/17/14	Soil	A	B		1

C1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 11/20/14 1617	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] C1=2.1 C2=1.9 DTB Ice	11/20/14 16:17

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:
111714-3
Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: M. Peters H14110380

SAMPLE ID C2	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-282-3642	1516	11/17/14	Soil	A	B		1
3-282-4248	1515	11/17/14	Soil	A	B		1
3-282n-0006	1617	11/17/14	Soil	A	B		1
3-282n-0612	1616	11/17/14	Soil	A	B		1
3-282n-1218	1615	11/17/14	Soil	A	B		1
3-283-3036	1547	11/17/14	Soil	A	B		1
3-283-3642	1546	11/17/14	Soil	A	B		1
3-283-4248	1545	11/17/14	Soil	A	B		1
3-296-4248	1355	11/17/14	Soil	A	B		1
3-296-4854	1410	11/17/14	Soil	A	B		1
3-296-5460	1357	11/17/14	Soil	A	B		1
3-297-1218	1335	11/17/14	Soil	A	B		1
3-297-1824	1334	11/17/14	Soil	A	B		1
3-297-2430	1333	11/17/14	Soil	A	B		1
3-281-1824	1459	11/17/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 11/20/14 1617

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:
Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]
C1=R.1
C2=1.4 } to ice
Date/Time: 11/20/14 16:17

ANALYTICAL SUMMARY REPORT

December 05, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110379

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 29 samples for MT DEQ-Federal Superfund on 11/20/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110379-001	3-264-3036	11/18/14 10:02	11/20/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14110379-002	3-264-3642	11/18/14 10:01	11/20/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14110379-003	3-264-4248	11/18/14 10:00	11/20/14	Soil	Same As Above
H14110379-004	3-283n-0612	11/18/14 11:26	11/20/14	Soil	Same As Above
H14110379-005	3-283n-1218	11/18/14 11:25	11/20/14	Soil	Same As Above
H14110379-006	3-283n-1824	11/18/14 11:24	11/20/14	Soil	Same As Above
H14110379-007	3-284-2430	11/18/14 9:23	11/20/14	Soil	Same As Above
H14110379-008	3-284-3036	11/18/14 9:22	11/20/14	Soil	Same As Above
H14110379-009	3-284-3642	11/18/14 9:21	11/20/14	Soil	Same As Above
H14110379-010	3-285-2430	11/18/14 10:18	11/20/14	Soil	Same As Above
H14110379-011	3-285-3036	11/18/14 10:17	11/20/14	Soil	Same As Above
H14110379-012	3-285-3642	11/18/14 10:16	11/20/14	Soil	Same As Above
H14110379-013	3-296n-0006	11/18/14 7:52	11/20/14	Soil	Same As Above
H14110379-014	3-296n-0612	11/18/14 7:51	11/20/14	Soil	Same As Above
H14110379-015	3-297n-0006	11/18/14 7:33	11/20/14	Soil	Same As Above
H14110379-016	3-297n-0612	11/18/14 7:32	11/20/14	Soil	Same As Above
H14110379-017	3-300-1824	11/18/14 9:04	11/20/14	Soil	Same As Above
H14110379-018	3-300-2430	11/18/14 9:03	11/20/14	Soil	Same As Above
H14110379-019	3-300-3036	11/18/14 9:02	11/20/14	Soil	Same As Above
H14110379-020	3-300-3642	11/18/14 9:01	11/20/14	Soil	Same As Above
H14110379-021	3-302-1824	11/18/14 10:54	11/20/14	Soil	Same As Above
H14110379-022	3-302-2430	11/18/14 10:53	11/20/14	Soil	Same As Above
H14110379-023	3-302-3036	11/18/14 10:52	11/20/14	Soil	Same As Above
H14110379-024	3-315-2430	11/18/14 8:23	11/20/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110379-025	3-315-3036	11/18/14 8:22	11/20/14	Soil	Same As Above
H14110379-026	3-315-3642	11/18/14 8:21	11/20/14	Soil	Same As Above
H14110379-027	3-315e-1824	11/18/14 11:49	11/20/14	Soil	Same As Above
H14110379-028	3-315e-2430	11/18/14 11:48	11/20/14	Soil	
H14110379-029	3-315e-3036	11/18/14 11:47	11/20/14	Soil	

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110379

Report Date: 12/05/14
Date Received: 11/20/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110379-001	3-264-3036	0	0	6.8	11	< 1	59	14	508
H14110379-002	3-264-3642	0	0	6.9	5	< 1	34	11	819
H14110379-003	3-264-4248	0	0	6.9	8	9	128	9	1660
H14110379-004	3-283n-0612	0	0	7.4	719	7	4520	560	2380
H14110379-005	3-283n-1218	0	0	7.5	21	1	116	19	378
H14110379-006	3-283n-1824	0	0	7.6	14	< 1	74	16	127
H14110379-007	3-284-2430	0	0	7.1	19	28	10100	25	5670
H14110379-008	3-284-3036	0	0	6.9	6	< 1	45	13	161
H14110379-009	3-284-3642	0	0	7.0	7	< 1	21	8	48
H14110379-010	3-285-2430	0	0	7.2	36	3	215	51	2170
H14110379-011	3-285-3036	0	0	6.9	16	4	118	12	1870
H14110379-012	3-285-3642	0	0	6.8	22	3	56	14	1290
H14110379-013	3-296n-0006	0	0	7.5	52	1	131	32	272
H14110379-014	3-296n-0612	0	0	7.6	39	< 1	58	14	156
H14110379-015	3-297n-0006	0	0	7.6	173	4	1480	145	944
H14110379-016	3-297n-0612	0	0	7.6	41	< 1	132	30	142
H14110379-017	3-300-1824	0	0	6.6	6	2	45	16	1970
H14110379-018	3-300-2430	0	0	6.8	3	7	100	11	792
H14110379-019	3-300-3036	0	0	6.8	5	4	368	16	630
H14110379-020	3-300-3642	0	0	7.2	5	2	100	23	1590
H14110379-021	3-302-1824	0	0	6.3	127	9	620	78	2370
H14110379-022	3-302-2430	0	0	5.7	17	2	59	15	1150
H14110379-023	3-302-3036	0	0	6.5	9	2	52	15	551
H14110379-024	3-315-2430	0	0	6.9	1350	10	9180	2000	3110
H14110379-025	3-315-3036	0	0	7.2	11	< 1	58	22	109
H14110379-026	3-315-3642	0	0	7.6	7	< 1	54	17	80
H14110379-027	3-315e-1824	0	0	7.4	674	21	15200	412	3800

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110379

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141203B		
Lab ID: CCV_1_141202_1		Continuing Calibration Verification Standard							12/03/14 08:12	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141202_1		Continuing Calibration Verification Standard							12/03/14 08:13	
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141202_1		Initial Calibration Verification Standard							12/03/14 08:14	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141202_1		Continuing Calibration Verification Standard							12/03/14 08:31	
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141202_1		Continuing Calibration Verification Standard							12/03/14 08:55	
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141202_1		Initial Calibration Verification Standard							12/03/14 10:02	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141202_1		Initial Calibration Verification Standard							12/03/14 07:33	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27217
Lab ID: LCS-27217		Laboratory Control Sample				Run: SOIL PH METER_141203B			12/03/14 08:15	
pH, sat. paste		7.68	s.u.	0.10	103	95	105			
Lab ID: H14110379-010ADUP		Sample Duplicate				Run: SOIL PH METER_141203B			12/03/14 08:30	
pH, sat. paste		7.20	s.u.	0.10				0.0	30	
Lab ID: H14110379-020ADUP		Sample Duplicate				Run: SOIL PH METER_141203B			12/03/14 08:54	
pH, sat. paste		7.26	s.u.	0.10				0.3	30	
Lab ID: H14110379-027ADUP		Sample Duplicate				Run: SOIL PH METER_141203B			12/03/14 09:08	
pH, sat. paste		7.47	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141203A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/03/14 08:36	
Arsenic			0.800	mg/L	0.0085	100	90	110			
Cadmium			0.394	mg/L	0.0010	98	90	110			
Copper			0.811	mg/L	0.010	101	90	110			
Lead			0.793	mg/L	0.010	99	90	110			
Zinc			0.806	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/03/14 08:51	
Arsenic			-0.00718	mg/L	0.0085		0	0			
Cadmium			0.00253	mg/L	0.0010		0	0			
Copper			0.00296	mg/L	0.010		0	0			
Lead			-0.0279	mg/L	0.010		0	0			
Zinc			0.00281	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/03/14 08:55	
Arsenic			0.964	mg/L	0.0085	96	80	120			
Cadmium			0.888	mg/L	0.0010	89	80	120			
Copper			0.519	mg/L	0.010	104	80	120			
Lead			0.883	mg/L	0.010	88	80	120			
Zinc			0.979	mg/L	0.010	98	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27212
Lab ID:	**MB-27212**	5	Method Blank				Run: ICP2-HE_141203A			12/03/14 17:19	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27212**	5	Laboratory Fortified Blank				Run: ICP2-HE_141203A			12/03/14 17:23	
Arsenic			48.3	mg/kg	1.0	97	80	120			
Cadmium			23.6	mg/kg	1.0	94	80	120			
Copper			49.5	mg/kg	1.0	99	80	120			
Lead			48.1	mg/kg	1.0	96	80	120			
Zinc			48.5	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27212**	5	Laboratory Control Sample				Run: ICP2-HE_141203A			12/03/14 17:26	
Arsenic			306	mg/kg	1.9	89	72.3	106.4			
Cadmium			124	mg/kg	1.0	91	73	105.1			
Copper			257	mg/kg	1.1	92	77.5	109.6			
Lead			191	mg/kg	3.3	102	75.9	108.6			
Zinc			201	mg/kg	1.0	94	74.2	109.9			
Lab ID:	**H14110379-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141203A			12/03/14 18:55	
Arsenic			235	mg/kg	1.9	90	75	125			
Cadmium			119	mg/kg	1.0	87	75	125			
Copper			337	mg/kg	1.1	92	75	125			
Lead			246	mg/kg	3.3	89	75	125			
Zinc			1030	mg/kg	1.0	93	75	125			
Lab ID:	**H14110379-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141203A			12/03/14 18:58	
Arsenic			50.5	mg/kg	1.8	94	75	125			
Cadmium			29.2	mg/kg	1.0	91	75	125			
Copper			146	mg/kg	1.1	94	75	125			
Lead			59.7	mg/kg	3.2	84	75	125			
Zinc			832	mg/kg	1.0		75	125			A
Lab ID:	**H14110379-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141203A			12/03/14 19:02	
Arsenic			49.4	mg/kg	1.8	91	75	125	2.2	20	
Cadmium			29.6	mg/kg	1.0	93	75	125	1.3	20	
Copper			153	mg/kg	1.1	107	75	125	4.2	20	
Lead			63.8	mg/kg	3.2	92	75	125	6.7	20	
Zinc			835	mg/kg	1.0		75	125	0.3	20	A
Method:	**SW6010B**										Batch: 27213
Lab ID:	**MB-27213**	5	Method Blank				Run: ICP2-HE_141203A			12/03/14 13:53	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27213
Lab ID:	**MB-27213**	5	Method Blank				Run: ICP2-HE_141203A			12/03/14 13:53	
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27213**	5	Laboratory Fortified Blank				Run: ICP2-HE_141203A			12/03/14 13:57	
Arsenic			46.6	mg/kg	1.0	93	80	120			
Cadmium			23.0	mg/kg	1.0	92	80	120			
Copper			49.2	mg/kg	1.0	98	80	120			
Lead			47.3	mg/kg	1.0	95	80	120			
Zinc			47.7	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27213**	5	Laboratory Control Sample				Run: ICP2-HE_141203A			12/03/14 14:00	
Arsenic			284	mg/kg	1.8	84	72.3	106.4			
Cadmium			120	mg/kg	1.0	88	73	105.1			
Copper			261	mg/kg	1.1	94	77.5	109.6			
Lead			176	mg/kg	3.2	95	75.9	108.6			
Zinc			194	mg/kg	1.0	92	74.2	109.9			
Lab ID:	**H14110217-027APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141203A			12/03/14 14:15	
Arsenic			291	mg/kg	1.9	87	75	125			
Cadmium			113	mg/kg	1.0	85	75	125			
Copper			631	mg/kg	1.2	83	75	125			
Lead			290	mg/kg	3.4	83	75	125			
Zinc			509	mg/kg	1.0	84	75	125			
Lab ID:	**H14110217-027AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141203A			12/03/14 14:19	
Arsenic			686	mg/kg	1.8		75	125			A
Cadmium			41.0	mg/kg	1.0	79	75	125			
Copper			15200	mg/kg	1.1		75	125			A
Lead			434	mg/kg	3.2		75	125			A
Zinc			3660	mg/kg	1.0		75	125			A
Lab ID:	**H14110217-027AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141203A			12/03/14 14:22	
Arsenic			683	mg/kg	1.9		75	125	0.4	20	A
Cadmium			41.4	mg/kg	1.0	80	75	125	0.9	20	
Copper			15000	mg/kg	1.1		75	125	1.2	20	A
Lead			432	mg/kg	3.3		75	125	0.4	20	A
Zinc			3680	mg/kg	1.0		75	125	0.5	20	A
Lab ID:	**H14110379-027APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141203A			12/03/14 15:17	
Arsenic			863	mg/kg	1.9	72	75	125			S
Cadmium			128	mg/kg	1.0	82	75	125			
Copper			15100	mg/kg	1.2		75	125			A
Lead			602	mg/kg	3.3	73	75	125			S
Zinc			3850	mg/kg	1.0		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110379

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B										Batch: 27213
Lab ID: H14110379-027AMS	5	Sample Matrix Spike				Run: ICP2-HE_141203A			12/03/14 15:21	
Arsenic		106	mg/kg	1.8	90	75	125			
Cadmium		23.6	mg/kg	1.0	89	75	125			
Copper		443	mg/kg	1.1		75	125			A
Lead		110	mg/kg	3.2	80	75	125			
Zinc		331	mg/kg	1.0		75	125			A
Lab ID: H14110379-027AMSD	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141203A			12/03/14 15:24	
Arsenic		104	mg/kg	1.8	85	75	125	2.1	20	
Cadmium		24.0	mg/kg	1.0	89	75	125	1.8	20	
Copper		430	mg/kg	1.1		75	125	2.9	20	A
Lead		111	mg/kg	3.2	82	75	125	1.0	20	
Zinc		330	mg/kg	1.0		75	125	0.2	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141203A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/03/14 14:30	
Arsenic			0.0601	mg/L	0.0010	100	90	110			
Cadmium			0.0310	mg/L	0.0010	103	90	110			
Lead			0.0596	mg/L	0.0010	99	90	110			
Method:	**SW6020**									Batch: 27213	
Lab ID:	**MB-27213**	3	Method Blank				Run: ICPMS204-B_141203A			12/03/14 15:27	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27213**	3	Laboratory Control Sample				Run: ICPMS204-B_141203A			12/03/14 15:32	
Arsenic			326	mg/kg	1.0	95	72.3	106.4			
Cadmium			129	mg/kg	1.0	94	73	105.1			
Lead			194	mg/kg	1.0	104	75.9	108.6			
Lab ID:	**LFB-27213**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141203A			12/03/14 15:36	
Arsenic			49.4	mg/kg	1.0	99	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H14110217-027APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141203A			12/03/14 15:54	
Arsenic			2820	mg/kg	1.0	107	75	125			
Cadmium			1130	mg/kg	1.0	88	75	125			
Lead			2380	mg/kg	1.0	90	75	125			
Lab ID:	**H14110217-027AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141203A			12/03/14 15:58	
Arsenic			112	mg/kg	1.0	95	75	125			
Cadmium			24.8	mg/kg	1.0	92	75	125			
Lead			109	mg/kg	1.0	86	75	125			
Lab ID:	**H14110217-027AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141203A			12/03/14 16:02	
Arsenic			101	mg/kg	1.0	73	75	125	10	20	S
Cadmium			22.3	mg/kg	1.0	81	75	125	11	20	
Lead			98.8	mg/kg	1.0	65	75	125	10	20	S
Lab ID:	**H14110379-027APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141203A			12/03/14 17:40	
Arsenic			3500	mg/kg	1.0	110	75	125			
Cadmium			1110	mg/kg	1.0	85	75	125			
Lead			2580	mg/kg	1.0	85	75	125			
Lab ID:	**H14110379-027AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141203A			12/03/14 17:44	
Arsenic			753	mg/kg	1.0		75	125			A
Cadmium			43.5	mg/kg	1.0	91	75	125			
Lead			467	mg/kg	1.0		75	125			A
Lab ID:	**H14110379-027AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141203A			12/03/14 17:48	
Arsenic			723	mg/kg	1.0		75	125	4.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110379

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 27213	
Lab ID:	**H14110379-027AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141203A			12/03/14 17:48	
Cadmium			41.5	mg/kg	1.0	83	75	125	4.7	20	
Lead			436	mg/kg	1.0		75	125	6.8	20	A
Method:	**SW6020**									Analytical Run: ICPMS204-B_141204A	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/04/14 10:07	
Arsenic			0.0594	mg/L	0.0010	99	90	110			
Lead			0.0589	mg/L	0.0010	98	90	110			
Method:	**SW6020**									Batch: 27212	
Lab ID:	**MB-27212**	2	Method Blank				Run: ICPMS204-B_141204A			12/04/14 15:27	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27212**	2	Laboratory Control Sample				Run: ICPMS204-B_141204A			12/04/14 15:32	
Arsenic			313	mg/kg	1.0	91	72.3	106.4			
Lead			191	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27212**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141204A			12/04/14 15:36	
Arsenic			48.6	mg/kg	1.0	97	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H14110379-018APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141204A			12/04/14 17:07	
Arsenic			2220	mg/kg	1.0	88	75	125			
Lead			2070	mg/kg	1.0	82	75	125			
Lab ID:	**H14110379-018AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141204A			12/04/14 17:11	
Arsenic			51.1	mg/kg	1.0	96	75	125			
Lead			58.6	mg/kg	1.0	95	75	125			
Lab ID:	**H14110379-018AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141204A			12/04/14 17:15	
Arsenic			51.0	mg/kg	1.0	96	75	125	0.1	20	
Lead			57.5	mg/kg	1.0	93	75	125	1.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14110379

Login completed by: Tracy L. Lorash
Date Received: 11/20/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 11/24/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	1.9°C No Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Samples 3-315e-2430 and 3-315e-3036 were not received.
Received samples labeled 3-315e-0612 collected on 11/18/14 @ 11:51 and 3-315e-1218 collected on 11/18/14 @ 11:50 that are not on the COC. Tl 11/20/14
Per Karen, samples 0612 and 1218 were delivered by mistake and they will pick them up. Samples 2430 and 3036 will be submitted at a later date. Tl 11/25/14

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:
111814-1
Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N
Sampler: M. Peters H4110379

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-264-3036	1002	11/18/14	Soil	A	B		1
3-264-3642	1001	11/18/14	Soil	A	B		1
3-264-4248	1000	11/18/14	Soil	A	B		1
3-283n-0612	1126	11/18/14	Soil	A	B		1
3-283n-1218	1125	11/18/14	Soil	A	B		1
3-283n-1824	1124	11/18/14	Soil	A	B		1
3-284-2430	923	11/18/14	Soil	A	B		1
3-284-3036	922	11/18/14	Soil	A	B		1
3-284-3642	921	11/18/14	Soil	A	B		1
3-285-2430	1018	11/18/14	Soil	A	B		1
3-285-3036	1017	11/18/14	Soil	A	B		1
3-285-3642	1016	11/18/14	Soil	A	B		1
3-296n-0006	752	11/18/14	Soil	A	B		1
3-296n-0612	751	11/18/14	Soil	A	B		1
3-297n-0006	733	11/18/14	Soil	A	B		1
3-297n-0612	732	11/18/14	Soil	A	B		1
3-300-1824	904	11/18/14	Soil	A	B		1
3-300-2430	903	11/18/14	Soil	A	B		1
3-300-3036	902	11/18/14	Soil	A	B		1
3-300-3642	901	11/18/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature] Date/Time: 11/20/14 1617	(1) Date/Time:	(2) Date/Time:	(2) Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] OTB 1.9 Ice	11/20/14 1617

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:
111814-2
Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: M. Peters H14110379

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-302-1824	1054	11/18/14	Soil	A	B		1
3-302-2430	1053	11/18/14	Soil	A	B		1
3-302-3036	1052	11/18/14	Soil	A	B		1
3-315-2430	823	11/18/14	Soil	A	B		1
3-315-3036	822	11/18/14	Soil	A	B		1
3-315-3642	821	11/18/14	Soil	A	B		1
3-315e-1824	1149	11/18/14	Soil	A	B		1
3-315e-2430	1148	11/18/14	Soil	A	B		1
3-315e-3036	1147	11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1
		11/18/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 11/20/14 1617	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 1.9 OTB DKC	11/20/14 16:17

ANALYTICAL SUMMARY REPORT

December 05, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110290

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 66 samples for MT DEQ-Federal Superfund on 11/17/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110290-001	3-197-3036	11/14/14 8:57	11/17/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14110290-002	3-197-3642	11/14/14 8:56	11/17/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14110290-003	3-197-4248	11/14/14 8:55	11/17/14	Soil	Same As Above
H14110290-004	3-199-3642	11/14/14 8:26	11/17/14	Soil	Same As Above
H14110290-005	3-199-4248	11/14/14 8:25	11/17/14	Soil	Same As Above
H14110290-006	3-199-4854	11/14/14 8:41	11/17/14	Soil	Same As Above
H14110290-007	3-199-5460	11/14/14 8:40	11/17/14	Soil	Same As Above
H14110290-008	3-206-1824	11/14/14 15:09	11/17/14	Soil	Same As Above
H14110290-009	3-206-2430	11/14/14 15:08	11/17/14	Soil	Same As Above
H14110290-010	3-206-3036	11/14/14 15:07	11/17/14	Soil	Same As Above
H14110290-011	3-206-3642	11/14/14 15:06	11/17/14	Soil	Same As Above
H14110290-012	3-217-6672	11/14/14 9:40	11/17/14	Soil	Same As Above
H14110290-013	3-217-7278	11/14/14 9:56	11/17/14	Soil	Same As Above
H14110290-014	3-217-7884	11/14/14 9:55	11/17/14	Soil	Same As Above
H14110290-015	3-218-3642	11/14/14 7:46	11/17/14	Soil	Same As Above
H14110290-016	3-218-4248	11/14/14 7:45	11/17/14	Soil	Same As Above
H14110290-017	3-219-3642	11/14/14 8:01	11/17/14	Soil	Same As Above
H14110290-018	3-219-4248	11/14/14 8:00	11/17/14	Soil	Same As Above
H14110290-019	3-221-1824	11/14/14 13:54	11/17/14	Soil	Same As Above
H14110290-020	3-221-2430	11/14/14 13:53	11/17/14	Soil	Same As Above
H14110290-021	3-221-3036	11/14/14 13:52	11/17/14	Soil	Same As Above
H14110290-022	3-223-3642	11/14/14 12:01	11/17/14	Soil	Same As Above
H14110290-023	3-223-4248	11/14/14 12:00	11/17/14	Soil	Same As Above
H14110290-024	3-224-4854	11/14/14 14:51	11/17/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110290-025	3-224-5460	11/14/14 14:50 11/17/14	Soil	Same As Above
H14110290-026	3-225-3036	11/14/14 12:22 11/17/14	Soil	Same As Above
H14110290-027	3-225-3642	11/14/14 12:21 11/17/14	Soil	Same As Above
H14110290-028	3-225-4248	11/14/14 12:20 11/17/14	Soil	Same As Above
H14110290-029	3-226-1824	11/14/14 12:49 11/17/14	Soil	Same As Above
H14110290-030	3-226-2430	11/14/14 12:48 11/17/14	Soil	Same As Above
H14110290-031	3-226-3036	11/14/14 12:47 11/17/14	Soil	Same As Above
H14110290-032	3-237-4248	11/14/14 14:00 11/17/14	Soil	Same As Above
H14110290-033	3-237-4854	11/14/14 14:16 11/17/14	Soil	Same As Above
H14110290-034	3-237-5460	11/14/14 14:15 11/17/14	Soil	Same As Above
H14110290-035	3-241-1824	11/14/14 10:19 11/17/14	Soil	Same As Above
H14110290-036	3-241-2430	11/14/14 10:18 11/17/14	Soil	Same As Above
H14110290-037	3-241-3036	11/14/14 10:17 11/17/14	Soil	Same As Above
H14110290-038	3-242-1218	11/14/14 16:35 11/17/14	Soil	Same As Above
H14110290-039	3-242-1824	11/14/14 16:34 11/17/14	Soil	Same As Above
H14110290-040	3-242-2430	11/14/14 16:33 11/17/14	Soil	Same As Above
H14110290-041	3-243-7884	11/13/14 15:45 11/17/14	Soil	Same As Above
H14110290-042	3-243-8496	11/13/14 16:00 11/17/14	Soil	Same As Above
H14110290-043	3-244-1218	11/13/14 14:35 11/17/14	Soil	Same As Above
H14110290-044	3-244-1218d	11/13/14 14:36 11/17/14	Soil	Same As Above
H14110290-045	3-244-1824	11/13/14 14:34 11/17/14	Soil	Same As Above
H14110290-046	3-244-2430	11/13/14 14:33 11/17/14	Soil	Same As Above
H14110290-047	3-245-2430	11/13/14 13:11 11/17/14	Soil	Same As Above
H14110290-048	3-245-3036	11/13/14 13:10 11/17/14	Soil	Same As Above
H14110290-049	3-245-3642	11/13/14 13:09 11/17/14	Soil	Same As Above
H14110290-050	3-258-4248	11/14/14 13:30 11/17/14	Soil	Same As Above
H14110290-051	3-258-4854	11/14/14 13:47 11/17/14	Soil	Same As Above
H14110290-052	3-258-5460	11/14/14 13:46 11/17/14	Soil	Same As Above
H14110290-053	3-259-3036	11/14/14 13:02 11/17/14	Soil	Same As Above
H14110290-054	3-259-3642	11/14/14 13:01 11/17/14	Soil	Same As Above
H14110290-055	3-259-4248	11/14/14 13:00 11/17/14	Soil	Same As Above
H14110290-056	3-260-6672	11/14/14 12:25 11/17/14	Soil	Same As Above
H14110290-057	3-260-7284	11/14/14 12:45 11/17/14	Soil	Same As Above
H14110290-058	3-261-4248	11/14/14 11:10 11/17/14	Soil	Same As Above
H14110290-059	3-261-4854	11/14/14 11:31 11/17/14	Soil	Same As Above
H14110290-060	3-261-5460	11/14/14 11:30 11/17/14	Soil	Same As Above
H14110290-061	3-262-2430	11/14/14 16:18 11/17/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110290-062	3-262-3036	11/14/14 16:17	11/17/14	Soil	Same As Above
H14110290-063	3-262-3642	11/14/14 16:16	11/17/14	Soil	Same As Above
H14110290-064	3-263-3642	11/14/14 7:26	11/17/14	Soil	Same As Above
H14110290-065	3-263-4248	11/14/14 7:25	11/17/14	Soil	Same As Above
H14110290-066	3-203-2430	11/04/14 12:25	11/17/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110290

Report Date: 12/05/14
Date Received: 11/17/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110290-001	3-197-3036	0	0	5.6	5	3	4390	12	723
H14110290-002	3-197-3642	0	0	6.8	5	2	1880	8	381
H14110290-003	3-197-4248	0	0	7.5	5	1	496	9	215
H14110290-004	3-199-3642	0	0	7.8	61	3	1310	57	735
H14110290-005	3-199-4248	0	0	7.8	70	3	797	61	912
H14110290-006	3-199-4854	0	0	7.6	9	4	733	9	321
H14110290-007	3-199-5460	0	0	7.8	10	9	426	10	645
H14110290-008	3-206-1824	0	0	7.5	147	20	11000	94	4980
H14110290-009	3-206-2430	0	0	7.0	7	2	325	7	463
H14110290-010	3-206-3036	0	0	7.2	12	5	692	17	732
H14110290-011	3-206-3642	0	0	7.3	9	5	686	10	637
H14110290-012	3-217-6672	0	0	6.2	10	1	2730	14	384
H14110290-013	3-217-7278	0	0	6.6	12	2	2270	10	320
H14110290-014	3-217-7884	0	0	6.6	40	1	2520	47	364
H14110290-015	3-218-3642	0	0	4.5	77	1	2270	173	425
H14110290-016	3-218-4248	0	0	5.1	44	< 1	1080	107	226
H14110290-017	3-219-3642	0	0	7.3	8	< 1	2940	7	263
H14110290-018	3-219-4248	0	0	7.4	13	< 1	1790	11	159
H14110290-019	3-221-1824	0	0	7.4	10	10	818	21	3130
H14110290-020	3-221-2430	0	0	7.3	46	< 1	198	39	187
H14110290-021	3-221-3036	0	0	7.3	4	< 1	68	7	87
H14110290-022	3-223-3642	0	0	6.8	7	2	3640	10	423
H14110290-023	3-223-4248	0	0	6.7	9	2	4150	16	481
H14110290-024	3-224-4854	0	0	7.2	645	6	2940	3560	1910
H14110290-025	3-224-5460	0	0	7.9	266	30	3000	1150	2570
H14110290-026	3-225-3036	0	0	6.9	1550	42	25000	2230	6830
H14110290-027	3-225-3642	0	0	7.2	15	1	201	25	445
H14110290-028	3-225-4248	0	0	7.2	5	6	904	11	663
H14110290-029	3-226-1824	0	0	7.4	692	14	13600	1480	5200
H14110290-030	3-226-2430	0	0	7.5	14	< 1	123	29	1050
H14110290-031	3-226-3036	0	0	7.0	14	< 1	76	26	209
H14110290-032	3-237-4248	0	0	7.2	62	2	215	132	908
H14110290-033	3-237-4854	0	0	6.6	128	3	2130	123	674
H14110290-034	3-237-5460	0	0	7.0	40	1	1190	16	240
H14110290-035	3-241-1824	0	0	7.5	13	30	5550	14	5120
H14110290-036	3-241-2430	0	0	7.7	18	2	178	22	468
H14110290-037	3-241-3036	0	0	7.7	7	< 1	166	15	107
H14110290-038	3-242-1218	0	0	6.7	330	10	16500	307	3890
H14110290-039	3-242-1824	0	0	7.5	12	3	250	14	579
H14110290-040	3-242-2430	0	0	7.7	7	< 1	56	8	60

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110290

Report Date: 12/05/14
Date Received: 11/17/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110290-041	3-243-7884	0	0	7.6	70	2	10900	28	833
H14110290-042	3-243-8496	0	0	7.9	21	< 1	439	23	175
H14110290-043	3-244-1218	0	0	7.5	73	12	31100	18	3940
H14110290-044	3-244-1218d	0	0	7.6	52	24	9630	18	2620
H14110290-045	3-244-1824	0	0	7.4	25	4	453	17	816
H14110290-046	3-244-2430	0	0	7.5	16	< 1	63	12	313
H14110290-047	3-245-2430	0	0	7.7	16	23	6830	15	3220
H14110290-048	3-245-3036	0	0	7.6	8	1	341	13	714
H14110290-049	3-245-3642	0	0	7.2	13	< 1	125	23	254
H14110290-050	3-258-4248	0	0	6.3	5	6	1890	12	964
H14110290-051	3-258-4854	0	0	6.8	11	1	1530	14	128
H14110290-052	3-258-5460	0	0	7.0	30	2	1250	28	165
H14110290-053	3-259-3036	0	0	6.7	15	3	2200	22	688
H14110290-054	3-259-3642	0	0	7.1	6	< 1	50	13	1140
H14110290-055	3-259-4248	0	0	7.2	11	2	344	12	1130
H14110290-056	3-260-6672	0	0	7.0	1170	13	20700	465	5620
H14110290-057	3-260-7284	0	0	7.3	604	28	6240	297	2930
H14110290-058	3-261-4248	0	0	7.4	25	10	3740	16	768
H14110290-059	3-261-4854	0	0	7.1	7	3	76	15	2410
H14110290-060	3-261-5460	0	0	7.4	7	3	640	14	665
H14110290-061	3-262-2430	0	0	7.7	16	6	1160	14	3000
H14110290-062	3-262-3036	0	0	7.4	12	3	178	7	546
H14110290-063	3-262-3642	0	0	7.2	8	3	112	8	526
H14110290-064	3-263-3642	0	0	7.3	791	11	5320	572	4560
H14110290-065	3-263-4248	0	0	7.3	800	16	4980	660	5920
H14110290-066	3-203-2430	0	0	7.2	16	< 1	79	21	105

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_141126A	
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 07:32
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 08:01
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 08:31
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_141126_1		Continuing Calibration Verification Standard								11/26/14 09:04
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141126_1		Continuing Calibration Verification Standard								11/26/14 09:04
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 09:05
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141126_1		Continuing Calibration Verification Standard								11/26/14 09:16
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141126_1		Continuing Calibration Verification Standard								11/26/14 09:32
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141126_1		Continuing Calibration Verification Standard								11/26/14 09:33
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 09:33
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141126_1		Continuing Calibration Verification Standard								11/26/14 09:46
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141126_1		Continuing Calibration Verification Standard								11/26/14 10:00
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141126_1		Continuing Calibration Verification Standard								11/26/14 10:01
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 10:01
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141126_1		Continuing Calibration Verification Standard								11/26/14 10:12
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_4_141126_1		Continuing Calibration Verification Standard								11/26/14 10:21
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2									Batch: 27169	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27169
Lab ID: LCS-27169		Laboratory Control Sample				Run: SOIL PH METER_141126A				11/26/14 09:06
pH, sat. paste		7.66	s.u.	0.10	102	95	105			
Lab ID: H14110290-010ADUP		Sample Duplicate				Run: SOIL PH METER_141126A				11/26/14 09:15
pH, sat. paste		7.17	s.u.	0.10				0.3	30	
Lab ID: H14110290-020ADUP		Sample Duplicate				Run: SOIL PH METER_141126A				11/26/14 09:24
pH, sat. paste		7.25	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27170
Lab ID: LCS-27170		Laboratory Control Sample				Run: SOIL PH METER_141126A				11/26/14 09:35
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14110290-030ADUP		Sample Duplicate				Run: SOIL PH METER_141126A				11/26/14 09:45
pH, sat. paste		7.48	s.u.	0.10				0.0	30	
Lab ID: H14110290-040ADUP		Sample Duplicate				Run: SOIL PH METER_141126A				11/26/14 09:54
pH, sat. paste		7.67	s.u.	0.10				0.4	30	
Method: ASAM10-3.2										Batch: 27171
Lab ID: LCS-27171		Laboratory Control Sample				Run: SOIL PH METER_141126A				11/26/14 10:02
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H14110290-050ADUP		Sample Duplicate				Run: SOIL PH METER_141126A				11/26/14 10:11
pH, sat. paste		6.32	s.u.	0.10				0.5	30	
Lab ID: H14110290-060ADUP		Sample Duplicate				Run: SOIL PH METER_141126A				11/26/14 10:21
pH, sat. paste		7.48	s.u.	0.10				0.4	30	
Lab ID: H14110290-066ADUP		Sample Duplicate				Run: SOIL PH METER_141126A				11/26/14 10:27
pH, sat. paste		7.18	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141202B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/02/14 09:22	
Arsenic			0.782	mg/L	0.0085	98	90	110			
Cadmium			0.384	mg/L	0.0010	96	90	110			
Copper			0.797	mg/L	0.010	100	90	110			
Lead			0.772	mg/L	0.010	96	90	110			
Zinc			0.784	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/02/14 09:37	
Arsenic			0.00749	mg/L	0.0085		0	0			
Cadmium			0.00227	mg/L	0.0010		0	0			
Copper			-0.00355	mg/L	0.010		0	0			
Lead			-0.0179	mg/L	0.010		0	0			
Zinc			0.00168	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/02/14 09:41	
Arsenic			1.00	mg/L	0.0085	100	80	120			
Cadmium			0.921	mg/L	0.0010	92	80	120			
Copper			0.515	mg/L	0.010	103	80	120			
Lead			0.899	mg/L	0.010	90	80	120			
Zinc			0.998	mg/L	0.010	100	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141203A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/03/14 08:36	
Arsenic			0.800	mg/L	0.0085	100	90	110			
Cadmium			0.394	mg/L	0.0010	98	90	110			
Copper			0.811	mg/L	0.010	101	90	110			
Lead			0.793	mg/L	0.010	99	90	110			
Zinc			0.806	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/03/14 08:51	
Arsenic			-0.00718	mg/L	0.0085		0	0			
Cadmium			0.00253	mg/L	0.0010		0	0			
Copper			0.00296	mg/L	0.010		0	0			
Lead			-0.0279	mg/L	0.010		0	0			
Zinc			0.00281	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/03/14 08:55	
Arsenic			0.964	mg/L	0.0085	96	80	120			
Cadmium			0.888	mg/L	0.0010	89	80	120			
Copper			0.519	mg/L	0.010	104	80	120			
Lead			0.883	mg/L	0.010	88	80	120			
Zinc			0.979	mg/L	0.010	98	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27145
Lab ID:	**MB-27145**	5	Method Blank				Run: ICP2-HE_141202B			12/02/14 12:59	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.5	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27145**	5	Laboratory Fortified Blank				Run: ICP2-HE_141202B			12/02/14 13:02	
Arsenic			48.4	mg/kg	1.0	97	80	120			
Cadmium			24.1	mg/kg	1.0	96	80	120			
Copper			50.9	mg/kg	1.0	101	80	120			
Lead			48.5	mg/kg	1.0	97	80	120			
Zinc			49.6	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27145**	5	Laboratory Control Sample				Run: ICP2-HE_141202B			12/02/14 13:06	
Arsenic			295	mg/kg	1.8	86	72.3	106.4			
Cadmium			125	mg/kg	1.0	91	73	105.1			
Copper			270	mg/kg	1.1	96	77.5	109.6			
Lead			186	mg/kg	3.1	99	75.9	108.6			
Zinc			202	mg/kg	1.0	95	74.2	109.9			
Lab ID:	**H14110290-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141202B			12/02/14 15:00	
Arsenic			240	mg/kg	1.8	94	75	125			
Cadmium			113	mg/kg	1.0	89	75	125			
Copper			2030	mg/kg	1.1		75	125			A
Lead			236	mg/kg	3.2	89	75	125			
Zinc			398	mg/kg	1.0	95	75	125			
Lab ID:	**H14110290-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141202B			12/02/14 15:11	
Arsenic			51.6	mg/kg	1.8	98	75	125			
Cadmium			23.9	mg/kg	1.0	93	75	125			
Copper			1710	mg/kg	1.1		75	125			A
Lead			60.4	mg/kg	3.1	99	75	125			
Zinc			196	mg/kg	1.0	74	75	125			S

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Lab ID:	**H14110290-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141202B			12/02/14 15:15	
Arsenic			52.3	mg/kg	1.8	100	75	125	1.2	20	
Cadmium			23.8	mg/kg	1.0	92	75	125	0.8	20	
Copper			1690	mg/kg	1.1		75	125	1.6	20	A
Lead			56.3	mg/kg	3.1	91	75	125	7.1	20	
Zinc			194	mg/kg	1.0	71	75	125	1.0	20	S

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recover is due to matrix interference.

Method:	**SW6010B**										Batch: 27146
Lab ID:	**MB-27146**	5	Method Blank				Run: ICP2-HE_141202B			12/02/14 15:18	
Arsenic			ND	mg/kg	0.4						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27146	
Lab ID:	**MB-27146**	5	Method Blank				Run: ICP2-HE_141202B			12/02/14 15:18	
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.2	mg/kg	0.09						
Lab ID:	**LFB-27146**	5	Laboratory Fortified Blank				Run: ICP2-HE_141202B			12/02/14 15:22	
Arsenic			47.3	mg/kg	1.0	95	80	120			
Cadmium			23.5	mg/kg	1.0	94	80	120			
Copper			49.8	mg/kg	1.0	100	80	120			
Lead			46.3	mg/kg	1.0	93	80	120			
Zinc			49.2	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27146**	5	Laboratory Control Sample				Run: ICP2-HE_141202B			12/02/14 15:26	
Arsenic			276	mg/kg	1.8	81	72.3	106.4			
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			253	mg/kg	1.1	90	77.5	109.6			
Lead			174	mg/kg	3.1	93	75.9	108.6			
Zinc			189	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H14110290-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141202B			12/02/14 16:54	
Arsenic			231	mg/kg	1.8	86	75	125			
Cadmium			103	mg/kg	1.0	81	75	125			
Copper			396	mg/kg	1.1	87	75	125			
Lead			226	mg/kg	3.2	82	75	125			
Zinc			676	mg/kg	1.0	83	75	125			
Lab ID:	**H14110290-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141202B			12/02/14 16:57	
Arsenic			57.7	mg/kg	1.8	85	75	125			
Cadmium			22.0	mg/kg	1.0	84	75	125			
Copper			224	mg/kg	1.1	95	75	125			
Lead			62.5	mg/kg	3.1	83	75	125			
Zinc			502	mg/kg	1.0		75	125			A
Lab ID:	**H14110290-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141202B			12/02/14 17:01	
Arsenic			58.4	mg/kg	1.8	87	75	125	1.1	20	
Cadmium			22.6	mg/kg	1.0	87	75	125	2.8	20	
Copper			221	mg/kg	1.1	89	75	125	1.4	20	
Lead			63.8	mg/kg	3.1	86	75	125	2.0	20	
Zinc			520	mg/kg	1.0		75	125	3.4	20	A
Method:	**SW6010B**									Batch: 27147	
Lab ID:	**MB-27147**	5	Method Blank				Run: ICP2-HE_141202B			12/02/14 17:04	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27147
Lab ID:	**MB-27147**	5	Method Blank				Run: ICP2-HE_141202B			12/02/14 17:04	
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27147**	5	Laboratory Fortified Blank				Run: ICP2-HE_141202B			12/02/14 17:08	
Arsenic			46.5	mg/kg	1.0	93	80	120			
Cadmium			22.9	mg/kg	1.0	92	80	120			
Copper			49.1	mg/kg	1.0	98	80	120			
Lead			46.0	mg/kg	1.0	92	80	120			
Zinc			47.8	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27147**	5	Laboratory Control Sample				Run: ICP2-HE_141202B			12/02/14 17:12	
Arsenic			281	mg/kg	1.8	82	72.3	106.4			
Cadmium			116	mg/kg	1.0	85	73	105.1			
Copper			256	mg/kg	1.1	92	77.5	109.6			
Lead			179	mg/kg	3.1	96	75.9	108.6			
Zinc			191	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14110290-054APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141202B			12/02/14 19:06	
Arsenic			242	mg/kg	1.8	92	75	125			
Cadmium			114	mg/kg	1.0	88	75	125			
Copper			280	mg/kg	1.1	90	75	125			
Lead			247	mg/kg	3.2	90	75	125			
Zinc			1400	mg/kg	1.0		75	125			A
Lab ID:	**H14110290-054AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141202B			12/02/14 19:17	
Arsenic			51.2	mg/kg	1.8	87	75	125			
Cadmium			23.0	mg/kg	1.0	89	75	125			
Copper			99.8	mg/kg	1.1	100	75	125			
Lead			58.8	mg/kg	3.2	84	75	125			
Zinc			1140	mg/kg	1.0		75	125			A
Lab ID:	**H14110290-054AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141202B			12/02/14 19:21	
Arsenic			54.4	mg/kg	1.8	94	75	125	6.2	20	
Cadmium			23.6	mg/kg	1.0	92	75	125	2.4	20	
Copper			97.4	mg/kg	1.1	96	75	125	2.4	20	
Lead			60.5	mg/kg	3.1	88	75	125	2.8	20	
Zinc			1170	mg/kg	1.0		75	125	2.6	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27149	
Lab ID:	**MB-27149**	5	Method Blank				Run: ICP2-HE_141203A			12/03/14 15:28	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1	mg/kg	0.09						
Lab ID:	**LFB-27149**	5	Laboratory Fortified Blank				Run: ICP2-HE_141203A			12/03/14 15:32	
Arsenic			48.1	mg/kg	1.0	96	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			49.2	mg/kg	1.0	98	80	120			
Lead			47.8	mg/kg	1.0	96	80	120			
Zinc			49.0	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27149**	5	Laboratory Control Sample				Run: ICP2-HE_141203A			12/03/14 15:35	
Arsenic			290	mg/kg	1.9	85	72.3	106.4			
Cadmium			124	mg/kg	1.0	90	73	105.1			
Copper			264	mg/kg	1.1	94	77.5	109.6			
Lead			180	mg/kg	3.3	96	75.9	108.6			
Zinc			198	mg/kg	1.0	92	74.2	109.9			
Lab ID:	**H14110290-066APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141203A			12/03/14 16:34	
Arsenic			237	mg/kg	1.8	87	75	125			
Cadmium			109	mg/kg	1.0	86	75	125			
Copper			304	mg/kg	1.1	89	75	125			
Lead			244	mg/kg	3.2	86	75	125			
Zinc			327	mg/kg	1.0	87	75	125			
Lab ID:	**H14110290-066AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141203A			12/03/14 17:11	
Arsenic			61.2	mg/kg	1.8	91	75	125			
Cadmium			21.7	mg/kg	1.0	88	75	125			
Copper			129	mg/kg	1.1	102	75	125			
Lead			69.0	mg/kg	3.1	89	75	125			
Zinc			150	mg/kg	1.0	91	75	125			
Lab ID:	**H14110290-066AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141203A			12/03/14 17:15	
Arsenic			59.6	mg/kg	1.8	88	75	125	2.6	20	
Cadmium			22.0	mg/kg	1.0	89	75	125	1.8	20	
Copper			126	mg/kg	1.1	95	75	125	2.8	20	
Lead			67.2	mg/kg	3.2	85	75	125	2.6	20	
Zinc			151	mg/kg	1.0	93	75	125	0.7	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141202A		
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/02/14 12:38	
Arsenic			0.0596	mg/L	0.0010	99	90	110			
Lead			0.0594	mg/L	0.0010	99	90	110			
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/02/14 22:41	
Arsenic			0.0606	mg/L	0.0010	101	90	110			
Lead			0.0609	mg/L	0.0010	101	90	110			
Method:	**SW6020**										Batch: 27147
Lab ID:	**MB-27147**	2	Method Blank				Run: ICPMS204-B_141202A			12/02/14 23:12	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27147**	2	Laboratory Control Sample				Run: ICPMS204-B_141202A			12/02/14 23:17	
Arsenic			306	mg/kg	1.0	89	72.3	106.4			
Lead			191	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27147**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141202A			12/02/14 23:21	
Arsenic			48.0	mg/kg	1.0	96	80	120			
Lead			48.0	mg/kg	1.0	96	80	120			
Lab ID:	**H14110290-054APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141202A			12/02/14 23:52	
Arsenic			2370	mg/kg	1.0	96	75	125			
Lead			2400	mg/kg	1.0	96	75	125			
Lab ID:	**H14110290-054AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141202A			12/02/14 23:56	
Arsenic			53.5	mg/kg	1.0	95	75	125			
Lead			59.4	mg/kg	1.0	93	75	125			
Lab ID:	**H14110290-054AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141202A			12/03/14 00:00	
Arsenic			52.9	mg/kg	1.0	94	75	125	1.1	20	
Lead			58.3	mg/kg	1.0	91	75	125	2.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141203A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/03/14 14:30	
Arsenic			0.0601	mg/L	0.0010	100	90	110			
Cadmium			0.0310	mg/L	0.0010	103	90	110			
Lead			0.0596	mg/L	0.0010	99	90	110			
Method:	**SW6020**									Batch: 27145	
Lab ID:	**LCS-27145**	3	Laboratory Control Sample				Run: ICPMS204-B_141203A			12/03/14 19:33	
Arsenic			323	mg/kg	1.0	94	72.3	106.4			
Cadmium			129	mg/kg	1.0	94	73	105.1			
Lead			198	mg/kg	1.0	106	75.9	108.6			
Lab ID:	**LFB-27145**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141203A			12/03/14 19:37	
Arsenic			49.6	mg/kg	1.0	99	80	120			
Cadmium			24.7	mg/kg	1.0	99	80	120			
Lead			47.0	mg/kg	1.0	94	80	120			
Lab ID:	**H14110290-018APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141203A			12/03/14 21:01	
Arsenic			3030	mg/kg	1.0	123	75	125			
Cadmium			1250	mg/kg	1.0	102	75	125			
Lead			2590	mg/kg	1.0	105	75	125			
Lab ID:	**H14110290-018AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141203A			12/03/14 21:05	
Arsenic			54.5	mg/kg	1.0	84	75	125			
Cadmium			23.7	mg/kg	1.0	94	75	125			
Lead			55.9	mg/kg	1.0	91	75	125			
Lab ID:	**H14110290-018AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141203A			12/03/14 21:09	
Arsenic			54.6	mg/kg	1.0	84	75	125	0.2	20	
Cadmium			23.6	mg/kg	1.0	94	75	125	0.4	20	
Lead			54.7	mg/kg	1.0	89	75	125	2.1	20	
Method:	**SW6020**									Batch: 27146	
Lab ID:	**LCS-27146**	3	Laboratory Control Sample				Run: ICPMS204-B_141203A			12/03/14 21:31	
Arsenic			314	mg/kg	1.0	92	72.3	106.4			
Cadmium			126	mg/kg	1.0	92	73	105.1			
Lead			194	mg/kg	1.0	104	75.9	108.6			
Lab ID:	**LFB-27146**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141203A			12/03/14 21:36	
Arsenic			49.6	mg/kg	1.0	99	80	120			
Cadmium			24.6	mg/kg	1.0	98	80	120			
Lead			47.0	mg/kg	1.0	94	80	120			
Lab ID:	**H14110290-036APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141203A			12/03/14 22:51	
Arsenic			2450	mg/kg	1.0	100	75	125			
Cadmium			1080	mg/kg	1.0	89	75	125			
Lead			2270	mg/kg	1.0	93	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 27146
Lab ID: H14110290-036AMS	3	Sample Matrix Spike				Run: ICPMS204-B_141203A			12/03/14 22:55	
Arsenic		63.9	mg/kg	1.0	94	75	125			
Cadmium		23.8	mg/kg	1.0	90	75	125			
Lead		63.4	mg/kg	1.0	90	75	125			
Lab ID: H14110290-036AMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141203A			12/03/14 22:59	
Arsenic		63.7	mg/kg	1.0	94	75	125	0.4	20	
Cadmium		23.3	mg/kg	1.0	88	75	125	2.2	20	
Lead		62.0	mg/kg	1.0	88	75	125	2.2	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110290

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141204A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/04/14 10:07	
Arsenic			0.0594	mg/L	0.0010	99	90	110			
Cadmium			0.0311	mg/L	0.0010	104	90	110			
Lead			0.0589	mg/L	0.0010	98	90	110			
Method:	**SW6020**									Batch: 27145	
Lab ID:	**MB-27145**	3	Method Blank				Run: ICPMS204-B_141204A			12/04/14 10:38	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Method:	**SW6020**									Batch: 27146	
Lab ID:	**MB-27146**	3	Method Blank				Run: ICPMS204-B_141204A			12/04/14 10:43	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Method:	**SW6020**									Batch: 27149	
Lab ID:	**MB-27149**	3	Method Blank				Run: ICPMS204-B_141204A			12/04/14 14:13	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27149**	3	Laboratory Control Sample				Run: ICPMS204-B_141204A			12/04/14 14:17	
Arsenic			320	mg/kg	1.0	93	72.3	106.4			
Cadmium			131	mg/kg	1.0	96	73	105.1			
Lead			199	mg/kg	1.0	107	75.9	108.6			
Lab ID:	**LFB-27149**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141204A			12/04/14 14:21	
Arsenic			48.7	mg/kg	1.0	97	80	120			
Cadmium			24.5	mg/kg	1.0	98	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Lab ID:	**H14110290-066APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141204A			12/04/14 15:15	
Arsenic			2550	mg/kg	1.0	103	75	125			
Cadmium			1030	mg/kg	1.0	83	75	125			
Lead			2140	mg/kg	1.0	86	75	125			
Lab ID:	**H14110290-066AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141204A			12/04/14 15:18	
Arsenic			64.6	mg/kg	1.0	98	75	125			
Cadmium			23.2	mg/kg	1.0	92	75	125			
Lead			69.0	mg/kg	1.0	98	75	125			
Lab ID:	**H14110290-066AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141204A			12/04/14 15:23	
Arsenic			63.0	mg/kg	1.0	95	75	125	2.5	20	
Cadmium			23.6	mg/kg	1.0	94	75	125	1.5	20	
Lead			68.8	mg/kg	1.0	97	75	125	0.3	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Report Date: 12/05/14
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Work Order: H14110290

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14110290

Login completed by: Tracy L. Lorash
Date Received: 11/17/2014
Reviewed by: BL2000\rwilliams
Received by: AHN
Reviewed Date: 11/25/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection date on COC for samples 19-23, 26-31 and 38-40 is 11/14/14 - sample bags have date of 11/13/14. Logged in with date from COC.
No collection date on page 3 of the COC. Logged in with date from sample bags.
Collection date on COC for samples 61-63 is 11/14/14 - sample bags have date of 11/13/14. Logged in with date from COC.
Cooler 1 was received at 3.3°C, Cooler 2 at 10.5°C, Cooler 3 at 7.6°C. Samples were received on wet ice. TI 11/18/14

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14110290

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
'3-197-3036	857	11/14/14	Soil	A	B		1
'3-197-3642	856	11/14/14	Soil	A	B		1
'3-197-4248	855	11/14/14	Soil	A	B		1
'3-199-3642	826	11/14/14	Soil	A	B		1
'3-199-4248	825	11/14/14	Soil	A	B		1
'3-199-4854	841	11/14/14	Soil	A	B		1
'3-199-5460	840	11/14/14	Soil	A	B		1
'3-206-1824	1509	11/14/14	Soil	A	B		1
'3-206-2430	1508	11/14/14	Soil	A	B		1
'3-206-3036	1507	11/14/14	Soil	A	B		1
'3-206-3642	1506	11/14/14	Soil	A	B		1
'3-217-6672	940	11/14/14	Soil	A	B		1
'3-217-7278	956	11/14/14	Soil	A	B		1
'3-217-~~9096~~ 7884 EL	955	11/14/14	Soil	A	B		1
'3-218-3642	746	11/14/14	Soil	A	B		1
'3-218-4248	745	11/14/14	Soil	A	B		1
'3-219-3642	801	11/14/14	Soil	A	B		1
'3-219-4248	800	11/14/14	Soil	A	B		1
'3-221-1824	1354	11/14/14	Soil	A	B		1
'3-221-2430	1353	11/14/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 1631 11/17/14

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature]

Date/Time: 11/17/14 16:31

Ø TB's C1 = 3.3
~~ice~~ TM2 = 4.5
ICE C3 = 7.6

COC111714 pg 1-4.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14110290

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
'3-221-3036	1352	11/14/14	Soil	A	B		1
'3-223-3642	1201	11/14/14	Soil	A	B		1
'3-223-4248	1200	11/14/14	Soil	A	B		1
'3-224-4854	1451	11/14/14	Soil	A	B		1
'3-224-5460	1450	11/14/14	Soil	A	B		1
'3-225-3036	1222	11/14/14	Soil	A	B		1
'3-225-3642	1221	11/14/14	Soil	A	B		1
'3-225-4248	1220	11/14/14	Soil	A	B		1
'3-226-1824	1249	11/14/14	Soil	A	B		1
'3-226-2430	1248	11/14/14	Soil	A	B		1
'3-226-3036	1247	11/14/14	Soil	A	B		1
'3-237-4248	1400	11/14/14	Soil	A	B		1
'3-237-4854	1416	11/14/14	Soil	A	B		1
'3-237-5460	1415	11/14/14	Soil	A	B		1
'3-241-1824	1019	11/14/14	Soil	A	B		1
'3-241-2430	1018	11/14/14	Soil	A	B		1
'3-241-3036	1017	11/14/14	Soil	A	B		1
'3-242-1218	1635	11/14/14	Soil	A	B		1
'3-242-1824	1634	11/14/14	Soil	A	B		1
'3-242-2430	1633	11/14/14	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 11/17/14 1631

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 11/17/14 1631

Date/Time: C1 = 3.3 C2 = 0.5 C3 = 7.6 ice

COC111714 pg 1-4.xls

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H411029D

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
'3-243-7884	1545		Soil	A	B		1
'3-243-8496	1600		Soil	A	B		1
'3-244-1218	1435		Soil	A	B		1
3-244-1218d	1436		Soil	A	B		1
'3-244-1824	1434		Soil	A	B		1
'3-244-2430	1433		Soil	A	B		1
'3-245-2430	1311		Soil	A	B		1
'3-245-3036	1310		Soil	A	B		1
'3-245-3642	1309		Soil	A	B		1
'3-258-4248	1330		Soil	A	B		1
'3-258-4854	1347		Soil	A	B		1
'3-258-5460	1346		Soil	A	B		1
'3-259-3036	1302		Soil	A	B		1
'3-259-3642	1301		Soil	A	B		1
'3-259-4248	1300		Soil	A	B		1
'3-260-6672	1225		Soil	A	B		1
'3-260-7284	1245		Soil	A	B		1
'3-261-4248	1110		Soil	A	B		1
'3-261-4854	1131		Soil	A	B		1
'3-261-5460	1130		Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 1631 11/17/14	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] 11/17/14 1631	C1 = 3.3 C2 = 1.05 C3 = 7.6 OTB ~~ice~~ AN ice

CDM Smith

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody Record

Chain of Custody No.:

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: H14110290

SAMPLE ID	TIME	DATE	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
'3-262-2430	1618	11/14/14	Soil	A	B		1
'3-262-3036	1617	11/14/14	Soil	A	B		1
'3-262-3642	1616	11/14/14	Soil	A	B		1
'3-263-3642	726	11/14/14	Soil	A	B		1
'3-263-4248	725	11/14/14	Soil	A	B		1
[redacted]	1225	11/4/14	Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1
			Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign): (1) [signature]
Date/Time: 11/17/14 1631

Received By (sign): (1) _____
Date/Time:

Relinquished By (sign): (2) _____
Date/Time:

Received By (sign): (2) _____
Date/Time:

Courier and Airbill No.:

Hand Deliver

Laboratory Name and Address:
Energy Laboratories 406-442-0711
3161 E Lyndale Ave
Helena, MT 59601

Received for Laboratory By (sign): [signature] 11/17/14 16:31

Date/Time: C1 = 3.3, C2 = 10.5, C3 = 7.6 / OTB on ice

COC111714 pg 1-4.xls

ANALYTICAL SUMMARY REPORT

December 05, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110250

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 58 samples for MT DEQ-Federal Superfund on 11/14/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110250-001	3-013w-0006	11/10/14 10:28	11/14/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14110250-002	3-013w-0612	11/10/14 10:27	11/14/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14110250-003	3-041-0006	11/10/14 7:58	11/14/14	Soil	Same As Above
H14110250-004	3-041-0612	11/10/14 7:57	11/14/14	Soil	Same As Above
H14110250-005	3-041-1218	11/10/14 7:56	11/14/14	Soil	Same As Above
H14110250-006	3-042-0612	11/10/14 8:51	11/14/14	Soil	Same As Above
H14110250-007	3-042-1218	11/10/14 8:50	11/14/14	Soil	Same As Above
H14110250-008	3-042-1824	11/10/14 8:49	11/14/14	Soil	Same As Above
H14110250-009	3-050-1218	11/10/14 8:25	11/14/14	Soil	Same As Above
H14110250-010	3-050-1824	11/10/14 8:24	11/14/14	Soil	Same As Above
H14110250-011	3-050-2430	11/10/14 8:23	11/14/14	Soil	Same As Above
H14110250-012	3-051w-0006	11/10/14 10:48	11/14/14	Soil	Same As Above
H14110250-013	3-051w-0612	11/10/14 10:46	11/14/14	Soil	Same As Above
H14110250-014	3-051w-1218	11/10/14 10:44	11/14/14	Soil	Same As Above
H14110250-015	3-057-0006	11/10/14 9:14	11/14/14	Soil	Same As Above
H14110250-016	3-057-0612	11/10/14 9:12	11/14/14	Soil	Same As Above
H14110250-017	3-057-1218	11/10/14 9:10	11/14/14	Soil	Same As Above
H14110250-018	3-064-0612	11/10/14 9:57	11/14/14	Soil	Same As Above
H14110250-019	3-064-1218	11/10/14 9:55	11/14/14	Soil	Same As Above
H14110250-020	3-064-1824	11/10/14 9:53	11/14/14	Soil	Same As Above
H14110250-021	3-227-0006	11/10/14 12:21	11/14/14	Soil	Same As Above
H14110250-022	3-227-0612	11/10/14 12:19	11/14/14	Soil	Same As Above
H14110250-023	3-227-1218	11/10/14 12:17	11/14/14	Soil	Same As Above
H14110250-024	3-228-1218	11/10/14 11:50	11/14/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110250-025	3-228-1824	11/10/14 11:49	11/14/14	Soil	Same As Above
H14110250-026	3-228-2430	11/10/14 11:48	11/14/14	Soil	Same As Above
H14110250-027	3-228w-0006	11/10/14 14:45	11/14/14	Soil	Same As Above
H14110250-028	3-228w-0612	11/10/14 14:44	11/14/14	Soil	Same As Above
H14110250-029	3-240-4248	11/10/14 12:45	11/14/14	Soil	Same As Above
H14110250-030	3-240-4854	11/10/14 13:10	11/14/14	Soil	Same As Above
H14110250-031	3-240-5460	11/10/14 13:05	11/14/14	Soil	Same As Above
H14110250-032	3-246-3036	11/10/14 13:29	11/14/14	Soil	Same As Above
H14110250-033	3-246-3642	11/10/14 13:27	11/14/14	Soil	Same As Above
H14110250-034	3-246-4248	11/10/14 13:25	11/14/14	Soil	Same As Above
H14110250-035	3-247-0612	11/10/14 14:07	11/14/14	Soil	Same As Above
H14110250-036	3-247-1218	11/10/14 14:05	11/14/14	Soil	Same As Above
H14110250-037	3-247-1824	11/10/14 14:03	11/14/14	Soil	Same As Above
H14110250-038	3-248-0006	11/10/14 14:34	11/14/14	Soil	Same As Above
H14110250-039	3-248-0612	11/10/14 14:32	11/14/14	Soil	Same As Above
H14110250-040	3-248-1218	11/10/14 14:30	11/14/14	Soil	Same As Above
H14110250-041	3-265-3036	11/10/14 15:09	11/14/14	Soil	Same As Above
H14110250-042	3-265-3642	11/10/14 15:07	11/14/14	Soil	Same As Above
H14110250-043	3-265-4248	11/10/14 15:05	11/14/14	Soil	Same As Above
H14110250-044	3-286-0612	11/10/14 15:42	11/14/14	Soil	Same As Above
H14110250-045	3-286-1218	11/10/14 15:40	11/14/14	Soil	Same As Above
H14110250-046	3-286-1824	11/10/14 15:38	11/14/14	Soil	Same As Above
H14110250-047	3-268-0006	11/11/14 9:47	11/14/14	Soil	Same As Above
H14110250-048	3-268-0006d	11/11/14 9:48	11/14/14	Soil	Same As Above
H14110250-049	3-268-0612	11/11/14 9:46	11/14/14	Soil	Same As Above
H14110250-050	3-268-1218	11/11/14 9:45	11/14/14	Soil	Same As Above
H14110250-051	3-269-0006	11/11/14 8:43	11/14/14	Soil	Same As Above
H14110250-052	3-269-0612	11/11/14 8:41	11/14/14	Soil	Same As Above
H14110250-053	3-269-1218	11/11/14 8:40	11/14/14	Soil	Same As Above
H14110250-054	3-289-1824	11/11/14 8:09	11/14/14	Soil	Same As Above
H14110250-055	3-289-2430	11/11/14 8:04	11/14/14	Soil	Same As Above
H14110250-056	3-289-3036	11/11/14 8:03	11/14/14	Soil	Same As Above
H14110250-057	3-289w-0006	11/11/14 9:20	11/14/14	Soil	Same As Above
H14110250-058	3-289w-0612	11/11/14 9:19	11/14/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

ANALYTICAL SUMMARY REPORT

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110250

Report Date: 12/05/14
Date Received: 11/14/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110250-001	3-013w-0006	0	0	7.1	222	3	1480	263	990
H14110250-002	3-013w-0612	0	0	7.5	76	< 1	329	55	228
H14110250-003	3-041-0006	0	0	7.6	723	23	10600	409	3470
H14110250-004	3-041-0612	0	0	7.5	12	3	749	19	913
H14110250-005	3-041-1218	0	0	7.0	9	1	93	21	443
H14110250-006	3-042-0612	0	0	7.7	610	9	4790	341	2150
H14110250-007	3-042-1218	0	0	7.9	52	2	566	54	887
H14110250-008	3-042-1824	0	0	7.9	5	< 1	40	13	86
H14110250-009	3-050-1218	0	0	7.3	15	34	28400	20	9010
H14110250-010	3-050-1824	0	0	7.5	6	3	260	13	1320
H14110250-011	3-050-2430	0	0	6.8	7	2	417	14	487
H14110250-012	3-051w-0006	0	0	8.1	276	4	1210	217	1070
H14110250-013	3-051w-0612	0	0	7.9	33	< 1	185	39	177
H14110250-014	3-051w-1218	0	0	7.8	5	< 1	31	7	43
H14110250-015	3-057-0006	0	0	7.5	384	4	2260	404	1220
H14110250-016	3-057-0612	0	0	7.7	12	< 1	47	13	77
H14110250-017	3-057-1218	0	0	7.8	3	< 1	22	8	39
H14110250-018	3-064-0612	0	0	7.7	325	11	2520	175	3070
H14110250-019	3-064-1218	0	0	7.8	43	1	207	23	458
H14110250-020	3-064-1824	0	0	7.7	32	< 1	249	22	214
H14110250-021	3-227-0006	0	0	7.5	1340	8	7750	784	2230
H14110250-022	3-227-0612	0	0	7.6	24	< 1	127	18	484
H14110250-023	3-227-1218	0	0	7.4	12	< 1	54	16	250
H14110250-024	3-228-1218	0	0	7.7	76	8	305	17	2470
H14110250-025	3-228-1824	0	0	7.7	17	1	88	16	623
H14110250-026	3-228-2430	0	0	7.6	12	< 1	57	14	174
H14110250-027	3-228w-0006	0	0	7.9	17	< 1	49	7	63
H14110250-028	3-228w-0612	0	0	8.0	14	< 1	32	6	51
H14110250-029	3-240-4248	0	0	7.2	6	13	3790	28	1120
H14110250-030	3-240-4854	0	0	7.6	3	7	603	10	1160
H14110250-031	3-240-5460	0	0	7.7	13	2	199	13	846
H14110250-032	3-246-3036	0	0	7.1	37	< 1	2100	14	444
H14110250-033	3-246-3642	0	0	7.2	13	< 1	1640	16	324
H14110250-034	3-246-4248	0	0	7.4	13	1	1220	15	539
H14110250-035	3-247-0612	0	0	7.7	1650	31	18300	853	5190
H14110250-036	3-247-1218	0	0	7.7	61	1	463	42	321
H14110250-037	3-247-1824	0	0	7.7	8	< 1	49	19	91
H14110250-038	3-248-0006	0	0	7.8	331	4	2810	360	1290
H14110250-039	3-248-0612	0	0	7.6	8	< 1	65	13	124
H14110250-040	3-248-1218	0	0	7.6	5	< 1	45	19	70

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110250

Report Date: 12/05/14
Date Received: 11/14/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110250-041	3-265-3036	0	0	7.5	2040	16	15700	1130	4390
H14110250-042	3-265-3642	0	0	7.4	132	2	863	358	518
H14110250-043	3-265-4248	0	0	7.9	11	< 1	38	20	79
H14110250-044	3-286-0612	0	0	7.3	2740	16	19500	1200	4010
H14110250-045	3-286-1218	0	0	7.4	28	< 1	124	28	779
H14110250-046	3-286-1824	0	0	7.2	13	< 1	65	20	185
H14110250-047	3-268-0006	0	0	7.6	1090	14	10400	822	2820
H14110250-048	3-268-0006d	0	0	7.7	658	8	6300	510	1990
H14110250-049	3-268-0612	0	0	7.7	17	< 1	66	15	365
H14110250-050	3-268-1218	0	0	7.6	8	< 1	28	10	134
H14110250-051	3-269-0006	0	0	7.8	413	4	3260	446	1170
H14110250-052	3-269-0612	0	0	7.8	11	< 1	37	8	49
H14110250-053	3-269-1218	0	0	7.7	18	< 1	119	13	70
H14110250-054	3-289-1824	0	0	7.1	3310	22	23500	1390	6060
H14110250-055	3-289-2430	0	0	7.6	20	< 1	68	20	109
H14110250-056	3-289-3036	0	0	7.9	11	< 1	52	19	86
H14110250-057	3-289w-0006	0	0	8.1	55	< 1	192	27	159
H14110250-058	3-289w-0612	0	0	8.0	14	< 1	33	6	46

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141126A		
Lab ID: CCV_1_141126_1		Continuing Calibration Verification Standard								11/26/14 07:30
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141126_1		Continuing Calibration Verification Standard								11/26/14 07:31
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 07:32
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141126_1		Continuing Calibration Verification Standard								11/26/14 07:44
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141126_1		Continuing Calibration Verification Standard								11/26/14 08:00
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141126_1		Continuing Calibration Verification Standard								11/26/14 08:00
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 08:01
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141126_1		Continuing Calibration Verification Standard								11/26/14 08:12
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141126_1		Continuing Calibration Verification Standard								11/26/14 08:30
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141126_1		Continuing Calibration Verification Standard								11/26/14 08:31
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 08:31
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141126_1		Continuing Calibration Verification Standard								11/26/14 08:42
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 09:05
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 09:33
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141126_1		Initial Calibration Verification Standard								11/26/14 10:01
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27166
Lab ID: LCS-27166		Laboratory Control Sample				Run: SOIL PH METER_141126A				11/26/14 07:33
pH, sat. paste		7.66	s.u.	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27166
Lab ID: H14110250-010ADUP	Sample Duplicate					Run: SOIL PH METER_141126A			11/26/14 07:43	
pH, sat. paste		7.49	s.u.	0.10				0.1	30	
Lab ID: H14110250-020ADUP	Sample Duplicate					Run: SOIL PH METER_141126A			11/26/14 07:51	
pH, sat. paste		7.71	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27167
Lab ID: LCS-27167	Laboratory Control Sample					Run: SOIL PH METER_141126A			11/26/14 08:02	
pH, sat. paste		7.67	s.u.	0.10	103	95	105			
Lab ID: H14110250-030ADUP	Sample Duplicate					Run: SOIL PH METER_141126A			11/26/14 08:11	
pH, sat. paste		7.60	s.u.	0.10				0.0	30	
Lab ID: H14110250-040ADUP	Sample Duplicate					Run: SOIL PH METER_141126A			11/26/14 08:21	
pH, sat. paste		7.60	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27168
Lab ID: LCS-27168	Laboratory Control Sample					Run: SOIL PH METER_141126A			11/26/14 08:33	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H14110250-050ADUP	Sample Duplicate					Run: SOIL PH METER_141126A			11/26/14 08:41	
pH, sat. paste		7.60	s.u.	0.10				0.0	30	
Lab ID: H14110250-058ADUP	Sample Duplicate					Run: SOIL PH METER_141126A			11/26/14 08:49	
pH, sat. paste		8.06	s.u.	0.10				0.2	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141201C		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/01/14 12:53	
Arsenic			0.807	mg/L	0.0085	101	90	110			
Cadmium			0.396	mg/L	0.0010	99	90	110			
Copper			0.780	mg/L	0.010	98	90	110			
Lead			0.790	mg/L	0.010	99	90	110			
Zinc			0.810	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/01/14 13:08	
Arsenic			0.00809	mg/L	0.0085		0	0			
Cadmium			0.00212	mg/L	0.0010		0	0			
Copper			-0.00430	mg/L	0.010		0	0			
Lead			0.0221	mg/L	0.010		0	0			
Zinc			0.00257	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/01/14 13:12	
Arsenic			0.984	mg/L	0.0085	98	80	120			
Cadmium			0.932	mg/L	0.0010	93	80	120			
Copper			0.499	mg/L	0.010	100	80	120			
Lead			0.895	mg/L	0.010	89	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141202B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/02/14 09:22	
Arsenic			0.782	mg/L	0.0085	98	90	110			
Cadmium			0.384	mg/L	0.0010	96	90	110			
Copper			0.797	mg/L	0.010	100	90	110			
Lead			0.772	mg/L	0.010	96	90	110			
Zinc			0.784	mg/L	0.010	98	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/02/14 09:37	
Arsenic			0.00749	mg/L	0.0085		0	0			
Cadmium			0.00227	mg/L	0.0010		0	0			
Copper			-0.00355	mg/L	0.010		0	0			
Lead			-0.0179	mg/L	0.010		0	0			
Zinc			0.00168	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/02/14 09:41	
Arsenic			1.00	mg/L	0.0085	100	80	120			
Cadmium			0.921	mg/L	0.0010	92	80	120			
Copper			0.515	mg/L	0.010	103	80	120			
Lead			0.899	mg/L	0.010	90	80	120			
Zinc			0.998	mg/L	0.010	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27140
Lab ID:	**MB-27140**	5	Method Blank				Run: ICP2-HE_141201C				12/01/14 19:36
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27140**	5	Laboratory Fortified Blank				Run: ICP2-HE_141201C				12/01/14 19:40
Arsenic			47.9	mg/kg	1.0	96	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			49.6	mg/kg	1.0	99	80	120			
Lead			46.9	mg/kg	1.0	94	80	120			
Zinc			49.2	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27140**	5	Laboratory Control Sample				Run: ICP2-HE_141201C				12/01/14 19:43
Arsenic			278	mg/kg	1.8	81	72.3	106.4			
Cadmium			117	mg/kg	1.0	85	73	105.1			
Copper			254	mg/kg	1.1	91	77.5	109.6			
Lead			172	mg/kg	3.1	92	75.9	108.6			
Zinc			190	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14110218-028APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141201C				12/01/14 19:58
Arsenic			256	mg/kg	1.8	93	75	125			
Cadmium			108	mg/kg	1.0	84	75	125			
Copper			311	mg/kg	1.1	96	75	125			
Lead			226	mg/kg	3.3	85	75	125			
Zinc			321	mg/kg	1.0	92	75	125			
Lab ID:	**H14110218-028AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141201C				12/01/14 20:02
Arsenic			66.8	mg/kg	1.8	99	75	125			
Cadmium			22.5	mg/kg	1.0	89	75	125			
Copper			117	mg/kg	1.1	105	75	125			
Lead			56.9	mg/kg	3.2	100	75	125			
Zinc			133	mg/kg	1.0	96	75	125			
Lab ID:	**H14110218-028AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141201C				12/01/14 20:13
Arsenic			66.9	mg/kg	1.8	100	75	125	0.1	20	
Cadmium			22.5	mg/kg	1.0	90	75	125	0.1	20	
Copper			113	mg/kg	1.1	97	75	125	3.5	20	
Lead			58.0	mg/kg	3.2	103	75	125	1.8	20	
Zinc			132	mg/kg	1.0	94	75	125	1.0	20	
Lab ID:	**H14110250-058APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141201C				12/01/14 20:36
Arsenic			241	mg/kg	1.8	91	75	125			
Cadmium			103	mg/kg	1.0	82	75	125			
Copper			271	mg/kg	1.1	95	75	125			
Lead			213	mg/kg	3.2	85	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27140	
Lab ID:	**H14110250-058APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141201C			12/01/14 20:36	
Zinc			274	mg/kg	1.0	91	75	125			
Lab ID:	**H14110250-058AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141201C			12/01/14 20:40	
Arsenic			61.6	mg/kg	1.8	97	75	125			
Cadmium			22.2	mg/kg	1.0	91	75	125			
Copper			82.7	mg/kg	1.1	102	75	125			
Lead			52.9	mg/kg	3.1	108	75	125			
Zinc			95.6	mg/kg	1.0	101	75	125			
Lab ID:	**H14110250-058AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141201C			12/01/14 20:43	
Arsenic			63.8	mg/kg	1.8	101	75	125	3.5	20	
Cadmium			22.0	mg/kg	1.0	90	75	125	0.8	20	
Copper			83.7	mg/kg	1.1	104	75	125	1.1	20	
Lead			51.0	mg/kg	3.1	104	75	125	3.7	20	
Zinc			96.7	mg/kg	1.0	103	75	125	1.1	20	
Method:	**SW6010B**									Batch: 27142	
Lab ID:	**MB-27142**	5	Method Blank				Run: ICP2-HE_141201C			12/01/14 21:43	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1.0	mg/kg	0.09						
Lab ID:	**LFB-27142**	5	Laboratory Fortified Blank				Run: ICP2-HE_141201C			12/01/14 21:47	
Arsenic			47.7	mg/kg	1.0	95	80	120			
Cadmium			23.2	mg/kg	1.0	93	80	120			
Copper			49.8	mg/kg	1.0	99	80	120			
Lead			46.6	mg/kg	1.0	93	80	120			
Zinc			48.5	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27142**	5	Laboratory Control Sample				Run: ICP2-HE_141201C			12/01/14 21:51	
Arsenic			285	mg/kg	1.8	83	72.3	106.4			
Cadmium			117	mg/kg	1.0	85	73	105.1			
Copper			257	mg/kg	1.1	92	77.5	109.6			
Lead			176	mg/kg	3.2	94	75.9	108.6			
Zinc			192	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H14110250-018APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141201C			12/01/14 23:19	
Arsenic			549	mg/kg	1.8	88	75	125			
Cadmium			117	mg/kg	1.0	83	75	125			
Copper			2760	mg/kg	1.1		75	125			A
Lead			394	mg/kg	3.2	86	75	125			
Zinc			3270	mg/kg	1.0		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27142	
Lab ID:	**H14110250-018AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141201C			12/01/14 23:23	
Arsenic			363	mg/kg	1.8		75	125			A
Cadmium			32.7	mg/kg	1.0	88	75	125			
Copper			2490	mg/kg	1.1		75	125			A
Lead			217	mg/kg	3.1	84	75	125			
Zinc			3060	mg/kg	1.0		75	125			A
Lab ID:	**H14110250-018AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141201C			12/01/14 23:26	
Arsenic			370	mg/kg	1.8		75	125	2.0	20	A
Cadmium			31.4	mg/kg	1.0	82	75	125	4.0	20	
Copper			2760	mg/kg	1.1		75	125	10	20	A
Lead			216	mg/kg	3.2	83	75	125	0.2	20	
Zinc			2980	mg/kg	1.0		75	125	2.9	20	A
Method:	**SW6010B**									Batch: 27143	
Lab ID:	**MB-27143**	5	Method Blank				Run: ICP2-HE_141201C			12/01/14 23:37	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LFB-27143**	5	Laboratory Fortified Blank				Run: ICP2-HE_141201C			12/01/14 23:41	
Arsenic			47.7	mg/kg	1.0	95	80	120			
Cadmium			23.0	mg/kg	1.0	92	80	120			
Copper			49.5	mg/kg	1.0	98	80	120			
Lead			46.9	mg/kg	1.0	94	80	120			
Zinc			47.4	mg/kg	1.0	93	80	120			
Lab ID:	**LCS-27143**	5	Laboratory Control Sample				Run: ICP2-HE_141201C			12/01/14 23:45	
Arsenic			277	mg/kg	1.8	81	72.3	106.4			
Cadmium			113	mg/kg	1.0	82	73	105.1			
Copper			250	mg/kg	1.1	89	77.5	109.6			
Lead			170	mg/kg	3.1	91	75.9	108.6			
Zinc			184	mg/kg	1.0	86	74.2	109.9			
Lab ID:	**H14110250-036APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141201C			12/02/14 01:40	
Arsenic			290	mg/kg	1.8	90	75	125			
Cadmium			109	mg/kg	1.0	85	75	125			
Copper			690	mg/kg	1.1	89	75	125			
Lead			254	mg/kg	3.2	83	75	125			
Zinc			544	mg/kg	1.0	88	75	125			
Lab ID:	**H14110250-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141201C			12/02/14 01:43	
Arsenic			107	mg/kg	1.8	94	75	125			
Cadmium			22.7	mg/kg	1.0	88	75	125			
Copper			524	mg/kg	1.1		75	125			A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **SW6010B**										Batch: 27143
Lab ID: **H14110250-036AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141201C			12/02/14 01:43	
Lead		81.4	mg/kg	3.1	80	75	125			
Zinc		366	mg/kg	1.0		75	125			A
Lab ID: **H14110250-036AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141201C			12/02/14 01:47	
Arsenic		112	mg/kg	1.8	105	75	125	4.7	20	
Cadmium		22.9	mg/kg	1.0	88	75	125	0.7	20	
Copper		541	mg/kg	1.1		75	125	3.2	20	A
Lead		89.3	mg/kg	3.1	96	75	125	9.3	20	
Zinc		366	mg/kg	1.0		75	125	0.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27144
Lab ID:	**MB-27144**	5	Method Blank				Run: ICP2-HE_141202B			12/02/14 11:12	
Arsenic			0.6	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27144**	5	Laboratory Fortified Blank				Run: ICP2-HE_141202B			12/02/14 11:16	
Arsenic			48.6	mg/kg	1.0	96	80	120			
Cadmium			24.2	mg/kg	1.0	97	80	120			
Copper			50.9	mg/kg	1.0	102	80	120			
Lead			48.2	mg/kg	1.0	96	80	120			
Zinc			49.9	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-27144**	5	Laboratory Control Sample				Run: ICP2-HE_141202B			12/02/14 11:20	
Arsenic			282	mg/kg	1.8	82	72.3	106.4			
Cadmium			117	mg/kg	1.0	86	73	105.1			
Copper			266	mg/kg	1.1	95	77.5	109.6			
Lead			175	mg/kg	3.2	94	75.9	108.6			
Zinc			190	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14110250-054APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141202B			12/02/14 12:48	
Arsenic			3540	mg/kg	1.8		75	125			A
Cadmium			133	mg/kg	1.0	86	75	125			
Copper			23700	mg/kg	1.1		75	125			A
Lead			1600	mg/kg	3.3		75	125			A
Zinc			6280	mg/kg	1.0		75	125			A
Lab ID:	**H14110250-054AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141202B			12/02/14 12:52	
Arsenic			3300	mg/kg	1.8		75	125			A
Cadmium			44.5	mg/kg	1.0	90	75	125			
Copper			23800	mg/kg	1.1		75	125			A
Lead			1430	mg/kg	3.2		75	125			A
Zinc			5980	mg/kg	1.0		75	125			A
Lab ID:	**H14110250-054AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141202B			12/02/14 12:55	
Arsenic			3330	mg/kg	1.8		75	125	0.9	20	A
Cadmium			44.4	mg/kg	1.0	90	75	125	0.2	20	
Copper			23500	mg/kg	1.1		75	125	1.2	20	A
Lead			1440	mg/kg	3.2		75	125	0.4	20	A
Zinc			6000	mg/kg	1.0		75	125	0.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141201B	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/01/14 13:39	
Arsenic			0.0596	mg/L	0.0010	99	90	110			
Lead			0.0591	mg/L	0.0010	99	90	110			
Method:	**SW6020**									Batch: 27140	
Lab ID:	**MB-27140**	2	Method Blank				Run: ICPMS204-B_141201B			12/02/14 01:03	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27140**	2	Laboratory Control Sample				Run: ICPMS204-B_141201B			12/02/14 01:08	
Arsenic			289	mg/kg	1.0	84	72.3	106.4			
Lead			190	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27140**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141201B			12/02/14 01:12	
Arsenic			47.0	mg/kg	1.0	94	80	120			
Lead			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**H14110218-028APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141201B			12/02/14 01:43	
Arsenic			2450	mg/kg	1.0	98	75	125			
Lead			2220	mg/kg	1.0	89	75	125			
Lab ID:	**H14110218-028AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141201B			12/02/14 01:47	
Arsenic			62.3	mg/kg	1.0	94	75	125			
Lead			60.5	mg/kg	1.0	97	75	125			
Lab ID:	**H14110218-028AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141201B			12/02/14 01:52	
Arsenic			60.1	mg/kg	1.0	91	75	125	3.6	20	
Lead			60.1	mg/kg	1.0	97	75	125	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141202A	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/02/14 12:38	
Arsenic			0.0596	mg/L	0.0010	99	90	110			
Lead			0.0594	mg/L	0.0010	99	90	110			
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/02/14 22:41	
Arsenic			0.0606	mg/L	0.0010	101	90	110			
Lead			0.0609	mg/L	0.0010	101	90	110			
Method:	**SW6020**									Batch: 27142	
Lab ID:	**MB-27142**	2	Method Blank				Run: ICPMS204-B_141202A			12/03/14 05:04	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27142**	2	Laboratory Control Sample				Run: ICPMS204-B_141202A			12/03/14 05:09	
Arsenic			312	mg/kg	1.0	91	72.3	106.4			
Lead			191	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27142**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141202A			12/03/14 05:13	
Arsenic			49.1	mg/kg	1.0	98	80	120			
Lead			48.9	mg/kg	1.0	98	80	120			
Lab ID:	**H14110250-018APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141202A			12/03/14 06:42	
Arsenic			2640	mg/kg	1.0	93	75	125			
Lead			2480	mg/kg	1.0	93	75	125			
Lab ID:	**H14110250-018AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141202A			12/03/14 06:46	
Arsenic			394	mg/kg	1.0		75	125			A
Lead			235	mg/kg	1.0	105	75	125			
Lab ID:	**H14110250-018AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141202A			12/03/14 06:50	
Arsenic			411	mg/kg	1.0		75	125	4.3	20	A
Lead			242	mg/kg	1.0	121	75	125	3.3	20	
Method:	**SW6020**									Batch: 27143	
Lab ID:	**MB-27143**	2	Method Blank				Run: ICPMS204-B_141202A			12/03/14 06:54	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27143**	2	Laboratory Control Sample				Run: ICPMS204-B_141202A			12/03/14 06:59	
Arsenic			306	mg/kg	1.0	89	72.3	106.4			
Lead			188	mg/kg	1.0	100	75.9	108.6			
Lab ID:	**LFB-27143**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141202A			12/03/14 07:03	
Arsenic			50.5	mg/kg	1.0	101	80	120			
Lead			48.8	mg/kg	1.0	98	80	120			
Lab ID:	**H14110250-036APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141202A			12/03/14 08:50	
Arsenic			2410	mg/kg	1.0	95	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110250

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Batch: 27143	
Lab ID:	**H14110250-036APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141202A			12/03/14 08:50	
Lead			2410	mg/kg	1.0	96	75	125			
Lab ID:	**H14110250-036AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141202A			12/03/14 08:53	
Arsenic			99.1	mg/kg	1.0	65	75	125			S
Lead			69.7	mg/kg	1.0	68	75	125			S
Lab ID:	**H14110250-036AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141202A			12/03/14 08:58	
Arsenic			113	mg/kg	1.0	94	75	125	13	20	
Lead			78.5	mg/kg	1.0	86	75	125	12	20	
Method:	**SW6020**									Analytical Run: ICPMS204-B_141203A	
Lab ID:	**ICV STD**	2	Initial Calibration Verification Standard							12/03/14 14:30	
Arsenic			0.0601	mg/L	0.0010	100	90	110			
Lead			0.0596	mg/L	0.0010	99	90	110			
Method:	**SW6020**									Batch: 27144	
Lab ID:	**MB-27144**	2	Method Blank				Run: ICPMS204-B_141203A			12/03/14 17:52	
Arsenic			2	mg/kg	0.3						
Lead			1	mg/kg	0.2						
Lab ID:	**LCS-27144**	2	Laboratory Control Sample				Run: ICPMS204-B_141203A			12/03/14 17:57	
Arsenic			317	mg/kg	1.0	92	72.3	106.4			
Lead			191	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27144**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141203A			12/03/14 18:01	
Arsenic			50.8	mg/kg	1.0	97	80	120			
Lead			49.0	mg/kg	1.0	95	80	120			
Lab ID:	**H14110250-054APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141203A			12/03/14 19:03	
Arsenic			6160	mg/kg	1.0	111	75	125			
Lead			3090	mg/kg	1.0	75	75	125			
Lab ID:	**H14110250-054AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141203A			12/03/14 19:06	
Arsenic			3560	mg/kg	1.0		75	125			A
Lead			1270	mg/kg	1.0		75	125			A
Lab ID:	**H14110250-054AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141203A			12/03/14 19:11	
Arsenic			3590	mg/kg	1.0		75	125	0.9	20	A
Lead			1290	mg/kg	1.0		75	125	1.8	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14110250

Login completed by: Tracy L. Lorash
Date Received: 11/14/2014
Reviewed by: BL2000\rwilliams
Received by: wjj
Reviewed Date: 11/20/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Collection time on COC for 3-057-0612 is 9:12 - sample bag has 09:2. Logged in with time from COC.
Collection time on COC for 3-240-4248 is 12:45 - sample bag has 12:40. Logged in with time from COC.
Cooler 1 was received at 0.9°C with temperature taken from a temperature blank, Cooler 2 at 0.4°C with temperature taken from a client sample. Samples were received on wet ice. TI 11/17/14

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.: 111414-1

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: M. Peters

H14110250

SAMPLE ID C2	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-013w-0006	11/10/2014	10:28	Soil	A	B		1
3-013w-0612	11/10/2014	10:27	Soil	A	B		1
3-041-0006	11/10/2014	7:58	Soil	A	B		1
3-041-0612	11/10/2014	7:57	Soil	A	B		1
3-041-1218	11/10/2014	7:56	Soil	A	B		1
3-042-0612	11/10/2014	8:51	Soil	A	B		1
3-042-1218	11/10/2014	8:50	Soil	A	B		1
3-042-1824	11/10/2014	8:49	Soil	A	B		1
3-050-1218	11/10/2014	8:25	Soil	A	B		1
3-050-1824	11/10/2014	8:24	Soil	A	B		1
3-050-2430	11/10/2014	8:23	Soil	A	B		1
3-051w-0006	11/10/2014	10:48	Soil	A	B		1
3-051w-0612	11/10/2014	10:46	Soil	A	B		1
3-051w-1218	11/10/2014	10:44	Soil	A	B		1
3-057-0006	11/10/2014	9:14	Soil	A	B		1
3-057-0612	11/10/2014	9:12	Soil	A	B		1
3-057-1218	11/10/2014	9:10	Soil	A	B		1
3-064-0612	11/10/2014	9:57	Soil	A	B		1
3-064-1218	11/10/2014	9:55	Soil	A	B		1
3-064-1824	11/10/2014	9:53	Soil	A	B		1

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 11/14/14 1545	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] ONICE TB 0.9 C-1 ØTB 0.7 C-2	11-14-14 1545

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.: 111414-2

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: M. Peters H14110250

SAMPLE ID C2	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-227-0006	11/10/2014	12:21	Soil	A	B		1
3-227-0612	11/10/2014	12:19	Soil	A	B		1
3-227-1218	11/10/2014	12:17	Soil	A	B		1
3-228-1218	11/10/2014	11:50	Soil	A	B		1
3-228-1824	11/10/2014	11:49	Soil	A	B		1
3-228-2430	11/10/2014	11:48	Soil	A	B		1
3-228w-0006	11/10/2014	14:45	Soil	A	B		1
3-228w-0612	11/10/2014	14:44	Soil	A	B		1
3-240-4248	11/10/2014	12:45	Soil	A	B		1
3-240-4854	11/10/2014	13:10	Soil	A	B		1
3-240-5460	11/10/2014	13:05	Soil	A	B		1
3-246-3036 C1	11/10/2014	13:29	Soil	A	B		1
3-246-3642	11/10/2014	13:27	Soil	A	B		1
3-246-4248	11/10/2014	13:25	Soil	A	B		1
3-247-0612	11/10/2014	14:07	Soil	A	B		1
3-247-1218	11/10/2014	14:05	Soil	A	B		1
3-247-1824	11/10/2014	14:03	Soil	A	B		1
3-248-0006	11/10/2014	14:34	Soil	A	B		1
3-248-0612	11/10/2014	14:32	Soil	A	B		1
3-248-1218	11/10/2014	14:30	Soil	A	B		1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 11/14/14 1545	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature]	11-14-14 1545

on ice
TB 0.9 C-1
07B 0.4 C-2

CDM Smith

Chain of Custody Record

Company Name:

MDEQ - Remediation Division

Report Mail Address:

50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:

PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452

Task Order: DEQ-Clark Fork River - Phases 3 & 4

Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.: 111414-3

Receipt Temp: (°C)

Sample Origin: MT

EPA/State Compliance: N

Sampler: M. Peters H14110250

SAMPLE ID C1	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
3-265-3036	11/10/2014	15:09	Soil	A	B		1
3-265-3642	11/10/2014	15:07	Soil	A	B		1
3-265-4248	11/10/2014	15:05	Soil	A	B		1
3-286-0612	11/10/2014	15:42	Soil	A	B		1
3-286-1218	11/10/2014	15:40	Soil	A	B		1
3-286-1824	11/10/2014	15:38	Soil	A	B		1
3-268-0006	11/11/2014	9:47	Soil	A	B		1
3-268-0006d	11/11/2014	9:48	Soil	A	B		1
3-268-0612	11/11/2014	9:46	Soil	A	B		1
3-268-1218	11/11/2014	9:45	Soil	A	B		1
3-269-0006	11/11/2014	8:43	Soil	A	B		1
3-269-0612	11/11/2014	8:41	Soil	A	B		1
3-269-1218	11/11/2014	8:40	Soil	A	B		1
3-289-1824	11/11/2014	8:09	Soil	A	B		1
3-289-2430	11/11/2014	8:04	Soil	A	B		1
3-289-3036	11/11/2014	8:03	Soil	A	B		1
3-289w-0006	11/11/2014	9:20	Soil	A	B		1
3-289w-0612	11/11/2014	9:19	Soil	A	B		1
							1
							1

Analyses Key:

A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:

1 - Ice

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 11/14/14 1545	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	On Ice TB 0.9 C-1 RTB 0.4 C-2 [signature]	11-14-14 1545

ANALYTICAL SUMMARY REPORT

November 21, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110244

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 4 samples for MT DEQ-Federal Superfund on 11/14/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110244-001	CCB10-110714	11/07/14 10:45	11/14/14	Aqueous	Metals by ICP/ICPMS, Total pH Metals Digestion by EPA 200.2
H14110244-002	FB21-111014	11/10/14 10:55	11/14/14	Aqueous	Same As Above
H14110244-003	FB22-111014	11/10/14 14:40	11/14/14	Aqueous	Same As Above
H14110244-004	FB23-111114	11/11/14 9:49	11/14/14	Aqueous	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110244-001
Client Sample ID: CCB10-110714

Report Date: 11/21/14
Collection Date: 11/07/14 10:45
DateReceived: 11/14/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	11/17/14 15:50 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/19/14 21:51 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/19/14 21:51 / dck
Copper	ND	mg/L		0.005		E200.8	11/19/14 21:51 / dck
Lead	ND	mg/L		0.001		E200.8	11/19/14 21:51 / dck
Zinc	ND	mg/L		0.01		E200.8	11/19/14 21:51 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110244-002
Client Sample ID: FB21-111014

Report Date: 11/21/14
Collection Date: 11/10/14 10:55
DateReceived: 11/14/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	11/17/14 15:56 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/19/14 22:08 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/19/14 22:08 / dck
Copper	ND	mg/L		0.005		E200.8	11/19/14 22:08 / dck
Lead	ND	mg/L		0.001		E200.8	11/19/14 22:08 / dck
Zinc	ND	mg/L		0.01		E200.8	11/19/14 22:08 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110244-003
Client Sample ID: FB22-111014

Report Date: 11/21/14
Collection Date: 11/10/14 14:40
DateReceived: 11/14/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	11/17/14 15:59 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/19/14 22:13 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/19/14 22:13 / dck
Copper	ND	mg/L		0.005		E200.8	11/19/14 22:13 / dck
Lead	ND	mg/L		0.001		E200.8	11/19/14 22:13 / dck
Zinc	ND	mg/L		0.01		E200.8	11/19/14 22:13 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110244-004
Client Sample ID: FB23-111114

Report Date: 11/21/14
Collection Date: 11/11/14 09:49
DateReceived: 11/14/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	11/17/14 16:01 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/19/14 22:17 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/19/14 22:17 / dck
Copper	ND	mg/L		0.005		E200.8	11/19/14 22:17 / dck
Lead	ND	mg/L		0.001		E200.8	11/19/14 22:17 / dck
Zinc	ND	mg/L		0.01		E200.8	11/19/14 22:17 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/21/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110244

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A4500-H B								Analytical Run: PHSC_101-H_141117A		
Lab ID: pH 7		Initial Calibration Verification Standard							11/17/14 08:41	
pH		7.0	s.u.	0.1	100	98	102			
Lab ID: CCV - pH 7		Continuing Calibration Verification Standard							11/17/14 09:34	
pH		7.0	s.u.	0.1	100	98	102			
Method: A4500-H B									Batch: R102214	
Lab ID: H14110244-001ADUP		Sample Duplicate				Run: PHSC_101-H_141117A			11/17/14 15:53	
pH		5.6	s.u.	0.1				0.2	3	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/21/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110244

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_141119B		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							11/19/14 10:21	
Arsenic			0.0594	mg/L	0.0050	99	90	110			
Cadmium			0.0307	mg/L	0.0010	102	90	110			
Copper			0.0617	mg/L	0.010	103	90	110			
Lead			0.0589	mg/L	0.010	98	90	110			
Zinc			0.0616	mg/L	0.010	103	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/19/14 10:25	
Arsenic			0.000122	mg/L	0.0050						
Cadmium			0.000477	mg/L	0.0010						
Copper			0.000382	mg/L	0.010						
Lead			0.000231	mg/L	0.010						
Zinc			0.00143	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/19/14 10:29	
Arsenic			0.0104	mg/L	0.0050	104	70	130			
Cadmium			0.00958	mg/L	0.0010	96	70	130			
Copper			0.0203	mg/L	0.010	101	70	130			
Lead			0.000231	mg/L	0.010		0	0			
Zinc			0.0117	mg/L	0.010	117	70	130			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							11/19/14 16:41	
Arsenic			0.0592	mg/L	0.0050	99	90	110			
Cadmium			0.0314	mg/L	0.0010	105	90	110			
Copper			0.0610	mg/L	0.010	102	90	110			
Lead			0.0582	mg/L	0.010	97	90	110			
Zinc			0.0606	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/19/14 16:46	
Arsenic			0.000158	mg/L	0.0050						
Cadmium			0.000456	mg/L	0.0010						
Copper			0.000381	mg/L	0.010						
Lead			0.000213	mg/L	0.010						
Zinc			0.00163	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/19/14 16:50	
Arsenic			0.0101	mg/L	0.0050	101	70	130			
Cadmium			0.00955	mg/L	0.0010	96	70	130			
Copper			0.0198	mg/L	0.010	99	70	130			
Lead			0.000233	mg/L	0.010		0	0			
Zinc			0.0111	mg/L	0.010	111	70	130			
Method:	**E200.8**										Batch: 27058
Lab ID:	**MB-27058**	5	Method Blank				Run: ICPMS204-B_141119B			11/19/14 21:39	
Arsenic			ND	mg/L	6E-05						
Cadmium			ND	mg/L	3E-05						
Copper			0.0005	mg/L	0.0003						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/21/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110244

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**										Batch: 27058
Lab ID:	**MB-27058**	5	Method Blank				Run: ICPMS204-B_141119B			11/19/14 21:39	
Lead			ND	mg/L	3E-05						
Zinc			0.002	mg/L	0.001						
Lab ID:	**LCS-27058**	5	Laboratory Control Sample				Run: ICPMS204-B_141119B			11/19/14 21:43	
Arsenic			0.501	mg/L	0.0010	100	85	115			
Cadmium			0.261	mg/L	0.0010	105	85	115			
Copper			0.507	mg/L	0.0050	101	85	115			
Lead			0.504	mg/L	0.0010	101	85	115			
Zinc			0.497	mg/L	0.010	99	85	115			
Lab ID:	**H14110244-001BMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_141119B			11/19/14 21:56	
Arsenic			0.492	mg/L	0.0010	98	70	130			
Cadmium			0.256	mg/L	0.0010	103	70	130			
Copper			0.492	mg/L	0.0050	98	70	130			
Lead			0.505	mg/L	0.0010	101	70	130			
Zinc			0.484	mg/L	0.010	96	70	130			
Lab ID:	**H14110244-001BMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141119B			11/19/14 22:00	
Arsenic			0.493	mg/L	0.0010	99	70	130	0.3	20	
Cadmium			0.260	mg/L	0.0010	104	70	130	1.2	20	
Copper			0.504	mg/L	0.0050	101	70	130	2.5	20	
Lead			0.504	mg/L	0.0010	101	70	130	0.2	20	
Zinc			0.489	mg/L	0.010	97	70	130	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14110244

Login completed by: Tracy L. Lorash

Date Received: 11/14/2014

Reviewed by: BL2000\rwilliams

Received by: wjj

Reviewed Date: 11/20/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	0.9°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample ID on COC is FB23-111014 -ID on bottles is FB23-111114. Logged in with ID from bottles. TI 11/17/14

CDM Smith

Chain of Custody Record

Company Name:
MDEQ - Remediation Division

Report Mail Address:
50 West 14th ST STE 200
Helena, MT 59601

Invoice Address:
PO Box 200901
Helena, MT 5620-0901

Project Manager: Karin Mainhausen, CDM Smith 406-441-1452
Task Order: DEQ-Clark Fork River - Phases 3 & 4
Invoice Contact: Brian Bartkowiak, DEQ 406-461-3070

Chain of Custody No.: QC-111414

Receipt Temp: (°C)

Sample Origin: MT
EPA/State Compliance: N

Sampler: H14110244

SAMPLE ID	DATE	TIME	SAMPLE MEDIA	Analyses		REMARKS	PRES. USED
CCB10-110714	11/7/2014	10:45	Water	A	B		1, 2
FB21-111014	11/10/2014	10:55	Water	A	B		1, 2
FB22-111014	11/10/2014	14:40	Water	A	B		1, 2
FB23-111014	11/11/2014	9:49	Water	A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2
				A	B		1, 2

Analyses Key:
A - Total As, Cd, Cu, Pb, Zn *B - pH*

Preservatives Used:
1 - Ice 2 - HNO3

Relinquished By (sign):	Received By (sign):	Relinquished By (sign):	Received By (sign):
(1) [signature]	(1)	(2)	(2)
Date/Time: 11/14/14 1545	Date/Time:	Date/Time:	Date/Time:

Courier and Airbill No.:	Laboratory Name and Address:	Received for Laboratory By (sign):	Date/Time:
Hand Deliver	Energy Laboratories 406-442-0711 3161 E Lyndale Ave Helena, MT 59601	[signature] temp 0.9 on Ice	11-14-14 1545

COC111414 pg 1-3.xls

ANALYTICAL SUMMARY REPORT

December 05, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110219

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 54 samples for MT DEQ-Federal Superfund on 11/12/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110219-001	3-203-1824	11/04/14 12:29	11/12/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14110219-002	3-203-2430	11/04/14 12:27	11/12/14	Soil	Cancelled Sample
H14110219-003	3-204-1824	11/04/14 12:58	11/12/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14110219-004	3-204-2430	11/04/14 12:55	11/12/14	Soil	Same As Above
H14110219-005	3-204-3036	11/04/14 13:00	11/12/14	Soil	Same As Above
H14110219-006	3-205-1824	11/04/14 13:28	11/12/14	Soil	Same As Above
H14110219-007	3-205-2430	11/04/14 13:26	11/12/14	Soil	Same As Above
H14110219-008	3-205-3036	11/04/14 13:24	11/12/14	Soil	Same As Above
H14110219-009	3-187-3642	11/04/14 10:48	11/12/14	Soil	Same As Above
H14110219-010	3-187-4248	11/04/14 10:46	11/12/14	Soil	Same As Above
H14110219-011	3-073w-0612	11/06/14 14:01	11/12/14	Soil	Same As Above
H14110219-012	3-073w-1218	11/06/14 14:02	11/12/14	Soil	Same As Above
H14110219-013	3-073-2430	11/06/14 12:38	11/12/14	Soil	Same As Above
H14110219-014	3-073-2430d	11/06/14 12:39	11/12/14	Soil	Same As Above
H14110219-015	3-073-3036	11/06/14 12:37	11/12/14	Soil	Same As Above
H14110219-016	3-073-3642	11/06/14 12:36	11/12/14	Soil	Same As Above
H14110219-017	3-099-0612	11/06/14 10:36	11/12/14	Soil	Same As Above
H14110219-018	3-099-1218	11/06/14 10:35	11/12/14	Soil	Same As Above
H14110219-019	3-099-1824	11/06/14 10:34	11/12/14	Soil	Same As Above
H14110219-020	3-099-1824d	11/06/14 10:34	11/12/14	Soil	Same As Above
H14110219-021	3-099s-0006	11/06/14 11:17	11/12/14	Soil	Same As Above
H14110219-022	3-099s-0612	11/06/14 11:17	11/12/14	Soil	Same As Above
H14110219-023	3-099s-1218	11/06/14 11:16	11/12/14	Soil	Same As Above
H14110219-024	3-108-1218	11/06/14 10:20	11/12/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110219-025	3-108-1824	11/06/14 10:19	11/12/14	Soil	Same As Above
H14110219-026	3-108-2430	11/06/14 10:18	11/12/14	Soil	Same As Above
H14110219-027	3-108w-0006	11/06/14 9:18	11/12/14	Soil	Same As Above
H14110219-028	3-117-1218	11/06/14 9:40	11/12/14	Soil	Same As Above
H14110219-029	3-117-1824	11/06/14 9:39	11/12/14	Soil	Same As Above
H14110219-030	3-108w-0612	11/06/14 9:17	11/12/14	Soil	Same As Above
H14110219-031	3-117-2430	11/06/14 9:38	11/12/14	Soil	Same As Above
H14110219-032	3-117w-0006	11/06/14 11:44	11/12/14	Soil	Same As Above
H14110219-033	3-117w-0612	11/06/14 11:43	11/12/14	Soil	Same As Above
H14110219-034	3-117w-1218	11/06/14 11:42	11/12/14	Soil	Same As Above
H14110219-035	3-126-0006	11/06/14 8:41	11/12/14	Soil	Same As Above
H14110219-036	3-126-0612	11/06/14 8:40	11/12/14	Soil	Same As Above
H14110219-037	3-126-1218	11/06/14 8:39	11/12/14	Soil	Same As Above
H14110219-038	3-126w-0006	11/06/14 10:03	11/12/14	Soil	Same As Above
H14110219-039	3-127-0612	11/06/14 8:17	11/12/14	Soil	Same As Above
H14110219-040	3-127-1218	11/06/14 8:15	11/12/14	Soil	Same As Above
H14110219-041	3-127-1218d	11/06/14 8:16	11/12/14	Soil	Same As Above
H14110219-042	3-127-1824	11/06/14 8:14	11/12/14	Soil	Same As Above
H14110219-043	3-131-0612	11/06/14 7:54	11/12/14	Soil	Same As Above
H14110219-044	3-131-1218	11/06/14 7:53	11/12/14	Soil	Same As Above
H14110219-045	3-131-1824	11/06/14 7:52	11/12/14	Soil	Same As Above
H14110219-046	3-131w-0006	11/06/14 9:03	11/12/14	Soil	Same As Above
H14110219-047	3-131w-0612	11/06/14 9:02	11/12/14	Soil	Same As Above
H14110219-048	3-131w-1218	11/06/14 9:01	11/12/14	Soil	Same As Above
H14110219-049	3-138w2-0006	11/06/14 7:29	11/12/14	Soil	Same As Above
H14110219-050	3-138w2-0612	11/06/14 7:28	11/12/14	Soil	Same As Above
H14110219-051	3-138w2-1218	11/06/14 7:27	11/12/14	Soil	Same As Above
H14110219-052	3-183w3-0006	11/06/14 7:40	11/12/14	Soil	Same As Above
H14110219-053	3-143-0006w3	11/05/14 14:32	11/12/14	Soil	Same As Above
H14110219-054	3-203-3036	11/04/14 12:25	11/12/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110219

Report Date: 12/05/14
Date Received: 11/12/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	Client Sample ID	Up	Low	Results	Results	Results	Results	Results	Results
H14110219-001	3-203-1824	0	0	7.5	17	< 1	148	23	534
H14110219-003	3-204-1824	0	0	7.6	2620	16	18200	1080	3640
H14110219-004	3-204-2430	0	0	7.1	13	< 1	95	23	106
H14110219-005	3-204-3036	0	0	6.7	14	< 1	106	32	128
H14110219-006	3-205-1824	0	0	7.3	18	1	715	14	586
H14110219-007	3-205-2430	0	0	7.3	13	< 1	237	12	636
H14110219-008	3-205-3036	0	0	7.4	23	< 1	272	11	402
H14110219-009	3-187-3642	0	0	7.2	3	< 1	712	10	458
H14110219-010	3-187-4248	0	0	7.7	4	< 1	878	9	261
H14110219-011	3-073w-0612	0	0	8.0	17	< 1	43	7	43
H14110219-012	3-073w-1218	0	0	7.9	7	< 1	25	7	36
H14110219-013	3-073-2430	0	0	7.5	107	< 1	42	13	84
H14110219-014	3-073-2430d	0	0	7.5	1160	< 1	93	17	989
H14110219-015	3-073-3036	0	0	7.6	43	< 1	21	8	48
H14110219-016	3-073-3642	0	0	7.8	13	< 1	19	8	56
H14110219-017	3-099-0612	0	0	8.0	226	3	1260	243	1000
H14110219-018	3-099-1218	0	0	7.4	279	6	2320	326	1970
H14110219-019	3-099-1824	0	0	7.7	5	< 1	35	17	79
H14110219-020	3-099-1824d	0	0	7.8	6	< 1	39	18	76
H14110219-021	3-099s-0006	0	0	8.0	249	2	778	190	710
H14110219-022	3-099s-0612	0	0	7.8	14	< 1	55	20	96
H14110219-023	3-099s-1218	0	0	8.2	7	< 1	35	8	31
H14110219-024	3-108-1218	0	0	7.5	891	11	6720	501	3680
H14110219-025	3-108-1824	0	0	7.9	45	< 1	161	20	161
H14110219-026	3-108-2430	0	0	7.7	7	< 1	31	13	62
H14110219-027	3-108w-0006	0	0	7.8	33	< 1	59	12	66
H14110219-028	3-117-1218	0	0	7.4	224	5	1760	272	1350
H14110219-029	3-117-1824	0	0	7.5	537	6	3930	227	1840
H14110219-030	3-108w-0612	0	0	7.9	9	< 1	19	5	42
H14110219-031	3-117-2430	0	0	7.7	12	< 1	83	16	84
H14110219-032	3-117w-0006	0	0	7.9	155	2	1160	234	708
H14110219-033	3-117w-0612	0	0	7.7	14	< 1	94	18	79
H14110219-034	3-117w-1218	0	0	7.8	7	< 1	30	7	52
H14110219-035	3-126-0006	0	0	7.8	144	2	848	190	943
H14110219-036	3-126-0612	0	0	7.7	384	4	2580	316	1110
H14110219-037	3-126-1218	0	0	7.5	8	< 1	39	11	60
H14110219-038	3-126w-0006	0	0	8.1	62	< 1	43	5	40
H14110219-039	3-127-0612	0	0	7.8	405	3	2230	360	1200
H14110219-040	3-127-1218	0	0	7.6	66	1	470	68	529
H14110219-041	3-127-1218d	0	0	7.7	17	< 1	97	22	151

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110219

Report Date: 12/05/14
Date Received: 11/12/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110219-042	3-127-1824	0	0	7.6	53	< 1	382	62	226
H14110219-043	3-131-0612	0	0	7.6	871	8	5420	493	2330
H14110219-044	3-131-1218	0	0	7.8	17	< 1	91	19	102
H14110219-045	3-131-1824	0	0	7.5	6	< 1	40	19	95
H14110219-046	3-131w-0006	0	0	8.0	219	3	964	182	929
H14110219-047	3-131w-0612	0	0	7.9	8	< 1	36	9	57
H14110219-048	3-131w-1218	0	0	7.8	4	< 1	23	8	39
H14110219-049	3-138w2-0006	0	0	8.0	228	4	1160	208	1030
H14110219-050	3-138w2-0612	0	0	7.9	14	< 1	59	14	84
H14110219-051	3-138w2-1218	0	0	7.8	11	< 1	65	19	102
H14110219-052	3-183w3-0006	0	0	8.0	106	2	172	38	150
H14110219-053	3-143-0006w3	0	0	7.8	187	3	1040	195	980
H14110219-054	3-203-3036	0	0	7.3	16	< 1	56	21	95

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110219

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141125A		
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 08:28
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 08:54
pH, sat. paste		9.97	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 09:21
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 10:05
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_1_141124_1		Continuing Calibration Verification Standard								11/25/14 10:45
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141124_1		Continuing Calibration Verification Standard								11/25/14 10:46
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 10:46
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141124_1		Continuing Calibration Verification Standard								11/25/14 10:57
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141124_1		Continuing Calibration Verification Standard								11/25/14 11:15
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141124_1		Continuing Calibration Verification Standard								11/25/14 11:16
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 11:17
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141124_1		Continuing Calibration Verification Standard								11/25/14 11:27
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141124_1		Continuing Calibration Verification Standard								11/25/14 11:45
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141124_1		Continuing Calibration Verification Standard								11/25/14 11:45
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 11:46
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141124_1		Continuing Calibration Verification Standard								11/25/14 11:56
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 07:12
pH, sat. paste		10.0	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110219

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_141125A	
Lab ID: ICV_4_141124_1		Initial Calibration Verification Standard							11/25/14 13:22	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard							11/25/14 13:53	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2									Batch: 27129	
Lab ID: LCS-27129		Laboratory Control Sample				Run: SOIL PH METER_141125A			11/25/14 10:48	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			
Lab ID: H14110219-010ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 10:56	
pH, sat. paste		7.74	s.u.	0.10				0.0	30	
Lab ID: H14110219-020ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 11:04	
pH, sat. paste		7.74	s.u.	0.10				0.3	30	
Method: ASAM10-3.2									Batch: 27130	
Lab ID: LCS-27130		Laboratory Control Sample				Run: SOIL PH METER_141125A			11/25/14 11:18	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H14110219-030ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 11:26	
pH, sat. paste		7.87	s.u.	0.10				0.1	30	
Lab ID: H14110219-040ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 11:34	
pH, sat. paste		7.64	s.u.	0.10				0.0	30	
Method: ASAM10-3.2									Batch: 27131	
Lab ID: LCS-27131		Laboratory Control Sample				Run: SOIL PH METER_141125A			11/25/14 11:47	
pH, sat. paste		7.62	s.u.	0.10	102	95	105			
Lab ID: H14110219-050ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 11:56	
pH, sat. paste		7.92	s.u.	0.10				0.0	30	
Lab ID: H14110219-054ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 12:00	
pH, sat. paste		7.32	s.u.	0.10				0.3	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110219

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141126A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							11/26/14 09:57	
Arsenic			0.799	mg/L	0.0085	100	90	110			
Cadmium			0.395	mg/L	0.0010	99	90	110			
Copper			0.790	mg/L	0.010	99	90	110			
Lead			0.795	mg/L	0.010	99	90	110			
Zinc			0.802	mg/L	0.010	100	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/26/14 10:12	
Arsenic			-0.00144	mg/L	0.0085		0	0			
Cadmium			-0.00143	mg/L	0.0010		0	0			
Copper			-0.00387	mg/L	0.010		0	0			
Lead			-0.00869	mg/L	0.010		0	0			
Zinc			0.00272	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/26/14 10:16	
Arsenic			1.01	mg/L	0.0085	101	80	120			
Cadmium			0.937	mg/L	0.0010	94	80	120			
Copper			0.512	mg/L	0.010	102	80	120			
Lead			0.941	mg/L	0.010	94	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141201C		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/01/14 12:53	
Arsenic			0.807	mg/L	0.0085	101	90	110			
Cadmium			0.396	mg/L	0.0010	99	90	110			
Copper			0.780	mg/L	0.010	98	90	110			
Lead			0.790	mg/L	0.010	99	90	110			
Zinc			0.810	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/01/14 13:08	
Arsenic			0.00809	mg/L	0.0085		0	0			
Cadmium			0.00212	mg/L	0.0010		0	0			
Copper			-0.00430	mg/L	0.010		0	0			
Lead			0.0221	mg/L	0.010		0	0			
Zinc			0.00257	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/01/14 13:12	
Arsenic			0.984	mg/L	0.0085	98	80	120			
Cadmium			0.932	mg/L	0.0010	93	80	120			
Copper			0.499	mg/L	0.010	100	80	120			
Lead			0.895	mg/L	0.010	89	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110219

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27137	
Lab ID:	**MB-27137**	5	Method Blank				Run: ICP2-HE_141126A			11/26/14 23:01	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27137**	5	Laboratory Fortified Blank				Run: ICP2-HE_141126A			11/26/14 23:05	
Arsenic			48.5	mg/kg	1.0	97	80	120			
Cadmium			24.0	mg/kg	1.0	96	80	120			
Copper			48.5	mg/kg	1.0	97	80	120			
Lead			48.1	mg/kg	1.0	96	80	120			
Zinc			49.4	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27137**	5	Laboratory Control Sample				Run: ICP2-HE_141126A			11/26/14 23:09	
Arsenic			282	mg/kg	1.8	82	72.3	106.4			
Cadmium			117	mg/kg	1.0	85	73	105.1			
Copper			245	mg/kg	1.1	87	77.5	109.6			
Lead			167	mg/kg	3.2	90	75.9	108.6			
Zinc			191	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14110219-020APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141126A			11/27/14 00:42	
Arsenic			221	mg/kg	1.8	85	75	125			
Cadmium			104	mg/kg	1.0	81	75	125			
Copper			249	mg/kg	1.1	82	75	125			
Lead			225	mg/kg	3.3	81	75	125			
Zinc			297	mg/kg	1.0	86	75	125			
Lab ID:	**H14110219-020AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141126A			11/27/14 00:45	
Arsenic			48.7	mg/kg	1.8	93	75	125			
Cadmium			20.8	mg/kg	1.0	85	75	125			
Copper			83.4	mg/kg	1.1	91	75	125			
Lead			57.0	mg/kg	3.1	78	75	125			
Zinc			124	mg/kg	1.0	98	75	125			
Lab ID:	**H14110219-020AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141126A			11/27/14 00:49	
Arsenic			50.1	mg/kg	1.8	94	75	125	2.9	20	
Cadmium			21.2	mg/kg	1.0	84	75	125	1.8	20	
Copper			83.1	mg/kg	1.1	88	75	125	0.4	20	
Lead			64.7	mg/kg	3.2	92	75	125	13	20	
Zinc			125	mg/kg	1.0	98	75	125	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110219

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27138
Lab ID:	**MB-27138**	5	Method Blank				Run: ICP2-HE_141201C				12/01/14 15:34
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-27138**	5	Laboratory Fortified Blank				Run: ICP2-HE_141201C				12/01/14 15:38
Arsenic			46.3	mg/kg	1.0	93	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			49.2	mg/kg	1.0	98	80	120			
Lead			46.0	mg/kg	1.0	92	80	120			
Zinc			49.5	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27138**	5	Laboratory Control Sample				Run: ICP2-HE_141201C				12/01/14 15:41
Arsenic			282	mg/kg	1.8	82	72.3	106.4			
Cadmium			120	mg/kg	1.0	87	73	105.1			
Copper			271	mg/kg	1.1	97	77.5	109.6			
Lead			178	mg/kg	3.2	95	75.9	108.6			
Zinc			198	mg/kg	1.0	93	74.2	109.9			
Lab ID:	**H14110219-038APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141201C				12/01/14 17:37
Arsenic			308	mg/kg	1.9	95	75	125			
Cadmium			112	mg/kg	1.0	86	75	125			
Copper			298	mg/kg	1.1	98	75	125			
Lead			229	mg/kg	3.3	86	75	125			
Zinc			285	mg/kg	1.0	94	75	125			
Lab ID:	**H14110219-038AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141201C				12/01/14 17:41
Arsenic			116	mg/kg	1.8	107	75	125			
Cadmium			23.5	mg/kg	1.0	93	75	125			
Copper			97.4	mg/kg	1.1	107	75	125			
Lead			53.4	mg/kg	3.2	94	75	125			
Zinc			93.1	mg/kg	1.0	105	75	125			
Lab ID:	**H14110219-038AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141201C				12/01/14 17:45
Arsenic			111	mg/kg	1.8	99	75	125	4.1	20	
Cadmium			22.9	mg/kg	1.0	91	75	125	2.5	20	
Copper			98.0	mg/kg	1.1	109	75	125	0.6	20	
Lead			47.7	mg/kg	3.2	83	75	125	11	20	
Zinc			90.9	mg/kg	1.0	102	75	125	2.4	20	
Method:	**SW6010B**										Batch: 27139
Lab ID:	**MB-27139**	5	Method Blank				Run: ICP2-HE_141201C				12/01/14 17:48
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110219

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27139
Lab ID:	**MB-27139**	5	Method Blank				Run: ICP2-HE_141201C				12/01/14 17:48
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27139**	5	Laboratory Fortified Blank				Run: ICP2-HE_141201C				12/01/14 18:00
Arsenic			49.1	mg/kg	1.0	98	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			50.4	mg/kg	1.0	101	80	120			
Lead			47.7	mg/kg	1.0	95	80	120			
Zinc			49.4	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27139**	5	Laboratory Control Sample				Run: ICP2-HE_141201C				12/01/14 18:03
Arsenic			288	mg/kg	1.8	84	72.3	106.4			
Cadmium			117	mg/kg	1.0	85	73	105.1			
Copper			253	mg/kg	1.1	90	77.5	109.6			
Lead			175	mg/kg	3.2	94	75.9	108.6			
Zinc			193	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H14110219-054APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141201C				12/01/14 19:17
Arsenic			237	mg/kg	1.8	88	75	125			
Cadmium			105	mg/kg	1.0	82	75	125			
Copper			280	mg/kg	1.1	88	75	125			
Lead			225	mg/kg	3.2	80	75	125			
Zinc			313	mg/kg	1.0	86	75	125			
Lab ID:	**H14110219-054AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141201C				12/01/14 19:28
Arsenic			64.4	mg/kg	2.1	104	75	125			
Cadmium			23.5	mg/kg	1.0	95	75	125			
Copper			109	mg/kg	1.3	107	75	125			
Lead			63.7	mg/kg	3.8	88	75	125			
Zinc			148	mg/kg	1.0	108	75	125			
Lab ID:	**H14110219-054AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141201C				12/01/14 19:32
Arsenic			59.3	mg/kg	1.8	94	75	125	8.2	20	
Cadmium			21.5	mg/kg	1.0	87	75	125	8.9	20	
Copper			103	mg/kg	1.1	95	75	125	5.7	20	
Lead			64.2	mg/kg	3.1	89	75	125	0.8	20	
Zinc			135	mg/kg	1.0	82	75	125	9.1	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110219

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141202A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/02/14 12:38	
Arsenic			0.0596	mg/L	0.0010	99	90	110			
Cadmium			0.0313	mg/L	0.0010	104	90	110			
Lead			0.0594	mg/L	0.0010	99	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/02/14 22:41	
Arsenic			0.0606	mg/L	0.0010	101	90	110			
Cadmium			0.0319	mg/L	0.0010	106	90	110			
Lead			0.0609	mg/L	0.0010	101	90	110			
Method:	**SW6020**									Batch: 27137	
Lab ID:	**MB-27137**	2	Method Blank				Run: ICPMS204-B_141202A			12/03/14 00:05	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27137**	2	Laboratory Control Sample				Run: ICPMS204-B_141202A			12/03/14 00:09	
Arsenic			313	mg/kg	1.0	91	72.3	106.4			
Lead			193	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-27137**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141202A			12/03/14 00:14	
Arsenic			49.4	mg/kg	1.0	99	80	120			
Lead			48.8	mg/kg	1.0	98	80	120			
Lab ID:	**H14110219-020APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141202A			12/03/14 01:11	
Arsenic			2320	mg/kg	1.0	93	75	125			
Lead			2310	mg/kg	1.0	92	75	125			
Lab ID:	**H14110219-020AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141202A			12/03/14 01:15	
Arsenic			50.3	mg/kg	1.0	91	75	125			
Lead			58.9	mg/kg	1.0	90	75	125			
Lab ID:	**H14110219-020AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141202A			12/03/14 01:19	
Arsenic			53.5	mg/kg	1.0	95	75	125	6.1	20	
Lead			62.0	mg/kg	1.0	94	75	125	5.2	20	
Method:	**SW6020**									Batch: 27138	
Lab ID:	**MB-27138**	3	Method Blank				Run: ICPMS204-B_141202A			12/03/14 01:37	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27138**	3	Laboratory Control Sample				Run: ICPMS204-B_141202A			12/03/14 01:42	
Arsenic			330	mg/kg	1.0	96	72.3	106.4			
Cadmium			134	mg/kg	1.0	98	73	105.1			
Lead			202	mg/kg	1.0	108	75.9	108.6			
Lab ID:	**LFB-27138**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141202A			12/03/14 01:46	
Arsenic			50.4	mg/kg	1.0	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110219

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27138
Lab ID:	**LFB-27138**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141202A				12/03/14 01:46
Cadmium			25.2	mg/kg	1.0	101	80	120			
Lead			48.3	mg/kg	1.0	97	80	120			
Lab ID:	**H14110219-038APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141202A				12/03/14 03:10
Arsenic			2440	mg/kg	1.0	95	75	125			
Cadmium			1170	mg/kg	1.0	93	75	125			
Lead			2390	mg/kg	1.0	95	75	125			
Lab ID:	**H14110219-038AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141202A				12/03/14 03:14
Arsenic			112	mg/kg	1.0	103	75	125			
Cadmium			25.3	mg/kg	1.0	98	75	125			
Lead			54.4	mg/kg	1.0	97	75	125			
Lab ID:	**H14110219-038AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141202A				12/03/14 03:18
Arsenic			107	mg/kg	1.0	94	75	125	4.9	20	
Cadmium			23.5	mg/kg	1.0	92	75	125	7.3	20	
Lead			51.5	mg/kg	1.0	92	75	125	5.6	20	
Method:	**SW6020**										Batch: 27139
Lab ID:	**MB-27139**	3	Method Blank				Run: ICPMS204-B_141202A				12/03/14 03:36
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27139**	3	Laboratory Control Sample				Run: ICPMS204-B_141202A				12/03/14 03:41
Arsenic			306	mg/kg	1.0	89	72.3	106.4			
Cadmium			125	mg/kg	1.0	91	73	105.1			
Lead			190	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27139**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141202A				12/03/14 03:45
Arsenic			50.2	mg/kg	1.0	100	80	120			
Cadmium			25.3	mg/kg	1.0	101	80	120			
Lead			48.3	mg/kg	1.0	97	80	120			
Lab ID:	**H14110219-054APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141202A				12/03/14 04:51
Arsenic			2340	mg/kg	1.0	94	75	125			
Cadmium			1130	mg/kg	1.0	91	75	125			
Lead			2350	mg/kg	1.0	94	75	125			
Lab ID:	**H14110219-054AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141202A				12/03/14 04:55
Arsenic			68.9	mg/kg	1.0	107	75	125			
Cadmium			25.8	mg/kg	1.0	103	75	125			
Lead			73.2	mg/kg	1.0	106	75	125			
Lab ID:	**H14110219-054AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141202A				12/03/14 05:00
Arsenic			65.6	mg/kg	1.0	101	75	125	4.8	20	
Cadmium			24.6	mg/kg	1.0	99	75	125	4.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110219

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020										Batch: 27139
Lab ID: H14110219-054AMSD	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141202A			12/03/14 05:00	
Lead		70.0	mg/kg	1.0	100	75	125	4.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14110219

Login completed by: Tracy L. Lorash

Date Received: 11/12/2014

Reviewed by: BL2000\rwilliams

Received by: TLL

Reviewed Date: 12/3/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Samples received frozen.
Sample 3-203-2430 not received in laboratory.
No collection date on sample bag for 3-204-3036. Logged in with date from COC.
Sample ID on COC is 3-073w-0612 -ID on bag is 3-072w-0612. Logged in with ID from COC.
Sample ID on COC is 3-073w-1218 -ID on bag is 3-072w-12-18. Logged in with ID from COC.
Sample ID on COC is 3-183w3-0006 -ID on bag is 3-138-0006w3. Logged in with ID from COC.
Received samples labeled 3-2063-3036 collected 11/4/14 @ 12:25 and 3-143-0006w3 collected 11/5/14 @ 14:32 that are not on the COC. Per Karin, we are to analyze.
Cooler 1 was received at -1.4°C, Cooler 2 at -2.8°C, Cooler 3 at -1.4°C, Cooler 4 at -3.4°C, Cooler 5 at -2.7°C.
Samples were not received on ice. Tl 11/13/14

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name:	Project Name, PWS, Permit, Etc.	Sample Origin	EPA/State Compliance:
MDEQ-Remediation Division	DEQ-Clark Fork River - Phases 3 and 4	State: MT	Yes ◯ No ◯

Report Mail Address (Required):
50 West 14 street, Suite 200
Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM — Phone/Fax: (406) 441-1413 — Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required):
PO box 200901
Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids
Vegetation Bioassay Other
DW - Drinking Water

ANALYSIS REQUESTED

Standard Turnaround (TAT) ◯ RUSH ◯

➡ Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): Y
Receipt Temp: See comments
On Ice: Y (N)
Custody Seal: On Bottle Y (N); On Cooler Y (N)
Intact Y N
Signature Match Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Comments
C4	1 3-203-1824	11/4/14	12:29	S	★	★									C1: -1.4
	2 3-203-2430	11/4/14	12:27	S	★	★									C2: -2.8
C4	3 3-204-1824	11/4/14	12:58	S	★	★									C3: -1.4
	4 3-204-2430	11/4/14	12:55	S	★	★									C4: -3.4
C4	5 3-204-3036	11/4/14	13:00	S	★	★									C5: -2.7
C4	6 3-205-1824	11/4/14	13:28	S	★	★									
C4	7 3-205-2430	11/4/14	13:26	S	★	★									
C4	8 3-205-3036	11/4/14	13:24	S	★	★									
C2	9 3-187-3642	11/4/14	10:48	S	★	★									
	10 3-187-4248	11/4/14	10:46	S	★	★									

LABORATORY USE ONLY: H14110219

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Pegan Peters	11/4/14 @ 14:42				
Relinquished by (print): S	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
Sample Disposal: Return to Client: ◯		Lab Disposal: ◯	Received by Laboratory: Tracy Lerad	Date/Time: 11/12/14 14:42	Signature: Tracy Lerad

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name:	Project Name, PWS, Permit, Etc.	Sample Origin	EPA/State Compliance:
MDEQ-Remediation Division	DEQ-Clark Fork River - Phases 3 and 4	State: MT	Yes ◯ No ◯

Report Mail Address (Required):
50 West 14 street, Suite 200
Helena Montana 59601
☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM
Phone/Fax: (406) 441-1413
Cell: (406) 465-0898
Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070
Purchase Order:
Quote/Bottle Order:

Invoice Address (Required):
PO box 200901
Helena, MT 56620-0901
☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): Y
Receipt Temp: See comment
On Ice: Y N
Custody Seal: On Bottle Y N; On Cooler Y N
Intact Y N
Signature Match Y N

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
C2	1 3-073w-0612	11/6/14	14:01	S	★	★									◉	◯	C1: -1.4	H14110219
C2	2 3-073w-1218	11/6/14	14:02	S	★	★									◉	◯	C2: -2.8	
C4	3 3-073-2430	11/6/14	12:38	S	★	★									◉	◯	C3: -1.4	
	4 3-073-2430d	11/6/14	12:39	S	★	★									◉	◯	C4: -3.4	
C3	5 3-073-3036	11/6/14	12:37	S	★	★									◉	◯	C5: -2.7	
	6 3-073-3642	11/6/14	12:36	S	★	★									◉	◯		
	7 3-099-0612	11/6/14	10:36	S	★	★									◉	◯		
	8 3-099-1218	11/6/14	10:35	S	★	★									◉	◯		
	9 3-099-1824	11/6/14	10:34	S	★	★									◉	◯		
	10 3-099-1824d	11/6/14	10:34	S	★	★									◉	◯		

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mark Peters	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Arnold Date/Time: 11/12/14 14:42 Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

ANALYSIS REQUESTED

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): 4

Receipt Temp: See comments °C

On Ice: Y (N)

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact Y N

Signature Match Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
C1	1 3-099s-0006	11/6/14	11:17	S	★	★									◉	◯	C1: -1.4	H14110219
C3	2 3-099s-0612	11/6/14	11:17	S	★	★									◉	◯	C2: -2.8	
	3 3-099s-1218	11/6/14	11:16	S	★	★									◉	◯	C3: -1.4	
	4 3-108-1218	11/6/14	10:20	S	★	★									◉	◯	C4: -3.4	
	5 3-108-1824	11/6/14	10:19	S	★	★									◉	◯	C5: -2.7	
	6 3-108-2430	11/6/14	10:18	S	★	★									◉	◯		
	7 3-108w-0006	11/6/14	09:18	S	★	★									◉	◯		
	8 3-117-1218	11/6/14	09:40	S	★	★									◉	◯		
	9 3-117-1824	11/6/14	09:39	S	★	★									◉	◯		
	10 3-108w-0612	11/6/14	09:17	S	★	★									◉	◯		

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mara Peters	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Lerch Date/Time: 11/12/14 14:42 Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data)
Format:
☐ LEVEL IV
☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): Y

Receipt Temp: See comment

On Ice: Y (N)

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact: Y N

Signature Match: Y N

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
C3 1	3-117-2430	11/6/14	09:38	S	★	★									◉	◯	C1: -1.4	H14110219
2	3-117w-0006	11/6/14	11:44	S	★	★									◉	◯	C2: -2.8	
3	3-117w-0612	11/6/14	11:43	S	★	★									◉	◯	C3: -1.4	
4	3-117w-1218	11/6/14	11:42	S	★	★									◉	◯	C4: -3.4	
5	3-126-0006	11/6/14	08:41	S	★	★									◉	◯	C5: -2.7	
6	3-126-0612	11/6/14	08:40	S	★	★									◉	◯		
7	3-126-1218	11/6/14	08:39	S	★	★									◉	◯		
8	3-126w-0006	11/6/14	10:03	S	★	★									◉	◯		
9	3-127-0612	11/6/14	08:17	S	★	★									◉	◯		
10	3-127-1218	11/6/14	08:15	S	★	★									◉	◯		

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S MARK PETERS	11/12/14 @ 1940				
S					

Received by Laboratory: Tracy Lorad — Date/Time: 11/12/14 14:42 — Signature: Tracy Lorad

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Chain of Custody and Analytical Request Record

ENERGY LABORATORIES

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ POTW/WWTP ☐ State: ☐ Other:
☐ EDD/EDT (Electronic Data) Format: ☐ LEVEL IV ☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): Y

Receipt Temp: See comments

On Ice: Y (N)

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact Y N

Signature Match Y N

Number of Containers / Sample Type: A W S V B O DW / Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

ANALYSIS REQUESTED: total AS, Cd, Cu, Pb, Zn; pH; SEE ATTACHED

Standard Turnaround (TAT) ◉ / RUSH ◯

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH	SEE ATTACHED	Comments
C3 1	3-127-1218d	11/6/14	08:16	S	★	★		C1: -1.4
2	3-127-1824	11/6/14	08:14	S	★	★		C2: -2.8
3	3-131-0612	11/6/14	07:54	S	★	★		C3: -1.4
4	3-131-1218	11/6/14	07:53	S	★	★		C4: -3.4
5	3-131-1824	11/6/14	07:52	S	★	★		C5: -2.7
6	3-131w-0006	11/6/14	09:03	S	★	★		
7	3-131w-0612	11/6/14	09:02	S	★	★		
8	3-131w-1218	11/6/14	09:01	S	★	★		
9	3-138w2-0006	11/6/14	07:29	S	★	★		
10	3-138w2-0612	11/6/14	07:28	S	★	★		

LABORATORY USE ONLY: H14110219

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S MARK PETERS	11/12/14 @ 14:42				
S					

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

Received by Laboratory: Tracy Conrad Date/Time: 11/12/14 14:42 Signature: Tracy Conrad

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ POTW/WWTP ☐ State: ☐ Other:
☐ EDD/EDT (Electronic Data) Format: ☐ LEVEL IV ☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

ANALYSIS REQUESTED

Standard Turnaround (TAT) ◯ RUSH ◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): Y

Receipt Temp: See comments

On Ice: Y (N)

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact: Y N

Signature Match: Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Comments	LABORATORY USE ONLY
1	3-138w2-1218	11/6/14	07:27	S	★	★									C1: -1.4	H14110219
2	3-183w3-0006	11/6/14	07:40	S	★	★									C2: -2.8	
3				S	★	★									C3: -1.4	
4				S	★	★									C4: -3.4	
5				S	★	★									C5: -2.7	
6				S	★	★										
7				S	★	★										
8				S	★	★										
9				S	★	★										
10				S	★	★										

C3 1

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S MARK PETERS	11/6/14 @ 9:42				
S					

Received by Laboratory: Tracy Lind Date/Time: 11/12/14 14:42 Signature: Tracy Lind

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ANALYTICAL SUMMARY REPORT

December 02, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110218

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 80 samples for MT DEQ-Federal Superfund on 11/12/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110218-001	3-153-w2-0006	11/05/14 13:20	11/12/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14110218-002	3-163-0006	11/05/14 7:55	11/12/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14110218-003	3-163-0612	11/05/14 7:53	11/12/14	Soil	Same As Above
H14110218-004	3-163-1218	11/05/14 7:51	11/12/14	Soil	Same As Above
H14110218-005	3-163w-0006	11/05/14 12:06	11/12/14	Soil	Same As Above
H14110218-006	3-163w-0612	11/05/14 12:04	11/12/14	Soil	Same As Above
H14110218-007	3-163w-1218	11/05/14 12:02	11/12/14	Soil	Same As Above
H14110218-008	3-163w2-0006	11/05/14 12:26	11/12/14	Soil	Same As Above
H14110218-009	3-163w2-0612	11/05/14 12:24	11/12/14	Soil	Same As Above
H14110218-010	3-163w2-1218	11/05/14 12:22	11/12/14	Soil	Same As Above
H14110218-011	3-163w3-0006	11/05/14 12:44	11/12/14	Soil	Same As Above
H14110218-012	3-163w3-0612	11/05/14 12:42	11/12/14	Soil	Same As Above
H14110218-013	3-163w3-1218	11/05/14 12:40	11/12/14	Soil	Same As Above
H14110218-014	3-163w4-0006	11/05/14 11:38	11/12/14	Soil	Same As Above
H14110218-015	3-178-1218	11/05/14 8:15	11/12/14	Soil	Same As Above
H14110218-016	3-178-1824	11/05/14 8:13	11/12/14	Soil	Same As Above
H14110218-017	3-178-2430	11/05/14 8:11	11/12/14	Soil	Same As Above
H14110218-018	3-178w-0006	11/05/14 11:46	11/12/14	Soil	Same As Above
H14110218-019	3-178w-0612	11/05/14 11:44	11/12/14	Soil	Same As Above
H14110218-020	3-178w-1218	11/05/14 11:42	11/12/14	Soil	Same As Above
H14110218-021	3-190-0612	11/05/14 9:32	11/12/14	Soil	Same As Above
H14110218-022	3-190-1824	11/05/14 9:28	11/12/14	Soil	Same As Above
H14110218-023	3-190-2430	11/05/14 9:26	11/12/14	Soil	Same As Above
H14110218-024	3-193-0006	11/05/14 8:49	11/12/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110218-025	3-193-0612	11/05/14 8:47	11/12/14	Soil	Same As Above
H14110218-026	3-193-1218	11/05/14 8:45	11/12/14	Soil	Same As Above
H14110218-027	3-193w-0006	11/05/14 11:21	11/12/14	Soil	Same As Above
H14110218-028	3-193w-0612	11/05/14 11:19	11/12/14	Soil	Same As Above
H14110218-029	3-193w-1218	11/05/14 11:17	11/12/14	Soil	Same As Above
H14110218-030	3-193-0006w2	11/05/14 11:15	11/12/14	Soil	Same As Above
H14110218-031	3-207-1824	11/05/14 9:56	11/12/14	Soil	Same As Above
H14110218-032	3-207-2430	11/05/14 9:54	11/12/14	Soil	Same As Above
H14110218-033	3-207-3036	11/05/14 9:52	11/12/14	Soil	Same As Above
H14110218-034	3-207w-0006	11/05/14 14:06	11/12/14	Soil	Same As Above
H14110218-035	3-207w-0612	11/05/14 14:04	11/12/14	Soil	Same As Above
H14110218-036	3-207w-1218	11/05/14 14:02	11/12/14	Soil	Same As Above
H14110218-037	3-207w2-0006	11/05/14 12:30	11/12/14	Soil	Same As Above
H14110218-038	3-220-1824	11/05/14 10:28	11/12/14	Soil	Same As Above
H14110218-039	3-220-2430	11/05/14 10:26	11/12/14	Soil	Same As Above
H14110218-040	3-220-3036	11/05/14 10:24	11/12/14	Soil	Same As Above
H14110218-041	3-157-3642	11/04/14 7:41	11/12/14	Soil	Same As Above
H14110218-042	3-157-4248	11/04/14 7:40	11/12/14	Soil	Same As Above
H14110218-043	3-162-2430	11/04/14 15:26	11/12/14	Soil	Same As Above
H14110218-044	3-162-3036	11/04/14 15:24	11/12/14	Soil	Same As Above
H14110218-045	3-162-3642	11/04/14 15:22	11/12/14	Soil	Same As Above
H14110218-046	3-172-1218	11/04/14 8:16	11/12/14	Soil	Same As Above
H14110218-047	3-172-1824	11/04/14 8:14	11/12/14	Soil	Same As Above
H14110218-048	3-172-1824d	11/04/14 8:15	11/12/14	Soil	Same As Above
H14110218-049	3-172-2430	11/04/14 8:13	11/12/14	Soil	Same As Above
H14110218-050	3-173-0006	11/04/14 8:37	11/12/14	Soil	Same As Above
H14110218-051	3-173-0612	11/04/14 8:36	11/12/14	Soil	Same As Above
H14110218-052	3-173-1218	11/04/14 8:35	11/12/14	Soil	Same As Above
H14110218-053	3-175-2430	11/04/14 15:06	11/12/14	Soil	Same As Above
H14110218-054	3-175-3036	11/04/14 15:04	11/12/14	Soil	Same As Above
H14110218-055	3-175-3642	11/04/14 15:02	11/12/14	Soil	Same As Above
H14110218-056	3-176-3036	11/04/14 14:34	11/12/14	Soil	Same As Above
H14110218-057	3-176-3642	11/04/14 14:32	11/12/14	Soil	Same As Above
H14110218-058	3-176-4248	11/04/14 14:30	11/12/14	Soil	Same As Above
H14110218-059	3-183-1218	11/04/14 11:23	11/12/14	Soil	Same As Above
H14110218-060	3-183-1218d	11/04/14 11:25	11/12/14	Soil	Same As Above
H14110218-061	3-183-1824	11/04/14 11:21	11/12/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110218-062	3-183-2430	11/04/14 11:19	11/12/14	Soil	Same As Above
H14110218-063	3-184-1824	11/04/14 8:59	11/12/14	Soil	Same As Above
H14110218-064	3-184-2430	11/04/14 8:58	11/12/14	Soil	Same As Above
H14110218-065	3-184-3036	11/04/14 8:57	11/12/14	Soil	Same As Above
H14110218-066	3-185-3642	11/04/14 9:29	11/12/14	Soil	Same As Above
H14110218-067	3-185-4248	11/04/14 9:27	11/12/14	Soil	Same As Above
H14110218-068	3-185-4854	11/04/14 9:55	11/12/14	Soil	Same As Above
H14110218-069	3-187-2430	11/04/14 10:52	11/12/14	Soil	Same As Above
H14110218-070	3-187-3036	11/04/14 10:50	11/12/14	Soil	Same As Above
H14110218-071	3-189-1824	11/04/14 14:08	11/12/14	Soil	Same As Above
H14110218-072	3-189-2430	11/04/14 14:06	11/12/14	Soil	Same As Above
H14110218-073	3-189-3036	11/04/14 14:04	11/12/14	Soil	Same As Above
H14110218-074	3-201-1824	11/04/14 10:35	11/12/14	Soil	Same As Above
H14110218-075	3-201-2430	11/04/14 10:34	11/12/14	Soil	Same As Above
H14110218-076	3-201-3036	11/04/14 10:33	11/12/14	Soil	Same As Above
H14110218-077	3-202-1824	11/04/14 11:59	11/12/14	Soil	Same As Above
H14110218-078	3-202-2430	11/04/14 11:57	11/12/14	Soil	Same As Above
H14110218-079	3-202-3036	11/04/14 11:55	11/12/14	Soil	Same As Above
H14110218-080	3-203-1218	11/04/14 12:31	11/12/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110218

Report Date: 12/02/14
Date Received: 11/12/14

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110218-001	3-153-w2-0006		7.6	160	3	1200	202	842
H14110218-002	3-163-0006		7.8	421	4	1620	344	1230
H14110218-003	3-163-0612		7.6	17	< 1	72	22	112
H14110218-004	3-163-1218		7.6	7	< 1	47	18	98
H14110218-005	3-163w-0006		7.7	59	< 1	270	43	252
H14110218-006	3-163w-0612		7.8	27	< 1	63	18	110
H14110218-007	3-163w-1218		7.7	9	< 1	43	18	96
H14110218-008	3-163w2-0006		8.0	200	2	1030	229	684
H14110218-009	3-163w2-0612		7.7	19	< 1	109	21	107
H14110218-010	3-163w2-1218		7.7	5	< 1	26	16	60
H14110218-011	3-163w3-0006		7.8	561	6	1860	487	1830
H14110218-012	3-163w3-0612		7.7	6	< 1	29	10	62
H14110218-013	3-163w3-1218		7.7	2	< 1	30	14	65
H14110218-014	3-163w4-0006		8.0	90	< 1	126	17	93
H14110218-015	3-178-1218		7.3	1790	21	20700	1770	4810
H14110218-016	3-178-1824		7.4	842	3	1390	254	1290
H14110218-017	3-178-2430		7.6	9	< 1	20	6	49
H14110218-018	3-178w-0006		7.8	103	2	257	52	215
H14110218-019	3-178w-0612		7.9	13	< 1	25	6	42
H14110218-020	3-178w-1218		7.8	5	< 1	21	5	37
H14110218-021	3-190-0612		7.5	728	5	8090	396	2100
H14110218-022	3-190-1824		7.3	10	< 1	89	15	592
H14110218-023	3-190-2430		7.1	6	< 1	48	19	212
H14110218-024	3-193-0006		7.9	374	5	1870	312	1710
H14110218-025	3-193-0612		7.7	163	4	1450	214	1330
H14110218-026	3-193-1218		7.6	20	2	179	19	354
H14110218-027	3-193w-0006		7.7	242	4	858	156	803
H14110218-028	3-193w-0612		7.6	15	< 1	64	12	85
H14110218-029	3-193w-1218		7.6	5	< 1	18	6	40
H14110218-030	3-193-0006w2		7.9	171	3	347	73	263
H14110218-031	3-207-1824		7.2	2540	23	24500	1780	5560
H14110218-032	3-207-2430		7.3	622	< 1	157	16	306
H14110218-033	3-207-3036		7.1	62	< 1	59	18	144
H14110218-034	3-207w-0006		8.0	521	6	2300	471	1800
H14110218-035	3-207w-0612		7.7	10	< 1	32	9	51
H14110218-036	3-207w-1218		7.8	5	< 1	28	9	41
H14110218-037	3-207w2-0006		7.7	47	< 1	104	15	71
H14110218-038	3-220-1824		7.1	1800	15	13200	1600	3490
H14110218-039	3-220-2430		6.2	503	1	169	62	214
H14110218-040	3-220-3036		6.4	251	< 1	159	17	99

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110218

Report Date: 12/02/14
Date Received: 11/12/14

		Analysis	pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units	s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**		**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110218-041	3-157-3642		6.9	13	6	13100	13	524
H14110218-042	3-157-4248		7.3	7	2	3580	12	456
H14110218-043	3-162-2430		7.2	810	14	6150	633	5850
H14110218-044	3-162-3036		7.4	14	< 1	98	22	119
H14110218-045	3-162-3642		7.5	7	< 1	55	18	102
H14110218-046	3-172-1218		7.3	816	23	8990	647	5850
H14110218-047	3-172-1824		7.2	9	< 1	68	19	213
H14110218-048	3-172-1824d		7.2	22	< 1	219	25	332
H14110218-049	3-172-2430		7.4	10	< 1	103	14	147
H14110218-050	3-173-0006		7.4	1250	24	13900	919	5000
H14110218-051	3-173-0612		7.4	19	< 1	279	38	212
H14110218-052	3-173-1218		7.4	4	< 1	24	10	49
H14110218-053	3-175-2430		7.4	36	< 1	118	24	1090
H14110218-054	3-175-3036		7.5	7	< 1	34	17	85
H14110218-055	3-175-3642		7.5	8	< 1	48	22	103
H14110218-056	3-176-3036		7.2	8	< 1	46	20	1150
H14110218-057	3-176-3642		7.7	12	< 1	124	11	387
H14110218-058	3-176-4248		7.6	9	< 1	86	15	197
H14110218-059	3-183-1218		7.2	2140	19	19900	1890	4450
H14110218-060	3-183-1218d		7.3	596	18	10100	1980	4300
H14110218-061	3-183-1824		6.5	93	< 1	419	36	1260
H14110218-062	3-183-2430		7.3	21	< 1	69	19	90
H14110218-063	3-184-1824		7.4	1100	13	8030	822	4110
H14110218-064	3-184-2430		7.5	29	< 1	154	40	153
H14110218-065	3-184-3036		7.4	18	< 1	119	22	93
H14110218-066	3-185-3642		7.4	7	6	5980	24	894
H14110218-067	3-185-4248		7.3	3	5	2100	9	503
H14110218-068	3-185-4854		7.8	11	8	3130	12	265
H14110218-069	3-187-2430		7.2	234	43	39200	990	9690
H14110218-070	3-187-3036		7.2	5	< 1	86	9	394
H14110218-071	3-189-1824		7.6	51	2	540	32	1140
H14110218-072	3-189-2430		7.4	9	< 1	53	11	91
H14110218-073	3-189-3036		7.1	11	< 1	66	18	116
H14110218-074	3-201-1824		7.1	528	4	11200	719	2760
H14110218-075	3-201-2430		7.4	38	< 1	348	44	1630
H14110218-076	3-201-3036		7.3	8	< 1	49	17	131
H14110218-077	3-202-1824		7.6	10	9	1200	15	2060
H14110218-078	3-202-2430		7.6	14	< 1	59	17	85
H14110218-079	3-202-3036		7.6	8	< 1	48	14	63
H14110218-080	3-203-1218		7.4	1470	12	14100	1050	3750

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141125A		
Lab ID: CCV_1_141124_1		Continuing Calibration Verification Standard								11/25/14 08:27
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141124_1		Continuing Calibration Verification Standard								11/25/14 08:27
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 08:28
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141124_1		Continuing Calibration Verification Standard								11/25/14 08:38
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141124_1		Continuing Calibration Verification Standard								11/25/14 08:52
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141124_1		Continuing Calibration Verification Standard								11/25/14 08:52
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 08:54
pH, sat. paste		9.97	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141124_1		Continuing Calibration Verification Standard								11/25/14 09:04
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141124_1		Continuing Calibration Verification Standard								11/25/14 09:43
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141124_1		Continuing Calibration Verification Standard								11/25/14 09:20
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 09:21
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141124_1		Continuing Calibration Verification Standard								11/25/14 09:32
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141124_1		Continuing Calibration Verification Standard								11/25/14 10:04
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141124_1		Continuing Calibration Verification Standard								11/25/14 10:04
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 10:05
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141124_1		Continuing Calibration Verification Standard								11/25/14 10:17
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard								11/25/14 10:46
pH, sat. paste		9.99	s.u.	0.10	100	99	101			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141125A		
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard							11/25/14 11:17	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard							11/25/14 11:46	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard							11/25/14 07:12	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_4_141124_1		Initial Calibration Verification Standard							11/25/14 13:22	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141124_1		Initial Calibration Verification Standard							11/25/14 13:53	
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27125
Lab ID: LCS-27125		Laboratory Control Sample				Run: SOIL PH METER_141125A			11/25/14 08:29	
pH, sat. paste		7.71	s.u.	0.10	103	95	105			
Lab ID: H14110218-010ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 08:37	
pH, sat. paste		7.70	s.u.	0.10				0.0	30	
Lab ID: H14110218-020ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 08:45	
pH, sat. paste		7.80	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27126
Lab ID: LCS-27123		Laboratory Control Sample				Run: SOIL PH METER_141125A			11/25/14 08:55	
pH, sat. paste		7.61	s.u.	0.10	102	95	105			
Lab ID: H14110218-030ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 09:03	
pH, sat. paste		7.89	s.u.	0.10				0.1	30	
Lab ID: H14110218-040ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 09:11	
pH, sat. paste		6.39	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27127
Lab ID: LCS-27127		Laboratory Control Sample				Run: SOIL PH METER_141125A			11/25/14 09:21	
pH, sat. paste		7.63	s.u.	0.10	102	95	105			
Lab ID: H14110218-050ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 09:32	
pH, sat. paste		7.39	s.u.	0.10				0.1	30	
Lab ID: H14110218-060ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 09:41	
pH, sat. paste		7.32	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27128
Lab ID: LCS-27128		Laboratory Control Sample				Run: SOIL PH METER_141125A			11/25/14 10:07	
pH, sat. paste		7.64	s.u.	0.10	102	95	105			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27128
Lab ID: H14110218-070ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 10:17	
pH, sat. paste		7.20	s.u.	0.10				0.1	30	
Lab ID: H14110218-080ADUP		Sample Duplicate				Run: SOIL PH METER_141125A			11/25/14 10:26	
pH, sat. paste		7.39	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141125B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							11/25/14 09:25	
Arsenic			0.773	mg/L	0.0085	97	90	110			
Cadmium			0.378	mg/L	0.0010	95	90	110			
Copper			0.792	mg/L	0.010	99	90	110			
Lead			0.756	mg/L	0.010	94	90	110			
Zinc			0.779	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/25/14 09:40	
Arsenic			0.00475	mg/L	0.0085		0	0			
Cadmium			0.00329	mg/L	0.0010		0	0			
Copper			3.00E-05	mg/L	0.010		0	0			
Lead			0.00863	mg/L	0.010		0	0			
Zinc			0.00691	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/25/14 09:44	
Arsenic			0.959	mg/L	0.0085	96	80	120			
Cadmium			0.872	mg/L	0.0010	87	80	120			
Copper			0.519	mg/L	0.010	104	80	120			
Lead			0.873	mg/L	0.010	87	80	120			
Zinc			0.964	mg/L	0.010	96	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141126A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							11/26/14 09:57	
Arsenic			0.799	mg/L	0.0085	100	90	110			
Cadmium			0.395	mg/L	0.0010	99	90	110			
Copper			0.790	mg/L	0.010	99	90	110			
Lead			0.795	mg/L	0.010	99	90	110			
Zinc			0.802	mg/L	0.010	100	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/26/14 10:12	
Arsenic			-0.00144	mg/L	0.0085		0	0			
Cadmium			-0.00143	mg/L	0.0010		0	0			
Copper			-0.00387	mg/L	0.010		0	0			
Lead			-0.00869	mg/L	0.010		0	0			
Zinc			0.00272	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/26/14 10:16	
Arsenic			1.01	mg/L	0.0085	101	80	120			
Cadmium			0.937	mg/L	0.0010	94	80	120			
Copper			0.512	mg/L	0.010	102	80	120			
Lead			0.941	mg/L	0.010	94	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141201C		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							12/01/14 12:53	
Arsenic			0.807	mg/L	0.0085	101	90	110			
Cadmium			0.396	mg/L	0.0010	99	90	110			
Copper			0.780	mg/L	0.010	98	90	110			
Lead			0.790	mg/L	0.010	99	90	110			
Zinc			0.810	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							12/01/14 13:08	
Arsenic			0.00809	mg/L	0.0085		0	0			
Cadmium			0.00212	mg/L	0.0010		0	0			
Copper			-0.00430	mg/L	0.010		0	0			
Lead			0.0221	mg/L	0.010		0	0			
Zinc			0.00257	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							12/01/14 13:12	
Arsenic			0.984	mg/L	0.0085	98	80	120			
Cadmium			0.932	mg/L	0.0010	93	80	120			
Copper			0.499	mg/L	0.010	100	80	120			
Lead			0.895	mg/L	0.010	89	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27122
Lab ID:	**MB-27122**	5	Method Blank				Run: ICP2-HE_141125B				11/25/14 12:24
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			1.0	mg/kg	0.09						
Lab ID:	**LFB-27122**	5	Laboratory Fortified Blank				Run: ICP2-HE_141125B				11/25/14 12:35
Arsenic			50.7	mg/kg	1.0	101	80	120			
Cadmium			24.1	mg/kg	1.0	97	80	120			
Copper			51.4	mg/kg	1.0	103	80	120			
Lead			49.5	mg/kg	1.0	99	80	120			
Zinc			50.2	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27122**	5	Laboratory Control Sample				Run: ICP2-HE_141125B				11/25/14 12:39
Arsenic			310	mg/kg	1.8	90	72.3	106.4			
Cadmium			124	mg/kg	1.0	91	73	105.1			
Copper			269	mg/kg	1.1	96	77.5	109.6			
Lead			189	mg/kg	3.2	101	75.9	108.6			
Zinc			203	mg/kg	1.0	95	74.2	109.9			
Lab ID:	**H14110218-020APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141125B				11/25/14 14:38
Arsenic			248	mg/kg	1.8	95	75	125			
Cadmium			110	mg/kg	1.0	87	75	125			
Copper			271	mg/kg	1.1	99	75	125			
Lead			225	mg/kg	3.2	87	75	125			
Zinc			281	mg/kg	1.0	97	75	125			
Lab ID:	**H14110218-020AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141125B				11/25/14 14:42
Arsenic			59.2	mg/kg	1.8	106	75	125			
Cadmium			23.4	mg/kg	1.0	94	75	125			
Copper			72.3	mg/kg	1.1	104	75	125			
Lead			46.4	mg/kg	3.2	86	75	125			
Zinc			87.1	mg/kg	1.0	102	75	125			
Lab ID:	**H14110218-020AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141125B				11/25/14 14:46
Arsenic			57.4	mg/kg	1.8	102	75	125	3.0	20	
Cadmium			23.5	mg/kg	1.0	95	75	125	0.7	20	
Copper			72.4	mg/kg	1.1	105	75	125	0.1	20	
Lead			53.2	mg/kg	3.1	100	75	125	14	20	
Zinc			87.2	mg/kg	1.0	103	75	125	0.1	20	
Method:	**SW6010B**										Batch: 27123
Lab ID:	**MB-27123**	5	Method Blank				Run: ICP2-HE_141125B				11/25/14 14:50
Arsenic			ND	mg/kg	0.4						
Cadmium			0.02	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27123
Lab ID:	**MB-27123**	5	Method Blank				Run: ICP2-HE_141125B			11/25/14 14:50	
Lead			ND	mg/kg	0.6						
Zinc			0.8	mg/kg	0.09						
Lab ID:	**LFB-27123**	5	Laboratory Fortified Blank				Run: ICP2-HE_141125B			11/25/14 14:54	
Arsenic			49.1	mg/kg	1.0	98	80	120			
Cadmium			23.9	mg/kg	1.0	95	80	120			
Copper			50.2	mg/kg	1.0	100	80	120			
Lead			47.6	mg/kg	1.0	95	80	120			
Zinc			49.3	mg/kg	1.0	97	80	120			
Lab ID:	**LCS-27123**	5	Laboratory Control Sample				Run: ICP2-HE_141125B			11/25/14 14:57	
Arsenic			310	mg/kg	1.8	90	72.3	106.4			
Cadmium			127	mg/kg	1.0	93	73	105.1			
Copper			273	mg/kg	1.1	98	77.5	109.6			
Lead			190	mg/kg	3.1	101	75.9	108.6			
Zinc			206	mg/kg	1.0	96	74.2	109.9			
Lab ID:	**H14110218-039APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141125B			11/25/14 16:27	
Arsenic			732	mg/kg	1.8	91	75	125			
Cadmium			104	mg/kg	1.0	82	75	125			
Copper			397	mg/kg	1.1	91	75	125			
Lead			276	mg/kg	3.2	86	75	125			
Zinc			435	mg/kg	1.0	89	75	125			
Lab ID:	**H14110218-039AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141125B			11/25/14 16:30	
Arsenic			562	mg/kg	1.8		75	125			A
Cadmium			22.6	mg/kg	1.0	87	75	125			
Copper			213	mg/kg	1.1	90	75	125			
Lead			110	mg/kg	3.1	100	75	125			
Zinc			266	mg/kg	1.0		75	125			A
Lab ID:	**H14110218-039AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141125B			11/25/14 16:34	
Arsenic			549	mg/kg	1.8		75	125	2.4	20	A
Cadmium			22.2	mg/kg	1.0	86	75	125	2.2	20	
Copper			208	mg/kg	1.1	80	75	125	2.3	20	
Lead			104	mg/kg	3.1	88	75	125	5.5	20	
Zinc			259	mg/kg	1.0		75	125	2.5	20	A
Method:	**SW6010B**										Batch: 27124
Lab ID:	**MB-27124**	5	Method Blank				Run: ICP2-HE_141125B			11/25/14 16:45	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27124
Lab ID:	**LFB-27124**	5	Laboratory Fortified Blank				Run: ICP2-HE_141125B			11/25/14 16:49	
Arsenic			49.3	mg/kg	1.0	99	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			51.4	mg/kg	1.0	103	80	120			
Lead			48.8	mg/kg	1.0	98	80	120			
Zinc			49.3	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27124**	5	Laboratory Control Sample				Run: ICP2-HE_141125B			11/25/14 16:53	
Arsenic			302	mg/kg	1.8	88	72.3	106.4			
Cadmium			121	mg/kg	1.0	88	73	105.1			
Copper			266	mg/kg	1.1	95	77.5	109.6			
Lead			185	mg/kg	3.1	99	75.9	108.6			
Zinc			199	mg/kg	1.0	93	74.2	109.9			
Lab ID:	**H14110218-057APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141125B			11/25/14 18:48	
Arsenic			243	mg/kg	1.8	92	75	125			
Cadmium			111	mg/kg	1.0	88	75	125			
Copper			354	mg/kg	1.1	92	75	125			
Lead			236	mg/kg	3.2	87	75	125			
Zinc			641	mg/kg	1.0	102	75	125			
Lab ID:	**H14110218-057AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141125B			11/25/14 18:51	
Arsenic			64.5	mg/kg	1.8	107	75	125			
Cadmium			23.2	mg/kg	1.0	93	75	125			
Copper			175	mg/kg	1.1	104	75	125			
Lead			63.6	mg/kg	3.1	93	75	125			
Zinc			473	mg/kg	1.0		75	125			A
Lab ID:	**H14110218-057AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141125B			11/25/14 18:55	
Arsenic			68.9	mg/kg	1.8	116	75	125	6.5	20	
Cadmium			24.0	mg/kg	1.0	96	75	125	3.3	20	
Copper			187	mg/kg	1.1	127	75	125	6.5	20	S
Lead			62.9	mg/kg	3.1	91	75	125	1.1	20	
Zinc			491	mg/kg	1.0		75	125	3.8	20	A

- S= Spike recovery outside of QC advisory limits. The recovery in the Laboratory Control Sample was within QC advisory limits. This suggests that the Matrix Spike recovei is due to matrix interference.

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

S - Spike recovery outside of advisory limits.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27135
Lab ID:	**MB-27135**	5	Method Blank				Run: ICP2-HE_141126A			11/26/14 18:50	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27135**	5	Laboratory Fortified Blank				Run: ICP2-HE_141126A			11/26/14 18:54	
Arsenic			45.5	mg/kg	1.0	91	80	120			
Cadmium			22.7	mg/kg	1.0	91	80	120			
Copper			49.8	mg/kg	1.0	99	80	120			
Lead			46.3	mg/kg	1.0	93	80	120			
Zinc			47.8	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27135**	5	Laboratory Control Sample				Run: ICP2-HE_141126A			11/26/14 18:58	
Arsenic			276	mg/kg	1.8	80	72.3	106.4			
Cadmium			115	mg/kg	1.0	84	73	105.1			
Copper			258	mg/kg	1.1	92	77.5	109.6			
Lead			178	mg/kg	3.1	95	75.9	108.6			
Zinc			190	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14110218-077APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141126A			11/26/14 20:33	
Arsenic			229	mg/kg	1.8	88	75	125			
Cadmium			114	mg/kg	1.0	84	75	125			
Copper			1390	mg/kg	1.1		75	125			A
Lead			228	mg/kg	3.2	86	75	125			
Zinc			2260	mg/kg	1.0		75	125			A
Lab ID:	**H14110218-077AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141126A			11/26/14 20:37	
Arsenic			53.6	mg/kg	1.7	90	75	125			
Cadmium			29.7	mg/kg	1.0	85	75	125			
Copper			1210	mg/kg	1.1		75	125			A
Lead			63.6	mg/kg	3.1	101	75	125			
Zinc			2080	mg/kg	1.0		75	125			A
Lab ID:	**H14110218-077AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141126A			11/26/14 20:40	
Arsenic			53.4	mg/kg	1.8	89	75	125	0.4	20	
Cadmium			30.2	mg/kg	1.0	86	75	125	1.7	20	
Copper			1230	mg/kg	1.1		75	125	1.9	20	A
Lead			61.3	mg/kg	3.1	96	75	125	3.7	20	
Zinc			2090	mg/kg	1.0		75	125	0.3	20	A
Method:	**SW6010B**										Batch: 27136
Lab ID:	**MB-27136**	5	Method Blank				Run: ICP2-HE_141126A			11/26/14 20:51	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.4	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27136
Lab ID:	**MB-27136**	5	Method Blank				Run: ICP2-HE_141126A			11/26/14 20:51	
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27136**	5	Laboratory Fortified Blank				Run: ICP2-HE_141126A			11/26/14 20:55	
Arsenic			44.5	mg/kg	1.0	89	80	120			
Cadmium			22.3	mg/kg	1.0	89	80	120			
Copper			49.0	mg/kg	1.0	97	80	120			
Lead			45.8	mg/kg	1.0	92	80	120			
Zinc			47.2	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27136**	5	Laboratory Control Sample				Run: ICP2-HE_141126A			11/26/14 20:59	
Arsenic			272	mg/kg	1.8	79	72.3	106.4			
Cadmium			114	mg/kg	1.0	83	73	105.1			
Copper			251	mg/kg	1.1	90	77.5	109.6			
Lead			170	mg/kg	3.1	91	75.9	108.6			
Zinc			190	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14110218-080APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141126A			11/26/14 21:17	
Arsenic			1670	mg/kg	1.8		75	125			A
Cadmium			118	mg/kg	1.0	82	75	125			
Copper			14400	mg/kg	1.1		75	125			A
Lead			1240	mg/kg	3.3		75	125			A
Zinc			3920	mg/kg	1.0		75	125			A
Lab ID:	**H14110218-080AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141126A			11/26/14 21:21	
Arsenic			1510	mg/kg	1.8		75	125			A
Cadmium			33.1	mg/kg	1.0	85	75	125			
Copper			13100	mg/kg	1.1		75	125			A
Lead			1070	mg/kg	3.2		75	125			A
Zinc			3620	mg/kg	1.0		75	125			A
Lab ID:	**H14110218-080AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141126A			11/26/14 21:24	
Arsenic			1490	mg/kg	1.8		75	125	1.3	20	A
Cadmium			32.5	mg/kg	1.0	82	75	125	1.9	20	
Copper			12700	mg/kg	1.1		75	125	3.2	20	A
Lead			1050	mg/kg	3.2		75	125	1.7	20	A
Zinc			3490	mg/kg	1.0		75	125	3.7	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27140	
Lab ID:	**MB-27140**	5	Method Blank				Run: ICP2-HE_141201C			12/01/14 19:36	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27140**	5	Laboratory Fortified Blank				Run: ICP2-HE_141201C			12/01/14 19:40	
Arsenic			47.9	mg/kg	1.0	96	80	120			
Cadmium			23.8	mg/kg	1.0	95	80	120			
Copper			49.6	mg/kg	1.0	99	80	120			
Lead			46.9	mg/kg	1.0	94	80	120			
Zinc			49.2	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27140**	5	Laboratory Control Sample				Run: ICP2-HE_141201C			12/01/14 19:43	
Arsenic			278	mg/kg	1.8	81	72.3	106.4			
Cadmium			117	mg/kg	1.0	85	73	105.1			
Copper			254	mg/kg	1.1	91	77.5	109.6			
Lead			172	mg/kg	3.1	92	75.9	108.6			
Zinc			190	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14110218-028APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141201C			12/01/14 19:58	
Arsenic			256	mg/kg	1.8	93	75	125			
Cadmium			108	mg/kg	1.0	84	75	125			
Copper			311	mg/kg	1.1	96	75	125			
Lead			226	mg/kg	3.3	85	75	125			
Zinc			321	mg/kg	1.0	92	75	125			
Lab ID:	**H14110218-028AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141201C			12/01/14 20:02	
Arsenic			66.8	mg/kg	1.8	99	75	125			
Cadmium			22.5	mg/kg	1.0	89	75	125			
Copper			117	mg/kg	1.1	105	75	125			
Lead			56.9	mg/kg	3.2	100	75	125			
Zinc			133	mg/kg	1.0	96	75	125			
Lab ID:	**H14110218-028AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141201C			12/01/14 20:13	
Arsenic			66.9	mg/kg	1.8	100	75	125	0.1	20	
Cadmium			22.5	mg/kg	1.0	90	75	125	0.1	20	
Copper			113	mg/kg	1.1	97	75	125	3.5	20	
Lead			58.0	mg/kg	3.2	103	75	125	1.8	20	
Zinc			132	mg/kg	1.0	94	75	125	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141126A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/26/14 12:50	
Arsenic			0.0600	mg/L	0.0010	100	90	110			
Cadmium			0.0313	mg/L	0.0010	104	90	110			
Lead			0.0588	mg/L	0.0010	98	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/27/14 11:58	
Arsenic			0.0597	mg/L	0.0010	99	90	110			
Cadmium			0.0314	mg/L	0.0010	105	90	110			
Lead			0.0591	mg/L	0.0010	98	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/28/14 06:30	
Arsenic			0.0586	mg/L	0.0010	98	90	110			
Cadmium			0.0311	mg/L	0.0010	104	90	110			
Lead			0.0603	mg/L	0.0010	100	90	110			
Method:	**SW6020**									Batch: 27122	
Lab ID:	**MB-27122**	3	Method Blank				Run: ICPMS204-B_141126A			11/26/14 21:01	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27122**	3	Laboratory Control Sample				Run: ICPMS204-B_141126A			11/26/14 21:05	
Arsenic			334	mg/kg	1.0	97	72.3	106.4			
Cadmium			129	mg/kg	1.0	94	73	105.1			
Lead			193	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-27122**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141126A			11/26/14 21:10	
Arsenic			51.3	mg/kg	1.0	103	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Lead			48.8	mg/kg	1.0	98	80	120			
Lab ID:	**H14110218-020AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141126A			11/27/14 13:06	
Arsenic			55.0	mg/kg	1.0	99	75	125			
Cadmium			24.9	mg/kg	1.0	100	75	125			
Lead			54.2	mg/kg	1.0	99	75	125			
Lab ID:	**H14110218-020AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141126A			11/27/14 13:10	
Arsenic			55.1	mg/kg	1.0	100	75	125	0.2	20	
Cadmium			25.2	mg/kg	1.0	101	75	125	1.4	20	
Lead			54.4	mg/kg	1.0	100	75	125	0.4	20	
Method:	**SW6020**									Batch: 27123	
Lab ID:	**MB-27123**	3	Method Blank				Run: ICPMS204-B_141126A			11/27/14 13:28	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27123
Lab ID:	**LCS-27123**	3	Laboratory Control Sample				Run: ICPMS204-B_141126A			11/27/14 13:33	
Arsenic			327	mg/kg	1.0	95	72.3	106.4			
Cadmium			138	mg/kg	1.0	101	73	105.1			
Lead			202	mg/kg	1.0	108	75.9	108.6			
Lab ID:	**LFB-27123**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141126A			11/27/14 13:38	
Arsenic			48.0	mg/kg	1.0	96	80	120			
Cadmium			26.1	mg/kg	1.0	104	80	120			
Lead			48.7	mg/kg	1.0	97	80	120			
Lab ID:	**H14110218-039APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141126A			11/27/14 15:00	
Arsenic			2830	mg/kg	1.0	94	75	125			
Cadmium			1200	mg/kg	1.0	99	75	125			
Lead			2430	mg/kg	1.0	97	75	125			
Lab ID:	**H14110218-039AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141126A			11/27/14 15:04	
Arsenic			598	mg/kg	1.0		75	125			A
Cadmium			26.0	mg/kg	1.0	101	75	125			
Lead			115	mg/kg	1.0	97	75	125			
Lab ID:	**H14110218-039AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141126A			11/27/14 15:08	
Arsenic			588	mg/kg	1.0		75	125	1.6	20	A
Cadmium			25.2	mg/kg	1.0	98	75	125	3.2	20	
Lead			114	mg/kg	1.0	95	75	125	0.9	20	
Method:	**SW6020**										Batch: 27124
Lab ID:	**MB-27124**	3	Method Blank				Run: ICPMS204-B_141126A			11/27/14 15:27	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27124**	3	Laboratory Control Sample				Run: ICPMS204-B_141126A			11/27/14 15:31	
Arsenic			317	mg/kg	1.0	93	72.3	106.4			
Cadmium			136	mg/kg	1.0	99	73	105.1			
Lead			196	mg/kg	1.0	105	75.9	108.6			
Lab ID:	**LFB-27124**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141126A			11/27/14 15:36	
Arsenic			46.8	mg/kg	1.0	94	80	120			
Cadmium			25.8	mg/kg	1.0	103	80	120			
Lead			47.3	mg/kg	1.0	95	80	120			
Lab ID:	**H14110218-057APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141126A			11/27/14 17:12	
Arsenic			2340	mg/kg	1.0	96	75	125			
Cadmium			1260	mg/kg	1.0	104	75	125			
Lead			2440	mg/kg	1.0	100	75	125			
Lab ID:	**H14110218-057AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141126A			11/27/14 17:16	
Arsenic			70.2	mg/kg	1.0	104	75	125			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27124
Lab ID:	**H14110218-057AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141126A				11/27/14 17:16
Cadmium			26.2	mg/kg	1.0	106	75	125			
Lead			60.8	mg/kg	1.0	103	75	125			
Lab ID:	**H14110218-057AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141126A				11/27/14 17:21
Arsenic			71.2	mg/kg	1.0	106	75	125	1.4	20	
Cadmium			26.6	mg/kg	1.0	107	75	125	1.7	20	
Lead			61.8	mg/kg	1.0	104	75	125	1.6	20	
Method:	**SW6020**										Batch: 27136
Lab ID:	**MB-27136**	2	Method Blank				Run: ICPMS204-B_141126A				11/26/14 16:22
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27136**	2	Laboratory Control Sample				Run: ICPMS204-B_141126A				11/26/14 16:28
Arsenic			316	mg/kg	1.0	92	72.3	106.4			
Lead			186	mg/kg	1.0	99	75.9	108.6			
Lab ID:	**LFB-27136**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141126A				11/26/14 16:33
Arsenic			49.4	mg/kg	1.0	99	80	120			
Lead			48.4	mg/kg	1.0	97	80	120			
Lab ID:	**H14110218-080APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141126A				11/26/14 18:31
Arsenic			4070	mg/kg	1.0	99	75	125			
Lead			3230	mg/kg	1.0	89	75	125			
Lab ID:	**H14110218-080AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141126A				11/26/14 18:35
Arsenic			1690	mg/kg	1.0		75	125			A
Lead			1070	mg/kg	1.0		75	125			A
Lab ID:	**H14110218-080AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141126A				11/26/14 18:40
Arsenic			1680	mg/kg	1.0		75	125	0.7	20	A
Lead			1060	mg/kg	1.0		75	125	1.1	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141201B		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							12/01/14 13:39	
Arsenic			0.0596	mg/L	0.0010	99	90	110			
Cadmium			0.0312	mg/L	0.0010	104	90	110			
Lead			0.0591	mg/L	0.0010	99	90	110			
Method:	**SW6020**										Batch: 27122
Lab ID:	**MB-27122**	3	Method Blank				Run: ICPMS204-B_141201B			12/01/14 22:34	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Method:	**SW6020**										Batch: 27135
Lab ID:	**MB-27135**	3	Method Blank				Run: ICPMS204-B_141201B			12/01/14 23:05	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27135**	3	Laboratory Control Sample				Run: ICPMS204-B_141201B			12/01/14 23:09	
Arsenic			296	mg/kg	1.0	86	72.3	106.4			
Cadmium			127	mg/kg	1.0	93	73	105.1			
Lead			193	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-27135**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141201B			12/01/14 23:14	
Arsenic			46.2	mg/kg	1.0	92	80	120			
Cadmium			25.2	mg/kg	1.0	101	80	120			
Lead			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**H14110218-077APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141201B			12/02/14 00:46	
Arsenic			2470	mg/kg	1.0	102	75	125			
Cadmium			1050	mg/kg	1.0	86	75	125			
Lead			2200	mg/kg	1.0	90	75	125			
Lab ID:	**H14110218-077AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141201B			12/02/14 00:50	
Arsenic			55.3	mg/kg	1.0	93	75	125			
Cadmium			32.1	mg/kg	1.0	95	75	125			
Lead			60.7	mg/kg	1.0	96	75	125			
Lab ID:	**H14110218-077AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141201B			12/02/14 00:54	
Arsenic			54.0	mg/kg	1.0	90	75	125	2.4	20	
Cadmium			32.4	mg/kg	1.0	95	75	125	0.7	20	
Lead			61.0	mg/kg	1.0	96	75	125	0.5	20	
Method:	**SW6020**										Batch: 27140
Lab ID:	**MB-27140**	2	Method Blank				Run: ICPMS204-B_141201B			12/02/14 01:03	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/02/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110218

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27140
Lab ID:	**LCS-27140**	2	Laboratory Control Sample				Run: ICPMS204-B_141201B			12/02/14 01:08	
Arsenic			289	mg/kg	1.0	84	72.3	106.4			
Lead			190	mg/kg	1.0	102	75.9	108.6			
Lab ID:	**LFB-27140**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141201B			12/02/14 01:12	
Arsenic			47.0	mg/kg	1.0	94	80	120			
Lead			48.1	mg/kg	1.0	96	80	120			
Lab ID:	**H14110218-028APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141201B			12/02/14 01:43	
Arsenic			2450	mg/kg	1.0	98	75	125			
Lead			2220	mg/kg	1.0	89	75	125			
Lab ID:	**H14110218-028AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141201B			12/02/14 01:47	
Arsenic			62.3	mg/kg	1.0	94	75	125			
Lead			60.5	mg/kg	1.0	97	75	125			
Lab ID:	**H14110218-028AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141201B			12/02/14 01:52	
Arsenic			60.1	mg/kg	1.0	91	75	125	3.6	20	
Lead			60.1	mg/kg	1.0	97	75	125	0.8	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14110218

Login completed by: Tracy L. Lorash
Date Received: 11/12/2014
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 12/2/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Samples were received frozen.
Sample ID on COC is 3-163w4-006 -ID on bag is 3-163w4-0006. Logged in with ID from bag.
Sample ID on COC is 3-184-1824, 2430, 3036 -ID on bags is 3-186. Logged in with ID from COC.
Cooler 1 was received at -1.4°C, Cooler 2 at -2.8°C, Cooler 3 at -1.4°C, Cooler 4 at -3.4°C, Cooler 5 at -2.7°C.
Samples were not received on ice. Tl 11/13/14

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division	Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4	Sample Origin State: MT	EPA/State Compliance: Yes ◯ No ◯
Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601 ☐ No Hard Copy Email:	Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898		Sampler: (Please Print)
	Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070	Purchase Order:	Quote/Bottle Order:
Invoice Address (Required): PO box 200901, Helena, MT 56620-0901 ☐ No Hard Copy Email:			

Special Report/Formats:
☐ DW ☐ POTW/WWTP ☐ State: ☐ Other: ☐ EDD/EDT (Electronic Data) Format: ☐ LEVEL IV ☐ NELAC

ANALYSIS REQUESTED

Number of Containers; Sample Type: A W S V B O DW Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

SEE ATTACHED

Standard Turnaround (TAT) ◯ RUSH ◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): Y
Receipt Temp: See comments
On Ice: Y (N)
Custody Seal: On Bottle Y (N); On Cooler Y (N)
Intact Y N
Signature Match Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH	Comments
1	3-153w2-0006	11/5/14	13:20	S	★	★	C1: -1.4
2	3-163-0006	11/5/14	07:55	S	★	★	C2: -2.8
3	3-163-0612	11/5/14	07:53	S	★	★	C3: -1.4
4	3-163-1218	11/5/14	07:51	S	★	★	C4: -3.4
5	3-163w-0006	11/5/14	12:06	S	★	★	C5: -2.7
6	3-163w-0612	11/5/14	12:04	S	★	★	
7	3-163w-1218	11/5/14	12:02	S	★	★	
8	3-163w2-0006	11/5/14	12:26	S	★	★	
9	3-163w2-0612	11/5/14	12:24	S	★	★	
10	3-163w2-1218	11/5/14	12:22	S	★	★	

LABORATORY USE ONLY: H14110218

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mana Peters	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Lorad 11/12/14 14:42

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print)

☐ No Hard Copy Email:

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

ANALYSIS REQUESTED

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): Y

Receipt Temp: See comments

On Ice: Y (N)

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact Y N

Signature Match Y N

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments
1 3-163w3-0006	11/5/14	12:44	S	★	★									◉	◯	C1: -1.4
2 3-163w3-0612	11/5/14	12:42	S	★	★									◉	◯	C2: -2.8
3 3-163w3-1218	11/5/14	12:40	S	★	★									◉	◯	C3: -1.4
4 3-163w4-006	11/5/14	11:38	S	★	★									◉	◯	C4: -3.4
5 3-178-1218	11/5/14	08:15	S	★	★									◉	◯	C5: -2.7
6 3-178-1824	11/5/14	08:13	S	★	★									◉	◯	
7 3-178-2430	11/5/14	08:11	S	★	★									◉	◯	
8 3-178w-0006	11/5/14	11:46	S	★	★									◉	◯	
9 3-178w-0612	11/5/14	11:44	S	★	★									◉	◯	
10 3-178w-1218	11/5/14	11:42	S	★	★									◉	◯	

LABORATORY USE ONLY: H14110218

Custody Record MUST be Signed

Relinquished by (print): S MARK PETERS Date/Time: 11/12/14 @ 14:42 Signature:

Received by (print): Date/Time: Signature:

Relinquished by (print): S Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Tracy Grant Date/Time: 11/12/14 14:42 Signature: Tracy Grant

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print)

☐ No Hard Copy Email:

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

ANALYSIS REQUESTED

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): Y

Receipt Temp: See comments

On Ice: Y (N)

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact Y N

Signature Match Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
C1	1 3-190-0612	11/5/14	09:32	S	★	★									◉	◯	C1: -1.4	H14110218
	2 3-190-1824	11/5/14	09:28	S	★	★									◉	◯	C2: -2.8	
	3 3-190-2430	11/5/14	09:26	S	★	★									◉	◯	C3: -1.4	
	4 3-193-0006	11/5/14	08:49	S	★	★									◉	◯	C4: -3.4	
	5 3-193-0612	11/5/14	08:47	S	★	★									◉	◯	C5: -2.7	
	6 3-193-1218	11/5/14	08:45	S	★	★									◉	◯		
	7 3-193w-0006	11/5/14	11:21	S	★	★									◉	◯		
	8 3-193w-0612	11/5/14	11:19	S	★	★									◉	◯		
	9 3-193w-1218	11/5/14	11:17	S	★	★									◉	◯		
	10 3-193-0006w2	11/5/14	11:15	S	★	★									◉	◯		

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mark Peters	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Lerud Date/Time: 11/12/14 14:42 Signature: Tracy Lerud

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin: State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

ANALYSIS REQUESTED

Standard Turnaround (TAT) ◯ RUSH ◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): 4
Receipt Temp: See comments
On Ice: Y (N)
Custody Seal: On Bottle Y (N); On Cooler Y (N)
Intact: Y N
Signature Match: Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard	RUSH	Comments
1	3-207-1824	11/5/14	09:56	S	★	★									◉	◯	C1: -1.4
2	3-207-2430	11/5/14	09:54	S	★	★									◉	◯	C2: -2.8
3	3-207-3036	11/5/14	09:52	S	★	★									◉	◯	C3: -1.4
4	3-207w-0006	11/5/14	14:06	S	★	★									◉	◯	C4: -3.4
5	3-207w-0612	11/5/14	14:04	S	★	★									◉	◯	C5: -2.7
6	3-207w-1218	11/5/14	14:02	S	★	★									◉	◯	
7	3-207w2-0006	11/5/14	12:30	S	★	★									◉	◯	
8	3-220-1824	11/5/14	10:28	S	★	★									◉	◯	
9	3-220-2430	11/5/14	10:26	S	★	★									◉	◯	
10	3-220-3036	11/5/14	10:24	S	★	★									◉	◯	

LABORATORY USE ONLY: H14110218

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mark Peters	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Grant — Date/Time: 11/12/14 14:42 — Signature: Tracy Grant

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): Y
Receipt Temp: See comments
On Ice: Y (N)
Custody Seal: On Bottle Y (N); On Cooler Y (N)
Intact Y N
Signature Match Y N

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
1	3-157-3642	11/4/14	07:41	S	★	★									◉	◯	C1: -1.4	H14110218
2	3-157-4248	11/4/14	07:40	S	★	★									◉	◯	C2: -2.8	
3	3-162-2430	11/4/14	15:26	S	★	★									◉	◯	C3: -1.4	
4	3-162-3036	11/4/14	15:24	S	★	★									◉	◯	C4: -3.4	
5	3-162-3642	11/4/14	15:22	S	★	★									◉	◯	C5: -2.7	
6	3-172-1218	11/4/14	08:16	S	★	★									◉	◯		
7	3-172-1824	11/4/14	08:14	S	★	★									◉	◯		
8	3-172-1824d	11/4/14	08:15	S	★	★									◉	◯		
9	3-172-2430	11/4/14	08:13	S	★	★									◉	◯		
10	3-173-0006	11/4/14	08:37	S	★	★									◉	◯		

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mann Peters	11/12/14 14:42				
S					

Received by Laboratory: Tracy Lerud Date/Time: 11/12/14 14:42 Signature: Tracy Lerud

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division	Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4	Sample Origin State: MT	EPA/State Compliance: Yes ◯ No ◯
Report Mail Address (Required): 50 West 14 street, Suite 200 Helena Montana 59601 ☐ No Hard Copy Email:	Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898		Sampler: (Please Print)
	Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070	Purchase Order:	Quote/Bottle Order:
Invoice Address (Required): PO box 200901 Helena, MT 56620-0901 ☐ No Hard Copy Email:			

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

ANALYSIS REQUESTED

Standard Turnaround (TAT) ➡ RUSH: Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): Y
Receipt Temp: See comments
On Ice: Y (N)
Custody Seal: On Bottle Y (N); On Cooler Y (N)
Intact: Y N
Signature Match: Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
C2	1 3-173-0612	11/4/14	08:36	S	★	★									◉	◯	C1: -1.4	H14110218
	2 3-173-1218	11/4/14	08:35	S	★	★									◉	◯	C2: -2.8	
	3 3-175-2430	11/4/14	15:06	S	★	★									◉	◯	C3: -1.8	
	4 3-175-3036	11/4/14	15:04	S	★	★									◉	◯	C4: -3.4	
	5 3-175-3642	11/4/14	15:02	S	★	★									◉	◯	C5: -2.7	
	6 3-176-3036	11/4/14	14:34	S	★	★									◉	◯		
	7 3-176-3642	11/4/14	14:32	S	★	★									◉	◯		
	8 3-176-4248	11/4/14	14:30	S	★	★									◉	◯		
C2	9 3-183-1218	11/4/14	11:23	S	★	★									◉	◯		
	10 3-183-1218d	11/4/14	11:25	S	★	★									◉	◯		

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mark Peters	11/12/14 14:42				
S					

Received by Laboratory: Tracy Carroll Date/Time: 11/12/14 14:42 Signature: Tracy Carroll

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Chain of Custody and Analytical Request Record

ENERGY LABORATORIES

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Shipped by: Hand

Cooler ID(s): 4

Receipt Temp: See comments

On Ice: Y (N)

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact: Y N

Signature Match: Y N

Comments:

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments
C2	1 3-183-1824	11/4/14	11:21	S	★	★									◉	◯	C1: -1.4
	2 3-183-2430	11/4/14	11:19	S	★	★									◉	◯	C2: -2.8
	3 3-184-1824	11/4/14	08:59	S	★	★									◉	◯	C3: -1.4
	4 3-184-2430	11/4/14	08:58	S	★	★									◉	◯	C4: -3.4
	5 3-184-3036	11/4/14	08:57	S	★	★									◉	◯	C5: -2.7
C2	6 3-185-3642	11/4/14	09:29	S	★	★									◉	◯	
	7 3-185-4248	11/4/14	09:27	S	★	★									◉	◯	
	8 3-185-4854	11/4/14	09:55	S	★	★									◉	◯	
	9 3-187-2430	11/4/14	10:52	S	★	★									◉	◯	
	10 3-187-3036	11/4/14	10:50	S	★	★									◉	◯	

LABORATORY USE ONLY: H14110218

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mark Peters	11/11/14 @ 14:42				
S					

Received by Laboratory: Tracy Arnold 11/12/14 14:42 Signature: Tracy Arnold

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required):
50 West 14 street, Suite 200
Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required):
PO box 200901
Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

ANALYSIS REQUESTED

Standard Turnaround (TAT) ◯ RUSH ◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): Y
Receipt Temp: See comments
On Ice: Y N
Custody Seal: On Bottle Y N; On Cooler Y N
Intact Y N
Signature Match Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH	SEE ATTACHED	Comments
C2 1	3-189-1824	11/4/14	14:08	S	★	★		C1: -1.4
2	3-189-2430	11/4/14	14:06	S	★	★		C2: -2.8
3	3-189-3036	11/4/14	14:04	S	★	★		C3: -1.4
4	3-201-1824	11/4/14	10:35	S	★	★		C4: -3.4
5	3-201-2430	11/4/14	10:34	S	★	★		C5: -2.7
6	3-201-3036	11/4/14	10:33	S	★	★		
7	3-202-1824	11/4/14	11:59	S	★	★		
8	3-202-2430	11/4/14	11:57	S	★	★		
9	3-202-3036	11/4/14	11:55	S	★	★		
C4 10	3-203-1218	11/4/14	12:31	S	★	★		

LABORATORY USE ONLY: H14110218

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mark Peters	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Lerch Date/Time: 11/12/14 14:42 Signature: Tracy Lerch

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ANALYTICAL SUMMARY REPORT

December 05, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110217

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 79 samples for MT DEQ-Federal Superfund on 11/12/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110217-001	3-009-0006	11/07/14 7:32	11/12/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14110217-002	3-009-0612	11/07/14 7:31	11/12/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14110217-003	3-009-1218	11/07/14 7:30	11/12/14	Soil	Same As Above
H14110217-004	3-010-2430	11/07/14 7:44	11/12/14	Soil	Same As Above
H14110217-005	3-010-3036	11/07/14 7:43	11/12/14	Soil	Same As Above
H14110217-006	3-010-3642	11/07/14 7:42	11/12/14	Soil	Same As Above
H14110217-007	3-011-0612	11/07/14 8:12	11/12/14	Soil	Same As Above
H14110217-008	3-011-1218	11/07/14 8:10	11/12/14	Soil	Same As Above
H14110217-009	3-011-1824	11/07/14 8:08	11/12/14	Soil	Same As Above
H14110217-010	3-013-1824	11/07/14 8:21	11/12/14	Soil	Same As Above
H14110217-011	3-013-2430	11/07/14 8:20	11/12/14	Soil	Same As Above
H14110217-012	3-013-3036	11/07/14 8:19	11/12/14	Soil	Same As Above
H14110217-013	3-022-0612	11/07/14 9:11	11/12/14	Soil	Same As Above
H14110217-014	3-022-1218	11/07/14 9:10	11/12/14	Soil	Same As Above
H14110217-015	3-022-1824	11/07/14 9:09	11/12/14	Soil	Same As Above
H14110217-016	3-023-0006	11/07/14 8:52	11/12/14	Soil	Same As Above
H14110217-017	3-023-0612	11/07/14 8:51	11/12/14	Soil	Same As Above
H14110217-018	3-178w-0006	11/05/14 8:14	11/12/14	Soil	Same As Above
H14110217-019	3-163w3-0006	11/05/14 10:53	11/12/14	Soil	Same As Above
H14110217-020	3-024-0006	11/07/14 8:47	11/12/14	Soil	Same As Above
H14110217-021	3-024-0612	11/07/14 8:46	11/12/14	Soil	Same As Above
H14110217-022	3-024-1218	11/07/14 8:45	11/12/14	Soil	Same As Above
H14110217-023	3-033-0612	11/07/14 9:27	11/12/14	Soil	Same As Above
H14110217-024	3-033-1218	11/07/14 9:26	11/12/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110217-025	3-033-1824	11/07/14 9:25	11/12/14	Soil	Same As Above
H14110217-026	3-034-0612	11/07/14 9:49	11/12/14	Soil	Same As Above
H14110217-027	3-034-1218	11/07/14 9:48	11/12/14	Soil	Same As Above
H14110217-028	3-034-1824	11/07/14 9:47	11/12/14	Soil	Same As Above
H14110217-029	3-163w2-0006	11/05/14 10:07	11/12/14	Soil	Same As Above
H14110217-030	3-043-0613	11/07/14 9:56	11/12/14	Soil	Same As Above
H14110217-031	3-043-0612d	11/07/14 10:00	11/12/14	Soil	Same As Above
H14110217-032	3-043-1218	11/07/14 9:55	11/12/14	Soil	Same As Above
H14110217-033	3-043-1824	11/07/14 9:54	11/12/14	Soil	Same As Above
H14110217-034	3-047-0612	11/07/14 10:33	11/12/14	Soil	Same As Above
H14110217-035	3-047-1218	11/07/14 10:32	11/12/14	Soil	Same As Above
H14110217-036	3-047-1824	11/07/14 10:31	11/12/14	Soil	Same As Above
H14110217-037	3-051-2430	11/07/14 10:11	11/12/14	Soil	Same As Above
H14110217-038	3-051-3036	11/07/14 10:09	11/12/14	Soil	Same As Above
H14110217-039	3-051-3642	11/07/14 10:07	11/12/14	Soil	Same As Above
H14110217-040	3-025-0612	11/06/14 15:12	11/12/14	Soil	Same As Above
H14110217-041	3-025-1218	11/06/14 15:10	11/12/14	Soil	Same As Above
H14110217-042	3-025-1824	11/06/14 15:08	11/12/14	Soil	Same As Above
H14110217-043	3-025w-0006	11/06/14 15:41	11/12/14	Soil	Same As Above
H14110217-044	3-025w-0612	11/06/14 15:39	11/12/14	Soil	Same As Above
H14110217-045	3-025w-1218	11/06/14 15:37	11/12/14	Soil	Same As Above
H14110217-046	3-035-1218	11/06/14 14:50	11/12/14	Soil	Same As Above
H14110217-047	3-035-1824	11/06/14 14:48	11/12/14	Soil	Same As Above
H14110217-048	3-035-2430	11/06/14 14:46	11/12/14	Soil	Same As Above
H14110217-049	3-163w-0006	11/05/14 9:33	11/12/14	Soil	Same As Above
H14110217-050	3-035w -0006	11/06/14 15:26	11/12/14	Soil	Same As Above
H14110217-051	3-035w-0612	11/06/14 15:24	11/12/14	Soil	Same As Above
H14110217-052	3-035w-1218	11/06/14 15:22	11/12/14	Soil	Same As Above
H14110217-053	3-056-0006	11/06/14 13:18	11/12/14	Soil	Same As Above
H14110217-054	3-056-0612	11/06/14 13:17	11/12/14	Soil	Same As Above
H14110217-055	3-065-3036	11/06/14 12:57	11/12/14	Soil	Same As Above
H14110217-056	3-138w-0006	11/05/14 14:55	11/12/14	Soil	Same As Above
H14110217-057	3-138w-0612	11/05/14 14:52	11/12/14	Soil	Same As Above
H14110217-058	3-138w-0612d	11/05/14 14:53	11/12/14	Soil	Same As Above
H14110217-059	3-138w-1218	11/05/14 14:50	11/12/14	Soil	Same As Above
H14110217-060	3-138w2-0006	11/05/14 15:35	11/12/14	Soil	Same As Above
H14110217-061	3-143w-0006	11/05/14 13:30	11/12/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110217-062	3-143w-0612	11/05/14 13:29	11/12/14	Soil	Same As Above
H14110217-063	3-143w-1218	11/05/14 13:28	11/12/14	Soil	Same As Above
H14110217-064	3-143w2-0612	11/05/14 15:19	11/12/14	Soil	Same As Above
H14110217-065	3-143w2-1218	11/05/14 15:17	11/12/14	Soil	Same As Above
H14110217-066	3-143w2-1824	11/05/14 15:15	11/12/14	Soil	Same As Above
H14110217-067	3-143w3-0006	11/05/14 15:29	11/12/14	Soil	Same As Above
H14110217-068	3-143w3-0612	11/05/14 15:28	11/12/14	Soil	Same As Above
H14110217-069	3-143w3-1218	11/05/14 15:27	11/12/14	Soil	Same As Above
H14110217-070	3-065-3642	11/06/14 12:56	11/12/14	Soil	Same As Above
H14110217-071	3-065-4248	11/06/14 12:55	11/12/14	Soil	Same As Above
H14110217-072	3-065w-0006	11/06/14 13:56	11/12/14	Soil	Same As Above
H14110217-073	3-065w-0612	11/06/14 13:54	11/12/14	Soil	Same As Above
H14110217-074	3-065w-1218	11/06/14 13:52	11/12/14	Soil	Same As Above
H14110217-075	3-073w-0006	11/06/14 14:00	11/12/14	Soil	Same As Above
H14110217-076	3-143w4-0006	11/05/14 14:55	11/12/14	Soil	Same As Above
H14110217-077	3-153w-0006	11/05/14 13:15	11/12/14	Soil	Same As Above
H14110217-078	3-153w-0612	11/05/14 13:13	11/12/14	Soil	Same As Above
H14110217-079	3-153w-1218	11/05/14 13:11	11/12/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110217

Report Date: 12/05/14
Date Received: 11/12/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110217-001	3-009-0006	0	0	7.3	2170	5	713	828	1860
H14110217-002	3-009-0612	0	0	7.6	47	3	1710	45	994
H14110217-003	3-009-1218	0	0	7.6	9	< 1	45	15	356
H14110217-004	3-010-2430	0	0	6.8	12	1	843	15	544
H14110217-005	3-010-3036	0	0	6.7	23	3	145	21	1490
H14110217-006	3-010-3642	0	0	7.0	4	4	62	9	489
H14110217-007	3-011-0612	0	0	7.5	20	2	620	18	1090
H14110217-008	3-011-1218	0	0	7.6	15	< 1	77	22	116
H14110217-009	3-011-1824	0	0	7.2	8	< 1	38	18	83
H14110217-010	3-013-1824	0	0	7.5	271	6	1830	280	1970
H14110217-011	3-013-2430	0	0	7.6	70	2	478	67	773
H14110217-012	3-013-3036	0	0	7.2	137	1	468	74	379
H14110217-013	3-022-0612	0	0	5.7	486	3	7090	389	1620
H14110217-014	3-022-1218	0	0	7.5	12	< 1	137	17	398
H14110217-015	3-022-1824	0	0	7.3	7	< 1	49	13	91
H14110217-016	3-023-0006	0	0	7.9	899	3	898	467	1230
H14110217-017	3-023-0612	0	0	7.5	17	< 1	172	20	200
H14110217-018	3-178w-0006	0	0	7.8	100	2	202	39	170
H14110217-019	3-163w3-0006	0	0	7.7	472	5	1750	399	1650
H14110217-020	3-024-0006	0	0	7.5	1750	7	8780	622	2280
H14110217-021	3-024-0612	0	0	7.5	27	< 1	99	36	178
H14110217-022	3-024-1218	0	0	7.4	7	< 1	42	16	83
H14110217-023	3-033-0612	0	0	7.4	331	9	3760	321	2930
H14110217-024	3-033-1218	0	0	7.4	13	< 1	96	20	145
H14110217-025	3-033-1824	0	0	7.1	50	< 1	358	42	284
H14110217-026	3-034-0612	0	0	7.2	583	10	4330	392	2860
H14110217-027	3-034-1218	0	0	7.4	60	1	411	69	288
H14110217-028	3-034-1824	0	0	7.4	9	< 1	34	15	72
H14110217-029	3-163w2-0006	0	0	8.0	297	4	1070	223	1020
H14110217-030	3-043-0613	0	0	7.6	1110	7	5120	621	2260
H14110217-031	3-043-0612d	0	0	7.6	392	8	4420	271	2570
H14110217-032	3-043-1218	0	0	7.5	31	< 1	88	30	229
H14110217-033	3-043-1824	0	0	7.5	14	< 1	34	15	101
H14110217-034	3-047-0612	0	0	7.5	498	23	6750	271	3470
H14110217-035	3-047-1218	0	0	7.1	12	2	57	17	1040
H14110217-036	3-047-1824	0	0	7.5	4	3	35	11	730
H14110217-037	3-051-2430	0	0	6.8	83	6	144	21	4020
H14110217-038	3-051-3036	0	0	7.2	13	< 1	37	11	294
H14110217-039	3-051-3642	0	0	7.3	7	3	81	6	633
H14110217-040	3-025-0612	0	0	7.7	1690	18	12200	776	5450

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110217

Report Date: 12/05/14
Date Received: 11/12/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110217-041	3-025-1218	0	0	7.5	25	< 1	134	23	150
H14110217-042	3-025-1824	0	0	7.2	10	< 1	35	16	84
H14110217-043	3-025w-0006	0	0	7.7	1000	9	4840	549	2490
H14110217-044	3-025w-0612	0	0	7.6	34	< 1	98	16	177
H14110217-045	3-025w-1218	0	0	7.6	14	< 1	44	19	95
H14110217-046	3-035-1218	0	0	7.6	142	6	2020	183	1460
H14110217-047	3-035-1824	0	0	7.6	61	2	1090	134	436
H14110217-048	3-035-2430	0	0	7.3	15	< 1	39	20	89
H14110217-049	3-163w-0006	0	0	7.8	248	3	1250	183	955
H14110217-050	3-035w -0006	0	0	7.7	1060	7	9380	592	2830
H14110217-051	3-035w-0612	0	0	7.8	15	< 1	57	14	201
H14110217-052	3-035w-1218	0	0	7.7	9	< 1	37	25	87
H14110217-053	3-056-0006	0	0	8.0	305	2	1330	280	945
H14110217-054	3-056-0612	0	0	7.8	13	< 1	78	17	104
H14110217-055	3-065-3036	0	0	7.4	6	< 1	40	21	98
H14110217-056	3-138w-0006	0	0	7.9	570	4	2450	537	1250
H14110217-057	3-138w-0612	0	0	8.0	15	< 1	54	14	111
H14110217-058	3-138w-0612d	0	0	7.9	11	< 1	34	12	85
H14110217-059	3-138w-1218	0	0	7.6	5	< 1	27	13	62
H14110217-060	3-138w2-0006	0	0	8.1	249	3	1090	189	866
H14110217-061	3-143w-0006	0	0	7.7	547	6	3500	481	2130
H14110217-062	3-143w-0612	0	0	7.6	10	< 1	66	16	90
H14110217-063	3-143w-1218	0	0	7.7	3	< 1	31	12	66
H14110217-064	3-143w2-0612	0	0	7.8	249	4	1380	243	1300
H14110217-065	3-143w2-1218	0	0	7.7	11	< 1	58	16	93
H14110217-066	3-143w2-1824	0	0	7.7	10	< 1	91	22	115
H14110217-067	3-143w3-0006	0	0	7.8	229	3	1480	307	1260
H14110217-068	3-143w3-0612	0	0	7.6	7	< 1	28	10	57
H14110217-069	3-143w3-1218	0	0	7.6	3	< 1	34	16	82
H14110217-070	3-065-3642	0	0	7.5	6	< 1	41	16	88
H14110217-071	3-065-4248	0	0	7.4	6	< 1	36	16	85
H14110217-072	3-065w-0006	0	0	8.1	176	2	783	184	715
H14110217-073	3-065w-0612	0	0	7.9	11	< 1	37	7	47
H14110217-074	3-065w-1218	0	0	7.8	6	< 1	34	7	43
H14110217-075	3-073w-0006	0	0	8.1	362	3	1620	256	1010
H14110217-076	3-143w4-0006	0	0	7.8	85	< 1	152	25	114
H14110217-077	3-153w-0006	0	0	7.8	365	4	1930	307	1220
H14110217-078	3-153w-0612	0	0	7.7	17	< 1	69	15	93
H14110217-079	3-153w-1218	0	0	7.6	6	< 1	45	25	89

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_141120A	
Lab ID: CCV_1_141119_1		Continuing Calibration Verification Standard								11/20/14 07:21
pH, sat. paste		6.95	s.u.	0.10	99	98.6	101.4			
Lab ID: CCV1_1_141119_1		Continuing Calibration Verification Standard								11/20/14 07:22
pH, sat. paste		4.04	s.u.	0.10	101	97.5	102.5			
Lab ID: ICV_1_141119_1		Initial Calibration Verification Standard								11/20/14 07:32
pH, sat. paste		9.94	s.u.	0.10	99	99	101			
Lab ID: CCV_3_141119_1		Continuing Calibration Verification Standard								11/20/14 07:49
pH, sat. paste		6.98	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141119_1		Continuing Calibration Verification Standard								11/20/14 08:07
pH, sat. paste		6.97	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141119_1		Continuing Calibration Verification Standard								11/20/14 08:07
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141119_1		Initial Calibration Verification Standard								11/20/14 08:08
pH, sat. paste		9.96	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141119_1		Continuing Calibration Verification Standard								11/20/14 08:25
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141119_1		Continuing Calibration Verification Standard								11/20/14 08:55
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141119_1		Continuing Calibration Verification Standard								11/20/14 08:56
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141119_1		Initial Calibration Verification Standard								11/20/14 08:56
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141119_1		Continuing Calibration Verification Standard								11/20/14 09:06
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141119_1		Continuing Calibration Verification Standard								11/20/14 09:18
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141119_1		Continuing Calibration Verification Standard								11/20/14 09:19
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141119_1		Initial Calibration Verification Standard								11/20/14 09:20
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141119_1		Continuing Calibration Verification Standard								11/20/14 09:29
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2									Batch: 27073	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27073
Lab ID: LCS-27073		Laboratory Control Sample				Run: SOIL PH METER_141120A				11/20/14 07:36
pH, sat. paste		7.55	s.u.	0.10	101	95	105			
Lab ID: H14110217-010ADUP		Sample Duplicate				Run: SOIL PH METER_141120A				11/20/14 07:48
pH, sat. paste		7.52	s.u.	0.10				0.0	30	
Lab ID: H14110217-020ADUP		Sample Duplicate				Run: SOIL PH METER_141120A				11/20/14 07:57
pH, sat. paste		7.48	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27074
Lab ID: LCS-27074		Laboratory Control Sample				Run: SOIL PH METER_141120A				11/20/14 08:09
pH, sat. paste		7.56	s.u.	0.10	101	95	105			
Lab ID: H14110217-030ADUP		Sample Duplicate				Run: SOIL PH METER_141120A				11/20/14 08:24
pH, sat. paste		7.59	s.u.	0.10				0.0	30	
Lab ID: H14110217-040ADUP		Sample Duplicate				Run: SOIL PH METER_141120A				11/20/14 08:37
pH, sat. paste		7.65	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27075
Lab ID: LCS-27075		Laboratory Control Sample				Run: SOIL PH METER_141120A				11/20/14 08:57
pH, sat. paste		7.69	s.u.	0.10	103	95	105			
Lab ID: H14110217-050ADUP		Sample Duplicate				Run: SOIL PH METER_141120A				11/20/14 09:05
pH, sat. paste		7.70	s.u.	0.10				0.1	30	
Lab ID: H14110217-060ADUP		Sample Duplicate				Run: SOIL PH METER_141120A				11/20/14 09:13
pH, sat. paste		8.11	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27076
Lab ID: LCS-27076		Laboratory Control Sample				Run: SOIL PH METER_141120A				11/20/14 09:21
pH, sat. paste		7.65	s.u.	0.10	102	95	105			
Lab ID: H14110217-070ADUP		Sample Duplicate				Run: SOIL PH METER_141120A				11/20/14 09:29
pH, sat. paste		7.53	s.u.	0.10				0.3	30	
Lab ID: H14110217-079ADUP		Sample Duplicate				Run: SOIL PH METER_141120A				11/20/14 09:37
pH, sat. paste		7.62	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141121B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							11/21/14 09:27	
Arsenic			0.825	mg/L	0.0085	103	90	110			
Cadmium			0.401	mg/L	0.0010	100	90	110			
Copper			0.800	mg/L	0.010	100	90	110			
Lead			0.813	mg/L	0.010	102	90	110			
Zinc			0.813	mg/L	0.010	102	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/21/14 09:42	
Arsenic			0.0121	mg/L	0.0085		0	0			
Cadmium			0.00430	mg/L	0.0010		0	0			
Copper			0.00332	mg/L	0.010		0	0			
Lead			-0.00491	mg/L	0.010		0	0			
Zinc			0.00280	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/21/14 09:46	
Arsenic			0.987	mg/L	0.0085	99	80	120			
Cadmium			0.885	mg/L	0.0010	89	80	120			
Copper			0.530	mg/L	0.010	106	80	120			
Lead			0.885	mg/L	0.010	89	80	120			
Zinc			0.991	mg/L	0.010	99	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141124B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							11/24/14 11:20	
Arsenic			0.776	mg/L	0.0085	97	90	110			
Cadmium			0.376	mg/L	0.0010	94	90	110			
Copper			0.782	mg/L	0.010	98	90	110			
Lead			0.744	mg/L	0.010	93	90	110			
Zinc			0.778	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/24/14 11:35	
Arsenic			-0.0143	mg/L	0.0085		0	0			
Cadmium			0.00325	mg/L	0.0010		0	0			
Copper			0.0191	mg/L	0.010		0	0			
Lead			-0.0191	mg/L	0.010		0	0			
Zinc			0.0187	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/24/14 11:39	
Arsenic			0.987	mg/L	0.0085	99	80	120			
Cadmium			0.898	mg/L	0.0010	90	80	120			
Copper			0.562	mg/L	0.010	112	80	120			
Lead			0.890	mg/L	0.010	89	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141125B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							11/25/14 09:25	
Arsenic			0.773	mg/L	0.0085	97	90	110			
Cadmium			0.378	mg/L	0.0010	95	90	110			
Copper			0.792	mg/L	0.010	99	90	110			
Lead			0.756	mg/L	0.010	94	90	110			
Zinc			0.779	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/25/14 09:40	
Arsenic			0.00475	mg/L	0.0085		0	0			
Cadmium			0.00329	mg/L	0.0010		0	0			
Copper			3.00E-05	mg/L	0.010		0	0			
Lead			0.00863	mg/L	0.010		0	0			
Zinc			0.00691	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/25/14 09:44	
Arsenic			0.959	mg/L	0.0085	96	80	120			
Cadmium			0.872	mg/L	0.0010	87	80	120			
Copper			0.519	mg/L	0.010	104	80	120			
Lead			0.873	mg/L	0.010	87	80	120			
Zinc			0.964	mg/L	0.010	96	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141203A		
Lab ID:	**ICV**	4	Initial Calibration Verification Standard							12/03/14 08:36	
Arsenic			0.800	mg/L	0.0085	100	90	110			
Copper			0.811	mg/L	0.010	101	90	110			
Lead			0.793	mg/L	0.010	99	90	110			
Zinc			0.806	mg/L	0.010	101	90	110			
Lab ID:	**ICSA**	4	Interference Check Sample A							12/03/14 08:51	
Arsenic			-0.00718	mg/L	0.0085		0	0			
Copper			0.00296	mg/L	0.010		0	0			
Lead			-0.0279	mg/L	0.010		0	0			
Zinc			0.00281	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	4	Interference Check Sample AB							12/03/14 08:55	
Arsenic			0.964	mg/L	0.0085	96	80	120			
Copper			0.519	mg/L	0.010	104	80	120			
Lead			0.883	mg/L	0.010	88	80	120			
Zinc			0.979	mg/L	0.010	98	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27087
Lab ID:	**MB-27087**	5	Method Blank				Run: ICP2-HE_141121B			11/21/14 18:56	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.9	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LFB-27087**	5	Laboratory Fortified Blank				Run: ICP2-HE_141121B			11/21/14 19:00	
Arsenic			46.7	mg/kg	1.0	93	80	120			
Cadmium			23.5	mg/kg	1.0	94	80	120			
Copper			48.9	mg/kg	1.0	96	80	120			
Lead			46.7	mg/kg	1.0	93	80	120			
Zinc			48.7	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27087**	5	Laboratory Control Sample				Run: ICP2-HE_141121B			11/21/14 19:04	
Arsenic			270	mg/kg	1.7	79	72.3	106.4			
Cadmium			118	mg/kg	1.0	86	73	105.1			
Copper			247	mg/kg	1.1	88	77.5	109.6			
Lead			170	mg/kg	3.1	91	75.9	108.6			
Zinc			188	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H14110217-020APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141121B			11/21/14 20:36	
Arsenic			1990	mg/kg	1.7		75	125			A
Cadmium			114	mg/kg	1.0	89	75	125			
Copper			9160	mg/kg	1.1		75	125			A
Lead			818	mg/kg	3.1	81	75	125			
Zinc			2520	mg/kg	1.0		75	125			A
Lab ID:	**H14110217-020AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141121B			11/21/14 20:39	
Arsenic			1800	mg/kg	1.8		75	125			A
Cadmium			29.3	mg/kg	1.0	92	75	125			
Copper			8950	mg/kg	1.1		75	125			A
Lead			666	mg/kg	3.2		75	125			A
Zinc			2350	mg/kg	1.0		75	125			A
Lab ID:	**H14110217-020AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141121B			11/21/14 20:43	
Arsenic			1830	mg/kg	1.9		75	125	1.7	20	A
Cadmium			30.5	mg/kg	1.0	93	75	125	4.3	20	
Copper			9060	mg/kg	1.1		75	125	1.3	20	A
Lead			673	mg/kg	3.3		75	125	1.1	20	A
Zinc			2390	mg/kg	1.0		75	125	1.7	20	A
Method:	**SW6010B**										Batch: 27091
Lab ID:	**MB-27091**	5	Method Blank				Run: ICP2-HE_141121B			11/21/14 20:47	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.9	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27091	
Lab ID:	**MB-27091**	5	Method Blank				Run: ICP2-HE_141121B			11/21/14 20:47	
Lead			ND	mg/kg	0.6						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LFB-27091**	5	Laboratory Fortified Blank				Run: ICP2-HE_141121B			11/21/14 20:58	
Arsenic			45.4	mg/kg	1.0	91	80	120			
Cadmium			23.3	mg/kg	1.0	93	80	120			
Copper			48.4	mg/kg	1.0	95	80	120			
Lead			45.5	mg/kg	1.0	91	80	120			
Zinc			47.9	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-27091**	5	Laboratory Control Sample				Run: ICP2-HE_141121B			11/21/14 21:02	
Arsenic			281	mg/kg	1.8	80	72.3	106.4			
Cadmium			122	mg/kg	1.0	87	73	105.1			
Copper			250	mg/kg	1.1	87	77.5	109.6			
Lead			181	mg/kg	3.2	95	75.9	108.6			
Zinc			195	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H14110217-038APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141121B			11/21/14 22:53	
Arsenic			239	mg/kg	1.9	86	75	125			
Cadmium			111	mg/kg	1.0	85	75	125			
Copper			282	mg/kg	1.1	94	75	125			
Lead			239	mg/kg	3.3	86	75	125			
Zinc			520	mg/kg	1.0	87	75	125			
Lab ID:	**H14110217-038AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141121B			11/21/14 22:57	
Arsenic			62.4	mg/kg	1.8	92	75	125			
Cadmium			23.0	mg/kg	1.0	90	75	125			
Copper			91.0	mg/kg	1.1	105	75	125			
Lead			61.2	mg/kg	3.2	87	75	125			
Zinc			339	mg/kg	1.0		75	125			A
Lab ID:	**H14110217-038AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141121B			11/21/14 23:00	
Arsenic			59.2	mg/kg	1.8	87	75	125	5.4	20	
Cadmium			22.5	mg/kg	1.0	89	75	125	2.3	20	
Copper			88.4	mg/kg	1.1	102	75	125	2.8	20	
Lead			61.5	mg/kg	3.2	90	75	125	0.5	20	
Zinc			344	mg/kg	1.0		75	125	1.6	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27096
Lab ID:	**MB-27096**	5	Method Blank				Run: ICP2-HE_141124B				11/24/14 17:45
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.5	mg/kg	0.09						
Lab ID:	**LFB-27096**	5	Laboratory Fortified Blank				Run: ICP2-HE_141124B				11/24/14 17:56
Arsenic			49.2	mg/kg	1.0	98	80	120			
Cadmium			23.9	mg/kg	1.0	96	80	120			
Copper			50.7	mg/kg	1.0	101	80	120			
Lead			49.1	mg/kg	1.0	98	80	120			
Zinc			50.3	mg/kg	1.0	100	80	120			
Lab ID:	**LCS-27096**	5	Laboratory Control Sample				Run: ICP2-HE_141124B				11/24/14 17:59
Arsenic			290	mg/kg	1.8	85	72.3	106.4			
Cadmium			122	mg/kg	1.0	89	73	105.1			
Copper			266	mg/kg	1.1	95	77.5	109.6			
Lead			183	mg/kg	3.2	98	75.9	108.6			
Zinc			200	mg/kg	1.0	94	74.2	109.9			
Lab ID:	**H14110217-057APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141124B				11/24/14 19:58
Arsenic			240	mg/kg	1.8	89	75	125			
Cadmium			107	mg/kg	1.0	84	75	125			
Copper			287	mg/kg	1.1	92	75	125			
Lead			229	mg/kg	3.2	85	75	125			
Zinc			342	mg/kg	1.0	91	75	125			
Lab ID:	**H14110217-057AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141124B				11/24/14 20:02
Arsenic			58.8	mg/kg	1.8	89	75	125			
Cadmium			21.4	mg/kg	1.0	85	75	125			
Copper			96.9	mg/kg	1.1	86	75	125			
Lead			57.5	mg/kg	3.2	91	75	125			
Zinc			155	mg/kg	1.0	89	75	125			
Lab ID:	**H14110217-057AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141124B				11/24/14 20:05
Arsenic			60.7	mg/kg	1.8	94	75	125	3.2	20	
Cadmium			22.5	mg/kg	1.0	90	75	125	4.9	20	
Copper			99.3	mg/kg	1.1	91	75	125	2.4	20	
Lead			63.2	mg/kg	3.1	103	75	125	9.4	20	
Zinc			163	mg/kg	1.0	105	75	125	4.8	20	
Method:	**SW6010B**										Batch: 27097
Lab ID:	**MB-27097**	5	Method Blank				Run: ICP2-HE_141124B				11/24/14 20:09
Arsenic			ND	mg/kg	0.4						
Cadmium			0.03	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27097
Lab ID:	**MB-27097**	5	Method Blank				Run: ICP2-HE_141124B				11/24/14 20:09
Lead			ND	mg/kg	0.6						
Zinc			0.7	mg/kg	0.09						
Lab ID:	**LFB-27097**	5	Laboratory Fortified Blank				Run: ICP2-HE_141124B				11/24/14 20:13
Arsenic			47.1	mg/kg	1.0	94	80	120			
Cadmium			23.3	mg/kg	1.0	93	80	120			
Copper			49.8	mg/kg	1.0	100	80	120			
Lead			46.2	mg/kg	1.0	92	80	120			
Zinc			48.4	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27097**	5	Laboratory Control Sample				Run: ICP2-HE_141124B				11/24/14 20:17
Arsenic			286	mg/kg	1.8	83	72.3	106.4			
Cadmium			119	mg/kg	1.0	87	73	105.1			
Copper			259	mg/kg	1.1	92	77.5	109.6			
Lead			179	mg/kg	3.1	96	75.9	108.6			
Zinc			195	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14110217-076APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141124B				11/24/14 21:50
Arsenic			319	mg/kg	1.8	92	75	125			
Cadmium			112	mg/kg	1.0	87	75	125			
Copper			402	mg/kg	1.1	98	75	125			
Lead			248	mg/kg	3.2	88	75	125			
Zinc			356	mg/kg	1.0	95	75	125			
Lab ID:	**H14110217-076AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141124B				11/24/14 21:54
Arsenic			135	mg/kg	1.8	102	75	125			
Cadmium			23.7	mg/kg	1.0	93	75	125			
Copper			202	mg/kg	1.1	102	75	125			
Lead			78.2	mg/kg	3.1	109	75	125			
Zinc			165	mg/kg	1.0	104	75	125			
Lab ID:	**H14110217-076AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141124B				11/24/14 22:05
Arsenic			129	mg/kg	1.8	89	75	125	4.6	20	
Cadmium			23.2	mg/kg	1.0	90	75	125	2.1	20	
Copper			202	mg/kg	1.1	102	75	125	0.1	20	
Lead			70.2	mg/kg	3.1	92	75	125	11	20	
Zinc			161	mg/kg	1.0	94	75	125	2.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27121	
Lab ID:	**MB-27121**	5	Method Blank				Run: ICP2-HE_141125B			11/25/14 10:48	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			0.3	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27121**	5	Laboratory Fortified Blank				Run: ICP2-HE_141125B			11/25/14 10:52	
Arsenic			48.9	mg/kg	1.0	98	80	120			
Cadmium			23.7	mg/kg	1.0	95	80	120			
Copper			50.7	mg/kg	1.0	101	80	120			
Lead			47.8	mg/kg	1.0	96	80	120			
Zinc			51.8	mg/kg	1.0	100	80	120			
Lab ID:	**LCS-27121**	5	Laboratory Control Sample				Run: ICP2-HE_141125B			11/25/14 10:55	
Arsenic			317	mg/kg	1.8	92	72.3	106.4			
Cadmium			131	mg/kg	1.0	96	73	105.1			
Copper			270	mg/kg	1.1	96	77.5	109.6			
Lead			199	mg/kg	3.1	106	75.9	108.6			
Zinc			218	mg/kg	1.0	101	74.2	109.9			
Lab ID:	**H14110217-079APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141125B			11/25/14 11:55	
Arsenic			229	mg/kg	1.8	88	75	125			
Cadmium			104	mg/kg	1.0	83	75	125			
Copper			271	mg/kg	1.1	90	75	125			
Lead			233	mg/kg	3.2	83	75	125			
Zinc			307	mg/kg	1.0	87	75	125			
Lab ID:	**H14110217-079AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141125B			11/25/14 11:58	
Arsenic			52.5	mg/kg	1.8	91	75	125			
Cadmium			21.1	mg/kg	1.0	86	75	125			
Copper			91.1	mg/kg	1.1	94	75	125			
Lead			63.7	mg/kg	3.1	79	75	125			
Zinc			136	mg/kg	1.0	95	75	125			
Lab ID:	**H14110217-079AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141125B			11/25/14 12:02	
Arsenic			49.9	mg/kg	1.8	86	75	125	5.1	20	
Cadmium			20.6	mg/kg	1.0	84	75	125	2.6	20	
Copper			91.5	mg/kg	1.1	95	75	125	0.4	20	
Lead			64.8	mg/kg	3.1	82	75	125	1.6	20	
Zinc			130	mg/kg	1.0	84	75	125	4.0	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27213
Lab ID:	**MB-27213**	4	Method Blank				Run: ICP2-HE_141203A			12/03/14 13:53	
Arsenic			ND	mg/kg	0.4						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27213**	4	Laboratory Fortified Blank				Run: ICP2-HE_141203A			12/03/14 13:57	
Arsenic			46.6	mg/kg	1.0	93	80	120			
Copper			49.2	mg/kg	1.0	98	80	120			
Lead			47.3	mg/kg	1.0	95	80	120			
Zinc			47.7	mg/kg	1.0	95	80	120			
Lab ID:	**LCS-27213**	4	Laboratory Control Sample				Run: ICP2-HE_141203A			12/03/14 14:00	
Arsenic			284	mg/kg	1.8	84	72.3	106.4			
Copper			261	mg/kg	1.1	94	77.5	109.6			
Lead			176	mg/kg	3.2	95	75.9	108.6			
Zinc			194	mg/kg	1.0	92	74.2	109.9			
Lab ID:	**H14110217-027APDS**	4	Post Digestion/Distillation Spike				Run: ICP2-HE_141203A			12/03/14 14:15	
Arsenic			291	mg/kg	1.9	87	75	125			
Copper			631	mg/kg	1.2	83	75	125			
Lead			290	mg/kg	3.4	83	75	125			
Zinc			509	mg/kg	1.0	84	75	125			
Lab ID:	**H14110217-027AMS**	4	Sample Matrix Spike				Run: ICP2-HE_141203A			12/03/14 14:19	
Arsenic			686	mg/kg	1.8		75	125			A
Copper			15200	mg/kg	1.1		75	125			A
Lead			434	mg/kg	3.2		75	125			A
Zinc			3660	mg/kg	1.0		75	125			A
Lab ID:	**H14110217-027AMSD**	4	Sample Matrix Spike Duplicate				Run: ICP2-HE_141203A			12/03/14 14:22	
Arsenic			683	mg/kg	1.9		75	125	0.4	20	A
Copper			15000	mg/kg	1.1		75	125	1.2	20	A
Lead			432	mg/kg	3.3		75	125	0.4	20	A
Zinc			3680	mg/kg	1.0		75	125	0.5	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141125A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/25/14 10:30	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0315	mg/L	0.0010	105	90	110			
Lead			0.0595	mg/L	0.0010	99	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/25/14 23:56	
Arsenic			0.0595	mg/L	0.0010	99	90	110			
Cadmium			0.0312	mg/L	0.0010	104	90	110			
Lead			0.0592	mg/L	0.0010	99	90	110			
Method:	**SW6020**									Batch: 27087	
Lab ID:	**MB-27087**	2	Method Blank				Run: ICPMS204-B_141125A			11/25/14 15:38	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27087**	2	Laboratory Control Sample				Run: ICPMS204-B_141125A			11/25/14 15:42	
Arsenic			318	mg/kg	1.0	93	72.3	106.4			
Lead			195	mg/kg	1.0	104	75.9	108.6			
Lab ID:	**LFB-27087**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141125A			11/25/14 15:47	
Arsenic			49.4	mg/kg	1.0	99	80	120			
Lead			50.0	mg/kg	1.0	100	80	120			
Lab ID:	**H14110217-020APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141125A			11/25/14 17:02	
Arsenic			4160	mg/kg	1.0	96	75	125			
Lead			2740	mg/kg	1.0	90	75	125			
Lab ID:	**H14110217-020AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141125A			11/25/14 17:06	
Arsenic			1970	mg/kg	1.0		75	125			A
Lead			680	mg/kg	1.0		75	125			A
Lab ID:	**H14110217-020AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141125A			11/25/14 17:10	
Arsenic			2030	mg/kg	1.0		75	125	3.3	20	A
Lead			709	mg/kg	1.0		75	125	4.1	20	A
Method:	**SW6020**									Batch: 27091	
Lab ID:	**MB-27091**	2	Method Blank				Run: ICPMS204-B_141125A			11/25/14 17:28	
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27091**	2	Laboratory Control Sample				Run: ICPMS204-B_141125A			11/25/14 17:33	
Arsenic			322	mg/kg	1.0	94	72.3	106.4			
Lead			197	mg/kg	1.0	106	75.9	108.6			
Lab ID:	**LFB-27091**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141125A			11/25/14 17:37	
Arsenic			50.4	mg/kg	1.0	101	80	120			
Lead			49.7	mg/kg	1.0	99	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27091
Lab ID:	**H14110217-038APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141125A				11/25/14 18:44
Arsenic			2490	mg/kg	1.0	98	75	125			
Lead			2520	mg/kg	1.0	99	75	125			
Lab ID:	**H14110217-038AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141125A				11/25/14 18:48
Arsenic			65.0	mg/kg	1.0	103	75	125			
Lead			62.3	mg/kg	1.0	100	75	125			
Lab ID:	**H14110217-038AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141125A				11/25/14 18:52
Arsenic			63.4	mg/kg	1.0	101	75	125	2.5	20	
Lead			60.5	mg/kg	1.0	99	75	125	2.9	20	
Method:	**SW6020**										Batch: 27096
Lab ID:	**MB-27096**	3	Method Blank				Run: ICPMS204-B_141125A				11/25/14 19:01
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LFB-27096**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141125A				11/25/14 19:10
Arsenic			51.3	mg/kg	1.0	103	80	120			
Cadmium			24.8	mg/kg	1.0	99	80	120			
Lead			51.0	mg/kg	1.0	102	80	120			
Lab ID:	**H14110217-057APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141125A				11/25/14 20:30
Arsenic			2430	mg/kg	1.0	98	75	125			
Cadmium			1130	mg/kg	1.0	92	75	125			
Lead			2480	mg/kg	1.0	100	75	125			
Lab ID:	**H14110217-057AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141125A				11/25/14 20:34
Arsenic			65.3	mg/kg	1.0	100	75	125			
Cadmium			23.7	mg/kg	1.0	94	75	125			
Lead			64.4	mg/kg	1.0	100	75	125			
Lab ID:	**H14110217-057AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141125A				11/25/14 20:39
Arsenic			63.6	mg/kg	1.0	96	75	125	2.7	20	
Cadmium			23.0	mg/kg	1.0	92	75	125	2.8	20	
Lead			61.8	mg/kg	1.0	95	75	125	4.0	20	
Method:	**SW6020**										Batch: 27097
Lab ID:	**MB-27097**	2	Method Blank				Run: ICPMS204-B_141125A				11/25/14 20:48
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LFB-27097**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141125A				11/25/14 20:57
Arsenic			51.4	mg/kg	1.0	103	80	120			
Lead			51.3	mg/kg	1.0	103	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27097
Lab ID:	**H14110217-076APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141125A				11/25/14 22:35
Arsenic			2580	mg/kg	1.0	101	75	125			
Lead			2480	mg/kg	1.0	99	75	125			
Lab ID:	**H14110217-076AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141125A				11/25/14 22:39
Arsenic			135	mg/kg	1.0	93	75	125			
Lead			73.8	mg/kg	1.0	94	75	125			
Lab ID:	**H14110217-076AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141125A				11/25/14 22:44
Arsenic			138	mg/kg	1.0	99	75	125	2.4	20	
Lead			77.3	mg/kg	1.0	101	75	125	4.6	20	
Method:	**SW6020**										Batch: 27121
Lab ID:	**MB-27121**		Method Blank				Run: ICPMS204-B_141125A				11/25/14 13:17
Arsenic			ND	mg/kg	0.3						
Lab ID:	**LCS-27121**		Laboratory Control Sample				Run: ICPMS204-B_141125A				11/25/14 13:22
Arsenic			333	mg/kg	1.0	97	72.3	106.4			
Lab ID:	**LFB-27121**		Laboratory Fortified Blank				Run: ICPMS204-B_141125A				11/25/14 13:26
Arsenic			50.4	mg/kg	1.0	101	80	120			
Lab ID:	**H14110217-079APDS**		Post Digestion/Distillation Spike				Run: ICPMS204-B_141125A				11/25/14 14:40
Arsenic			2420	mg/kg	1.0	99	75	125			
Lab ID:	**H14110217-079AMS**		Sample Matrix Spike				Run: ICPMS204-B_141125A				11/25/14 14:44
Arsenic			56.8	mg/kg	1.0	103	75	125			
Lab ID:	**H14110217-079AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS204-B_141125A				11/25/14 14:49
Arsenic			54.9	mg/kg	1.0	99	75	125	3.4	20	
Method:	**SW6020**										Analytical Run: ICPMS204-B_141201B
Lab ID:	**ICV STD**		Initial Calibration Verification Standard								12/01/14 13:39
Lead			0.0591	mg/L	0.0010	99	90	110			
Method:	**SW6020**										Batch: 27096
Lab ID:	**LCS-27096**	3	Laboratory Control Sample				Run: ICPMS204-B_141201B				12/01/14 20:46
Arsenic			308	mg/kg	1.0	90	72.3	106.4			
Cadmium			116	mg/kg	1.0	84	73	105.1			
Lead			195	mg/kg	1.0	104	75.9	108.6			
Method:	**SW6020**										Batch: 27097
Lab ID:	**LCS-27097**	2	Laboratory Control Sample				Run: ICPMS204-B_141201B				12/01/14 21:12
Arsenic			305	mg/kg	1.0	89	72.3	106.4			
Lead			193	mg/kg	1.0	103	75.9	108.6			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/05/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110217

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020								Analytical Run: ICPMS204-B_141203A		
Lab ID: ICV STD		Initial Calibration Verification Standard								12/03/14 14:30
Cadmium		0.0310	mg/L	0.0010	103	90	110			
Method: SW6020										Batch: 27213
Lab ID: MB-27213		Method Blank				Run: ICPMS204-B_141203A				12/03/14 15:27
Cadmium		ND	mg/kg	0.2						
Lab ID: LCS-27213		Laboratory Control Sample				Run: ICPMS204-B_141203A				12/03/14 15:32
Cadmium		129	mg/kg	1.0	94	73	105.1			
Lab ID: LFB-27213		Laboratory Fortified Blank				Run: ICPMS204-B_141203A				12/03/14 15:36
Cadmium		25.2	mg/kg	1.0	101	80	120			
Lab ID: H14110217-027APDS		Post Digestion/Distillation Spike				Run: ICPMS204-B_141203A				12/03/14 15:54
Cadmium		1130	mg/kg	1.0	88	75	125			
Lab ID: H14110217-027AMS		Sample Matrix Spike				Run: ICPMS204-B_141203A				12/03/14 15:58
Cadmium		24.8	mg/kg	1.0	92	75	125			
Lab ID: H14110217-027AMSD		Sample Matrix Spike Duplicate				Run: ICPMS204-B_141203A				12/03/14 16:02
Cadmium		22.3	mg/kg	1.0	81	75	125	11	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14110217

Login completed by: Tracy L. Lorash
Date Received: 11/12/2014
Reviewed by: BL2000\rwilliams
Received by: TLL
Reviewed Date: 11/26/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	°C See comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Samples were received frozen.
No collection date on bag for 3-011-1218. Logged in with date from COC.
Collection time smeared on sample bag for 3-013-1824. Logged in with time from COC.
Sample ID on COC is 3-178w-0006 -ID on bag is 3-178-0006w. Logged in with ID from COC.
Collection time on COC for 3-178w-0006 is 08:14 - bag has 9:14. Logged in with time from COC.
Collection time on COC for 3-163w3-0006 is 10:53 - bag has 10:55. Logged in with time from COC.
Sample ID on COC is 3-163w2-0006 -ID on bag is 3-163-0006w2. Logged in with ID from COC.
No collection time on page 4 of the COC. Logged in with time from sample bags.
Collection time on COC for 3-163w-0006 is 09:33 - bag has 9:35. Logged in with time from COC.
Sample ID on COC is 3-035w-0006 -ID on bag is 3-035-0006. Logged in with ID from COC.
Sample ID on COC is 3-035w-1218 -ID on bag is JP-. Logged in with ID from COC.
Sample ID on COC is 3-138w-0006 -ID on bag is 3-138-0006w2. Logged in with ID from COC.

Workorder Receipt Checklist - Continued

MT DEQ-Federal Superfund H14110217

Sample ID on COC for sample numbers 61-64 and 76 have a "w" after 143, sample 77 has a "w" after 153 -ID on bags has w after 0006, 0612 and 1218. Logged in with ID from COC.
Collection time on COC for sample 61 is 13:30 - bag has 14:48. Collection time on COC for sample 62 is 13:29 - bag has 14:46. Collection time on COC for sample 63 is 13:28 - bag has 14:44. Logged in with time from COC on all.
Cooler 1 was received at -1.4℃, Cooler 2 at -2.8℃, Cooler 3 at -1.4℃, Cooler 4 at -3.4℃, Cooler 5 at -2.7℃.
Samples were not received on ice. TI 11/13/14

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

ANALYSIS REQUESTED

Standard Turnaround (TAT) ◯ RUSH ◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): Y

Receipt Temp: See comments

On Ice: Y (N)

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact: Y N

Signature Match: Y N

LABORATORY USE ONLY: H14110217

CS

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH	SEE ATTACHED	Comments
1	3-009-0006	11/7/14	07:32	S	★	★		C1 = -1.4
2	3-009-0612	11/7/14	07:31	S	★	★		C2 = -2.8
3	3-009-1218	11/7/14	07:30	S	★	★		C3 = -1.4
4	3-010-2430	11/7/14	07:44	S	★	★		C4 = -3.4
5	3-010-3036	11/7/14	07:43	S	★	★		C5 = -2.7
6	3-010-3642	11/7/14	07:42	S	★	★		
7	3-011-0612	11/7/14	08:12	S	★	★		
8	3-011-1218	11/7/14	08:10	S	★	★		
9	3-011-1824	11/7/14	08:08	S	★	★		
10				S	★	★		

Custody Record MUST be Signed

Relinquished by (print): MARK S Date/Time: 11/12/14 @ 14:42 Signature:

Received by (print): Date/Time: Signature:

Relinquished by (print): S Date/Time: Signature:

Received by (print): Date/Time: Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

Received by Laboratory: Tracy Lerad Date/Time: 11/12/14 14:42 Signature: Tracy Lerad

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print)

☐ No Hard Copy Email:

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

ANALYSIS REQUESTED

Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

Standard Turnaround (TAT) ◯ RUSH ◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): Y

Receipt Temp: See comment

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N

Intact Y N

Signature Match Y N

LABORATORY USE ONLY: H14110217

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH	SEE ATTACHED	Comments
1	3-013-1824	11/7/14	08:21	S	★	★		C1 = -1.4
2	3-013-2430	11/7/14	08:20	S	★	★		C2 = -2.8
3	3-013-3036	11/7/14	08:19	S	★	★		C3 = -1.4
4	3-022-0612	11/7/14	09:11	S	★	★		C4 = -3.4
5	3-022-1218	11/7/14	09:10	S	★	★		C5 = -2.7
6	3-022-1824	11/7/14	09:09	S	★	★		
7	3-023-0006	11/7/14	08:52	S	★	★		
8	3-023-0612	11/7/14	08:51	S	★	★		
9	3-178w-0006	11/5/14	08:14	S	★	★		
10	3-163w3-0006	11/5/14	10:53	S	★	★		

C5

Cl

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Marra Pettes	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Brant Date/Time: 11/12/14 14:42 Signature: Tracy Brant

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin: State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required):
50 West 14 street, Suite 200
Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required):
PO box 200901
Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data)
Format:
☐ LEVEL IV
☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): 4

Receipt Temp: See comments

On Ice: Y (N)

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact: Y N

Signature Match: Y N

LABORATORY USE ONLY: H14110217

ANALYSIS REQUESTED

Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids; Vegetation Bioassay Other; DW - Drinking Water

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments
1	3-024-0006	11/7/14	08:47	S	★	★									◉	◯	C1 = -1.4
2	3-024-0612	11/7/14	08:46	S	★	★									◉	◯	C2 = -2.8
3	3-024-1218	11/7/14	08:45	S	★	★									◉	◯	C3 = -1.4
4	3-033-0612	11/7/14	09:27	S	★	★									◉	◯	C4 = -3.4
5	3-033-1218	11/7/14	09:26	S	★	★									◉	◯	C5 = -2.7
6	3-033-1824	11/7/14	09:25	S	★	★									◉	◯	
7	3-034-0612	11/7/14	09:49	S	★	★									◉	◯	
8	3-034-1218	11/7/14	09:48	S	★	★									◉	◯	
9	3-034-1824	11/7/14	09:47	S	★	★									◉	◯	
10	3-163w2-0006	11/5/14	10:07	S	★	★									◉	◯	

C5

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mana Pegas	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Lovat 11/12/14 14:42 Signature: Tracy Lovat

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ POTW/WWTP ☐ State: ☐ Other:
☐ EDD/EDT (Electronic Data) Format: ☐ LEVEL IV ☐ NELAC

ANALYSIS REQUESTED

Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

Standard Turnaround (TAT) ◯ RUSH ◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): Y

Receipt Temp: See comments

On Ice: Y (N)

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact Y N

Signature Match Y N

LABORATORY USE ONLY: H14110217

C5

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH	SEE ATTACHED	Comments
1	3-043-0612	11/7/14		S	★	★		C1: -1.4
2	3-043-0612d	11/7/14		S	★	★		C2: -2.8
3	3-043-1218	11/7/14		S	★	★		C3: -1.4
4	3-043-1824	11/7/14		S	★	★		C4: -3.4
5	3-047-0612	11/7/14		S	★	★		C5: -2.7
6	3-047-1218	11/7/14		S	★	★		
7	3-047-1824	11/7/14		S	★	★		
8	3-051-2430	11/7/14		S	★	★		
9	3-051-3036	11/7/14		S	★	★		
10	3-051-3642	11/7/14		S	★	★		

Custody Record MUST be Signed

Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
S [illegible]	11/12/14 @ 14:42	[signature]			
S					

Received by Laboratory: Tracy [illegible] Date/Time: 11/12/14 14:42 Signature: [signature]

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin: State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:

☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids
Vegetation Bioassay Other
DW - Drinking Water

ANALYSIS REQUESTED

Standard Turnaround (TAT) ◯ RUSH ◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): Y
Receipt Temp: See comment
On Ice: Y N
Custody Seal: On Bottle Y N; On Cooler Y N
Intact Y N
Signature Match Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Comments
C4 1	3-025-0612	11/6/14	15:12	S	★	★									C1: -1.4
2	3-025-1218	11/6/14	15:10	S	★	★									C2: -2.8
3	3-025-1824	11/6/14	15:08	S	★	★									C3: -1.4
4	3-025w-0006	11/6/14	15:41	S	★	★									C4: -3.4
5	3-025w-0612	11/6/14	15:39	S	★	★									C5: -2.7
6	3-025w-1218	11/6/14	15:37	S	★	★									
7	3-035-1218	11/6/14	14:50	S	★	★									
8	3-035-1824	11/6/14	14:48	S	★	★									
9	3-035-2430	11/6/14	14:46	S	★	★									
C1 10	3-163w-0006	11/5/14	09:33	S	★	★									

LABORATORY USE ONLY: H14110217

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mark Peters	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Lerud 11/12/14 14:42 Tracy Lerud

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data)
Format:
☐ LEVEL IV
☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand

Cooler ID(s): 4

Receipt Temp: See comments

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N

Intact Y N

Signature Match Y N

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
C4	1 3-035w-0006	11/6/14	15:26	S	★	★									◉	◯	C1: -1.4	H14110217
	2 3-035w-0612	11/6/14	15:24	S	★	★									◉	◯	C2: -2.8	
	3 3-035w-1218	11/6/14	15:22	S	★	★									◉	◯	C3: -1.4	
	4 3-056-0006	11/6/14	13:18	S	★	★									◉	◯	C4: -3.4	
	5 3-056-0612	11/6/14	13:17	S	★	★									◉	◯	C5: -2.7	
	6 3-065-3036	11/6/14	12:57	S	★	★									◉	◯		
C3	7 3-138w-0006	11/5/14	14:55	S	★	★									◉	◯		
	8 3-138w-0612	11/5/14	14:52	S	★	★									◉	◯		
	9 3-138w-0612d	11/5/14	14:53	S	★	★									◉	◯		
C3	10 3-138w-1218	11/5/14	14:50	S	★	★									◉	◯		

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S	11/12/14 @ 14:42				
S					

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

Received by Laboratory: Tracy Lerud Date/Time: 11/12/14 14:42 Signature: Tracy Lerud

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin: State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required):
50 West 14 street, Suite 200
Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required):
PO box 200901
Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

ANALYSIS REQUESTED

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): 4
Receipt Temp: See comments
On Ice: Y (N)
Custody Seal: On Bottle Y (N); On Cooler Y N
Intact: Y N
Signature Match: Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments
1	3-138w2-0006	11/5/14	15:35	S	★	★									◉	◯	C1: -1.4
2	3-143w-0006	11/5/14	13:30	S	★	★									◉	◯	C2: -2.6
3	3-143w-0612	11/5/14	13:29	S	★	★									◉	◯	C3: -1.4
4	3-143w-1218	11/5/14	13:28	S	★	★									◉	◯	C4: -3.4
5	3-143w2-0612	11/5/14	15:19	S	★	★									◉	◯	C5: -2.7
6	3-143w2-1218	11/5/14	15:17	S	★	★									◉	◯	
7	3-143w2-1824	11/5/14	15:15	S	★	★									◉	◯	
8	3-143w3-0006	11/5/14	15:29	S	★	★									◉	◯	
9	3-143w3-0612	11/5/14	15:28	S	★	★									◉	◯	
10	3-143w3-1218	11/5/14	15:27	S	★	★									◉	◯	

LABORATORY USE ONLY: H14110217

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mann Peters	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Ernst Date/Time: 11/12/14 14:42 Signature: Tracy Ernst

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

Chain of Custody and Analytical Request Record

ENERGY LABORATORIES

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division	Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4	Sample Origin State: MT	EPA/State Compliance: Yes ◯ No ◯
Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601 ☐ No Hard Copy Email:	Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898		Sampler: (Please Print)
	Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070	Purchase Order:	Quote/Bottle Order:
Invoice Address (Required): PO box 200901, Helena, MT 56620-0901 ☐ No Hard Copy Email:			

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format: ____
☐ State: ____ ☐ LEVEL IV
☐ Other: ____ ☐ NELAC

ANALYSIS REQUESTED

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids
Vegetation Bioassay Other
DW - Drinking Water

Standard Turnaround (TAT) ◯ RUSH ◯ — Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Hand
Cooler ID(s): Y
Receipt Temp: See comments
On Ice: Y (N)
Custody Seal: On Bottle Y (N); On Cooler Y N
Intact: Y N
Signature Match: Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH	SEE ATTACHED	Comments
1	3-065-3642	11/6/14	12:56	S	★	★		C1: -1.4
2	3-065-4248	11/6/14	12:55	S	★	★		C2: -2.8
3	3-065w-0006	11/6/14	13:56	S	★	★		C3: -1.4
4	3-065w-0612	11/6/14	13:54	S	★	★		C4: -3.4
5	3-065w-1218	11/6/14	13:52	S	★	★		C5: -2.7
6	3-073w-0006	11/6/14	14:00	S	★	★		
7	3-143w4-0006	11/5/14	14:55	S	★	★		
8	3-153w-0006	11/5/14	13:15	S	★	★		
9	3-153w-0612	11/5/14	13:13	S	★	★		
10	3-153w-1218	11/5/14	13:11	S	★	★		

LABORATORY USE ONLY: H14110217

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S Mark Peters	11/12/14 @ 14:42				
S					

Received by Laboratory: Tracy Lewis Date/Time: 11/12/14 14:42 Signature: Tracy Lewis

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ANALYTICAL SUMMARY REPORT

December 01, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110124 Quote ID: H958 - CFR Monitoring-474374

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 24 samples for MT DEQ-Federal Superfund on 11/10/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110124-001	FB1-103014	10/30/14 11:15	11/10/14	Aqueous	Metals by ICP/ICPMS, Total pH Metals Digestion by EPA 200.2
H14110124-002	FB02-103014	10/30/14 12:57	11/10/14	Aqueous	Same As Above
H14110124-003	FB06-103114	10/31/14 10:50	11/10/14	Aqueous	Same As Above
H14110124-004	FB07-103114	10/31/14 13:00	11/10/14	Aqueous	Same As Above
H14110124-005	FB08-10/31/14	10/31/14 14:41	11/10/14	Aqueous	Same As Above
H14110124-006	FB09-103114	10/31/14 16:01	11/10/14	Aqueous	Same As Above
H14110124-007	FB10-103114	10/31/14 16:20	11/10/14	Aqueous	Same As Above
H14110124-008	FB12-110414	11/04/14 7:28	11/10/14	Aqueous	Metals by ICP/ICPMS, Total Metals Digestion by EPA 200.2
H14110124-009	FB13-110414	11/04/14 10:53	11/10/14	Aqueous	Metals by ICP/ICPMS, Total pH Metals Digestion by EPA 200.2
H14110124-010	FB14-110414	11/04/14 14:45	11/10/14	Aqueous	Same As Above
H14110124-011	FB15-110514	11/05/14 9:06	11/10/14	Aqueous	Same As Above
H14110124-012	FB16-110514	11/05/14 14:35	11/10/14	Aqueous	Same As Above
H14110124-013	FB17-110614	11/06/14 10:25	11/10/14	Aqueous	Same As Above
H14110124-014	FB18-110614	11/06/14 15:03	11/10/14	Aqueous	Same As Above
H14110124-015	FB05-103114	10/31/14 9:22	11/10/14	Aqueous	Same As Above
H14110124-016	FB03-103014	10/30/14 14:20	11/10/14	Aqueous	Same As Above
H14110124-017	FB04-103014	10/30/14 16:07	11/10/14	Aqueous	Same As Above
H14110124-018	CCB01-103014	10/30/14 13:17	11/10/14	Aqueous	Same As Above
H14110124-019	CCB02-103114	10/31/14 9:30	11/10/14	Aqueous	Same As Above
H14110124-020	CCB03-103114	10/31/14 13:40	11/10/14	Aqueous	Same As Above
H14110124-021	CCB04-103114	10/31/14 15:24	11/10/14	Aqueous	Same As Above
H14110124-022	CCB07-110414	11/04/14 15:43	11/10/14	Aqueous	Same As Above
H14110124-023	CCB08-110614	11/06/14 8:00	11/10/14	Aqueous	Same As Above
H14110124-024	CCB09-110614	11/06/14 15:45	11/10/14	Aqueous	Same As Above

ANALYTICAL SUMMARY REPORT

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-001
Client Sample ID: FB1-103014

Report Date: 12/01/14
Collection Date: 10/30/14 11:15
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/11/14 11:30 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 22:02 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 22:02 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 22:02 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 22:02 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 22:02 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-002
Client Sample ID: FB02-103014

Report Date: 12/01/14
Collection Date: 10/30/14 12:57
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/11/14 11:36 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 22:32 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 22:32 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 22:32 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 22:32 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 22:32 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-003
Client Sample ID: FB06-103114

Report Date: 12/01/14
Collection Date: 10/31/14 10:50
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/11/14 11:39 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 22:37 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 22:37 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 22:37 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 22:37 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 22:37 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-004
Client Sample ID: FB07-103114

Report Date: 12/01/14
Collection Date: 10/31/14 13:00
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.4	s.u.	H	0.1		A4500-H B	11/11/14 11:42 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 22:41 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 22:41 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 22:41 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 22:41 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 22:41 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-005
Client Sample ID: FB08-10/31/14

Report Date: 12/01/14
Collection Date: 10/31/14 14:41
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	6.0	s.u.	H	0.1		A4500-H B	11/11/14 11:44 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 22:46 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 22:46 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 22:46 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 22:46 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 22:46 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-006
Client Sample ID: FB09-103114

Report Date: 12/01/14
Collection Date: 10/31/14 16:01
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/11/14 11:47 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 22:50 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 22:50 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 22:50 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 22:50 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 22:50 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-007
Client Sample ID: FB10-103114

Report Date: 12/01/14
Collection Date: 10/31/14 16:20
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.9	s.u.	H	0.1		A4500-H B	11/11/14 11:50 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 22:54 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 22:54 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 22:54 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 22:54 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 22:54 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-008
Client Sample ID: FB12-110414

Report Date: 12/01/14
Collection Date: 11/04/14 07:28
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 22:59 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 22:59 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 22:59 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 22:59 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 22:59 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-009
Client Sample ID: FB13-110414

Report Date: 12/01/14
Collection Date: 11/04/14 10:53
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	11/11/14 11:53 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 23:03 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 23:03 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 23:03 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 23:03 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 23:03 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-010
Client Sample ID: FB14-110414

Report Date: 12/01/14
Collection Date: 11/04/14 14:45
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.8	s.u.	H	0.1		A4500-H B	11/11/14 11:56 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 23:08 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 23:08 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 23:08 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 23:08 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 23:08 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-011
Client Sample ID: FB15-110514

Report Date: 12/01/14
Collection Date: 11/05/14 09:06
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.8	s.u.	H	0.1		A4500-H B	11/11/14 11:59 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 23:25 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 23:25 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 23:25 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 23:25 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 23:25 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-012
Client Sample ID: FB16-110514

Report Date: 12/01/14
Collection Date: 11/05/14 14:35
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.7	s.u.	H	0.1		A4500-H B	11/11/14 12:02 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/14/14 23:42 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/14/14 23:42 / dck
Copper	ND	mg/L		0.005		E200.8	11/14/14 23:42 / dck
Lead	ND	mg/L		0.001		E200.8	11/14/14 23:42 / dck
Zinc	ND	mg/L		0.01		E200.8	11/14/14 23:42 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-013
Client Sample ID: FB17-110614

Report Date: 12/01/14
Collection Date: 11/06/14 10:25
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.9	s.u.	H	0.1		A4500-H B	11/11/14 12:04 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/15/14 00:04 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 00:04 / dck
Copper	ND	mg/L		0.005		E200.8	11/15/14 00:04 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 00:04 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 00:04 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-014
Client Sample ID: FB18-110614

Report Date: 12/01/14
Collection Date: 11/06/14 15:03
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.6	s.u.	H	0.1		A4500-H B	11/11/14 12:07 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/15/14 00:20 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 00:20 / dck
Copper	ND	mg/L		0.005		E200.8	11/15/14 00:20 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 00:20 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 00:20 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-015
Client Sample ID: FB05-103114

Report Date: 12/01/14
Collection Date: 10/31/14 09:22
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.9	s.u.	H	0.1		A4500-H B	11/11/14 12:10 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/15/14 00:25 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 00:25 / dck
Copper	ND	mg/L		0.005		E200.8	11/15/14 00:25 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 00:25 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 00:25 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-016
Client Sample ID: FB03-103014

Report Date: 12/01/14
Collection Date: 10/30/14 14:20
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/11/14 12:13 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/15/14 00:43 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 00:43 / dck
Copper	ND	mg/L		0.005		E200.8	11/15/14 00:43 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 00:43 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 00:43 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-017
Client Sample ID: FB04-103014

Report Date: 12/01/14
Collection Date: 10/30/14 16:07
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/11/14 12:16 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/15/14 00:47 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 00:47 / dck
Copper	ND	mg/L		0.005		E200.8	11/15/14 00:47 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 00:47 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 00:47 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-018
Client Sample ID: CCB01-103014

Report Date: 12/01/14
Collection Date: 10/30/14 13:17
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/11/14 12:19 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/15/14 00:51 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 00:51 / dck
Copper	ND	mg/L		0.005		E200.8	11/15/14 00:51 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 00:51 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 00:51 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-019
Client Sample ID: CCB02-103114

Report Date: 12/01/14
Collection Date: 10/31/14 09:30
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/11/14 12:21 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/15/14 00:56 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 00:56 / dck
Copper	ND	mg/L		0.005		E200.8	11/15/14 00:56 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 00:56 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 00:56 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-020
Client Sample ID: CCB03-103114

Report Date: 12/01/14
Collection Date: 10/31/14 13:40
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.7	s.u.	H	0.1		A4500-H B	11/11/14 12:24 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/15/14 01:00 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 01:00 / dck
Copper	ND	mg/L		0.005		E200.8	11/15/14 01:00 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 01:00 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 01:00 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-021
Client Sample ID: CCB04-103114

Report Date: 12/01/14
Collection Date: 10/31/14 15:24
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/12/14 09:21 / SRW
METALS, TOTAL							
Arsenic	0.001	mg/L		0.001		E200.8	11/15/14 01:05 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 01:05 / dck
Copper	0.014	mg/L		0.005		E200.8	11/15/14 01:05 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 01:05 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 01:05 / dck

-Detections were confirmed by duplicate analysis.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-022
Client Sample ID: CCB07-110414

Report Date: 12/01/14
Collection Date: 11/04/14 15:43
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/12/14 09:24 / SRW
METALS, TOTAL							
Arsenic	0.002	mg/L		0.001		E200.8	11/15/14 01:09 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 01:09 / dck
Copper	0.010	mg/L		0.005		E200.8	11/15/14 01:09 / dck
Lead	0.001	mg/L		0.001		E200.8	11/15/14 01:09 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 01:09 / dck

-Detections were confirmed by duplicate analysis.

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-023
Client Sample ID: CCB08-110614

Report Date: 12/01/14
Collection Date: 11/06/14 08:00
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.5	s.u.	H	0.1		A4500-H B	11/12/14 09:27 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/15/14 01:14 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 01:14 / dck
Copper	ND	mg/L		0.005		E200.8	11/15/14 01:14 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 01:14 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 01:14 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Lab ID: H14110124-024
Client Sample ID: CCB09-110614

Report Date: 12/01/14
Collection Date: 11/06/14 15:45
DateReceived: 11/10/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
pH	5.8	s.u.	H	0.1		A4500-H B	11/12/14 09:29 / SRW
METALS, TOTAL							
Arsenic	ND	mg/L		0.001		E200.8	11/15/14 01:30 / dck
Cadmium	ND	mg/L		0.001		E200.8	11/15/14 01:30 / dck
Copper	ND	mg/L		0.005		E200.8	11/15/14 01:30 / dck
Lead	ND	mg/L		0.001		E200.8	11/15/14 01:30 / dck
Zinc	ND	mg/L		0.01		E200.8	11/15/14 01:30 / dck

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
H - Analysis performed past recommended holding time.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110124

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **A4500-H B**								Analytical Run: PHSC_101-H_141111A		
Lab ID: **pH 7**	Initial Calibration Verification Standard								11/11/14 10:28	
pH		7.0	s.u.	0.1	100	98	102			
Lab ID: **CCV - pH 7**	Continuing Calibration Verification Standard								11/11/14 12:30	
pH		7.0	s.u.	0.1	100	98	102			
Method: **A4500-H B**									Batch: R102077	
Lab ID: **H14110124-001BDUP**	Sample Duplicate					Run: PHSC_101-H_141111A			11/11/14 11:33	
pH		5.5	s.u.	0.1				0.2	3	
Lab ID: **H14110124-020BDUP**	Sample Duplicate					Run: PHSC_101-H_141111A			11/11/14 12:27	
pH		5.7	s.u.	0.1				0.4	3	
Method: **A4500-H B**								Analytical Run: PHSC_101-H_141112A		
Lab ID: **pH 7**	Initial Calibration Verification Standard								11/12/14 08:59	
pH		7.0	s.u.	0.1	100	98	102			
Method: **A4500-H B**									Batch: R102108	
Lab ID: **H14110136-001BDUP**	Sample Duplicate					Run: PHSC_101-H_141112A			11/12/14 09:35	
pH		8.2	s.u.	0.1				0.0	3	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110124

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_141114B		
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							11/14/14 11:48	
Arsenic			0.0599	mg/L	0.0050	100	90	110			
Cadmium			0.0313	mg/L	0.0010	104	90	110			
Copper			0.0642	mg/L	0.010	107	90	110			
Lead			0.0580	mg/L	0.010	97	90	110			
Zinc			0.0621	mg/L	0.010	103	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/14/14 11:53	
Arsenic			7.50E-05	mg/L	0.0050						
Cadmium			0.000510	mg/L	0.0010						
Copper			0.000455	mg/L	0.010						
Lead			0.000246	mg/L	0.010						
Zinc			0.00168	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/14/14 11:58	
Arsenic			0.0111	mg/L	0.0050	111	70	130			
Cadmium			0.00977	mg/L	0.0010	98	70	130			
Copper			0.0214	mg/L	0.010	107	70	130			
Lead			0.000256	mg/L	0.010		0	0			
Zinc			0.0116	mg/L	0.010	116	70	130			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/14/14 17:19	
Arsenic			7.70E-05	mg/L	0.0050						
Cadmium			0.000424	mg/L	0.0010						
Copper			0.000238	mg/L	0.010						
Lead			0.000232	mg/L	0.010						
Zinc			0.00170	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/14/14 17:24	
Arsenic			0.0103	mg/L	0.0050	103	70	130			
Cadmium			0.00877	mg/L	0.0010	88	70	130			
Copper			0.0210	mg/L	0.010	105	70	130			
Lead			0.000224	mg/L	0.010		0	0			
Zinc			0.0114	mg/L	0.010	114	70	130			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							11/14/14 18:30	
Arsenic			0.0598	mg/L	0.0050	100	90	110			
Cadmium			0.0317	mg/L	0.0010	106	90	110			
Copper			0.0639	mg/L	0.010	107	90	110			
Lead			0.0599	mg/L	0.010	100	90	110			
Zinc			0.0626	mg/L	0.010	104	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/14/14 18:34	
Arsenic			0.000150	mg/L	0.0050						
Cadmium			0.000485	mg/L	0.0010						
Copper			0.000407	mg/L	0.010						
Lead			0.000223	mg/L	0.010						

Qualifiers:

RL - Analyte reporting limit. ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110124

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**								Analytical Run: ICPMS204-B_141114B		
Lab ID:	**ICSA**	5	Interference Check Sample A							11/14/14 18:34	
Zinc			0.00159	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/14/14 18:39	
Arsenic			0.0103	mg/L	0.0050	103	70	130			
Cadmium			0.00933	mg/L	0.0010	93	70	130			
Copper			0.0197	mg/L	0.010	99	70	130			
Lead			0.000229	mg/L	0.010		0	0			
Zinc			0.0106	mg/L	0.010	106	70	130			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/15/14 05:18	
Arsenic			0.000379	mg/L	0.0050						
Cadmium			0.000463	mg/L	0.0010						
Copper			0.000391	mg/L	0.010						
Lead			0.000227	mg/L	0.010						
Zinc			0.00156	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/15/14 05:22	
Arsenic			0.0105	mg/L	0.0050	105	70	130			
Cadmium			0.00937	mg/L	0.0010	94	70	130			
Copper			0.0202	mg/L	0.010	101	70	130			
Lead			0.000229	mg/L	0.010		0	0			
Zinc			0.0112	mg/L	0.010	112	70	130			
Lab ID:	**ICV STD**	5	Initial Calibration Verification Standard							11/15/14 16:18	
Arsenic			0.0599	mg/L	0.0050	100	90	110			
Cadmium			0.0315	mg/L	0.0010	105	90	110			
Copper			0.0642	mg/L	0.010	107	90	110			
Lead			0.0592	mg/L	0.010	99	90	110			
Zinc			0.0632	mg/L	0.010	105	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/15/14 16:22	
Arsenic			0.000147	mg/L	0.0050						
Cadmium			0.000537	mg/L	0.0010						
Copper			0.000398	mg/L	0.010						
Lead			0.000230	mg/L	0.010						
Zinc			0.00166	mg/L	0.010						
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/15/14 16:27	
Arsenic			0.0102	mg/L	0.0050	102	70	130			
Cadmium			0.00912	mg/L	0.0010	91	70	130			
Copper			0.0202	mg/L	0.010	101	70	130			
Lead			0.000222	mg/L	0.010		0	0			
Zinc			0.0112	mg/L	0.010	112	70	130			
Method:	**E200.8**									Batch: 26977	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110124

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**										Batch: 26977
Lab ID:	**MB-26977**	5	Method Blank				Run: ICPMS204-B_141114B			11/14/14 21:50	
Arsenic			0.0001	mg/L	6E-05						
Cadmium			ND	mg/L	3E-05						
Copper			0.001	mg/L	0.0003						
Lead			4E-05	mg/L	3E-05						
Zinc			0.005	mg/L	0.001						
Lab ID:	**LCS-26977**	5	Laboratory Control Sample				Run: ICPMS204-B_141114B			11/14/14 21:54	
Arsenic			0.506	mg/L	0.0010	101	85	115			
Cadmium			0.262	mg/L	0.0010	105	85	115			
Copper			0.528	mg/L	0.0050	105	85	115			
Lead			0.512	mg/L	0.0010	102	85	115			
Zinc			0.503	mg/L	0.010	100	85	115			
Lab ID:	**H14110124-001AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_141114B			11/14/14 22:07	
Arsenic			0.499	mg/L	0.0010	100	70	130			
Cadmium			0.253	mg/L	0.0010	101	70	130			
Copper			0.521	mg/L	0.0050	104	70	130			
Lead			0.503	mg/L	0.0010	101	70	130			
Zinc			0.496	mg/L	0.010	98	70	130			
Lab ID:	**H14110124-001AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141114B			11/14/14 22:11	
Arsenic			0.499	mg/L	0.0010	100	70	130	0.0	20	
Cadmium			0.259	mg/L	0.0010	104	70	130	2.4	20	
Copper			0.524	mg/L	0.0050	105	70	130	0.4	20	
Lead			0.507	mg/L	0.0010	101	70	130	0.8	20	
Zinc			0.497	mg/L	0.010	99	70	130	0.2	20	
Lab ID:	**H14110124-011AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_141114B			11/14/14 23:30	
Arsenic			0.501	mg/L	0.0010	100	70	130			
Cadmium			0.259	mg/L	0.0010	104	70	130			
Copper			0.523	mg/L	0.0050	105	70	130			
Lead			0.512	mg/L	0.0010	102	70	130			
Zinc			0.498	mg/L	0.010	99	70	130			
Lab ID:	**H14110124-011AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141114B			11/14/14 23:34	
Arsenic			0.497	mg/L	0.0010	99	70	130	0.8	20	
Cadmium			0.256	mg/L	0.0010	102	70	130	1.3	20	
Copper			0.522	mg/L	0.0050	104	70	130	0.3	20	
Lead			0.506	mg/L	0.0010	101	70	130	1.2	20	
Zinc			0.493	mg/L	0.010	98	70	130	0.9	20	
Method:	**E200.8**										Batch: 26978
Lab ID:	**MB-26978**	5	Method Blank				Run: ICPMS204-B_141114B			11/14/14 23:51	
Arsenic			0.0001	mg/L	6E-05						
Cadmium			ND	mg/L	3E-05						
Copper			0.0005	mg/L	0.0003						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110124

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**										Batch: 26978
Lab ID:	**MB-26978**	5	Method Blank				Run: ICPMS204-B_141114B				11/14/14 23:51
Lead			4E-05	mg/L	3E-05						
Zinc			0.002	mg/L	0.001						
Lab ID:	**LCS-26978**	5	Laboratory Control Sample				Run: ICPMS204-B_141114B				11/14/14 23:55
Arsenic			0.504	mg/L	0.0010	101	85	115			
Cadmium			0.258	mg/L	0.0010	103	85	115			
Copper			0.528	mg/L	0.0050	105	85	115			
Lead			0.512	mg/L	0.0010	102	85	115			
Zinc			0.500	mg/L	0.010	100	85	115			
Lab ID:	**H14110124-013AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_141114B				11/15/14 00:08
Arsenic			0.497	mg/L	0.0010	99	70	130			
Cadmium			0.254	mg/L	0.0010	102	70	130			
Copper			0.521	mg/L	0.0050	104	70	130			
Lead			0.503	mg/L	0.0010	101	70	130			
Zinc			0.491	mg/L	0.010	98	70	130			
Lab ID:	**H14110124-013AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141114B				11/15/14 00:12
Arsenic			0.499	mg/L	0.0010	100	70	130	0.5	20	
Cadmium			0.258	mg/L	0.0010	103	70	130	1.2	20	
Copper			0.523	mg/L	0.0050	104	70	130	0.3	20	
Lead			0.496	mg/L	0.0010	99	70	130	1.4	20	
Zinc			0.496	mg/L	0.010	99	70	130	1.0	20	
Lab ID:	**H14110124-023AMS3**	5	Sample Matrix Spike				Run: ICPMS204-B_141114B				11/15/14 01:18
Arsenic			0.498	mg/L	0.0010	100	70	130			
Cadmium			0.254	mg/L	0.0010	102	70	130			
Copper			0.530	mg/L	0.0050	106	70	130			
Lead			0.506	mg/L	0.0010	101	70	130			
Zinc			0.498	mg/L	0.010	99	70	130			
Lab ID:	**H14110124-023AMSD**	5	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141114B				11/15/14 01:22
Arsenic			0.494	mg/L	0.0010	99	70	130	0.8	20	
Cadmium			0.258	mg/L	0.0010	103	70	130	1.7	20	
Copper			0.522	mg/L	0.0050	104	70	130	1.5	20	
Lead			0.503	mg/L	0.0010	101	70	130	0.6	20	
Zinc			0.494	mg/L	0.010	98	70	130	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14110124

Login completed by: Tracy L. Lorash

Date Received: 11/10/2014

Reviewed by: BL2000\rwilliams

Received by: wjj

Reviewed Date: 11/12/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	4.2°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample ID on COC is FB1-103014 -ID on unpreserved bottle is FB-01-103014. Logged in with ID from COC.
Sample ID on COC is FB07-103114 -ID on unpreserved bottle is FB07 103114. Logged in with ID from COC.
Sample ID on COC is FB08-10/31/14 -ID on nitric bottle is FB08-103114, unpreserved bottle is FB-08 103114. Logged in with ID from COC.
Sample ID on COC is FB09-103114 -ID on nitric bottle is FB-09-103114. Logged in with ID from COC.
Sample ID on COC is FB15-110514 -ID on bottles is FB15 110514. Logged in with ID from COC.
Sample ID on COC is FB16-110514 -ID on bottles is FB16 110514. Logged in with ID from COC.
Sample ID on COC is FB18-110614 -ID on bottles is FB18 110614. Logged in with ID from COC.
Sample ID on COC is FB03-103014 -ID on bottles is FB-03 103014. Logged in with ID from COC.
Sample ID on COC is FB04-103014 -ID on bottles is FB04. Logged in with ID from COC.
Sample ID on COC is CCB04-10314 -ID on bottles is CCB04-103114. Logged in with ID from bottles.
Sample ID on COC is CCB07-110414 -ID on unpreserved bottle is CCB07 110414. Logged in with ID from COC.

Workorder Receipt Checklist - Continued

MT DEQ-Federal Superfund H14110124

FB13, FB04, CCB01, CCB02, CCB03, CCB04 metals samples were preserved with 2 mL nitric acid upon receipt to pH <2 in the laboratory. In accordance with the Clean Water Act, these samples must be held for 24 hours prior to analysis.
TI 11/11/14

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ- Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River-Phases 3+4

Sample Origin State:

EPA/State Compliance: Yes ☐ No ☒

Report Mail Address (Required): 50 W 14TH ST STE 200, Helena, MT 59601

Contact Name: Karin Mainzhausen

Phone/Fax: 406-441-1452

Cell:

Sampler: (Please Print) M. Peters, S. Lombert

☐ No Hard Copy Email:

Invoice Contact & Phone: Brian Bartkowiak, DEQ 406-461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO Box 200901, Helena MT 59 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:

☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

ANALYSIS REQUESTED

SEE ATTACHED

Standard Turnaround (TAT)

RUSH

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: handed

Cooler ID(s): Y

Receipt Temp 4.2 °C

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N; Intact Y N; Signature Match Y N

LABORATORY USE ONLY: H14110124

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	Total As, Cd, Cu, Pb, Zn	pH
1	FB1-103014	10/30/14	1115	W	X	
2	FB02-103014	10/30/14	1257	W		
3	FB06-103114	10/31/14	1050	W		
4	FB07-103114	10/31/14	1300	W		
5	FB08-10/31/14	10/31/14	1441	W		
6	FB09-103114	10/31/14	1601	W		
7	FB10-103114	10/31/14	1620	W		
8	FB12-110414	11/4/14	0728	W	X	
9	FB13-110414	11/4/14	1053	W		
10	FB14-110414	11/4/14	1445	W		

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
Erin McLauden	11/10/14 1700	Erin McLauden			
Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
			Received by Laboratory: Wanderson	11-10-14 17[illegible]	

Sample Disposal: Return to Client: Lab Disposal:

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: See page 1

Report Mail Address (Required):

☐ No Hard Copy Email:

Invoice Address (Required):

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

Project Name, PWS, Permit, Etc.

Sample Origin State:

EPA/State Compliance: Yes ☐ No ☐

Contact Name: Phone/Fax: Cell:

Sampler: (Please Print)

Invoice Contact & Phone:

Purchase Order:

Quote/Bottle Order:

ANALYSIS REQUESTED

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids
Vegetation Bioassay Other
DW - Drinking Water

SEE ATTACHED

Standard Turnaround (TAT)

RUSH

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: hand dd

Cooler ID(s): 4

Receipt Temp 4.2 °C

On Ice: Y N

Custody Seal
On Bottle Y N
On Cooler Y N
Intact Y N
Signature Match Y N

LABORATORY USE ONLY H14110124

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	Total As, Cd, Cu, Pb, Zn	pH
1	FB15-110514	11/05/14	0906	W		
2	FB116-110514	11/05/14	1435	W		
3	FB17-110614	11/06/14	1025	W		
4	FB18-110614	11/06/14	1503	W		
5	FB05-103114	10/31/14	922	W		
6	FB03-103014	10/30/14	1420	W		
7	FB04-103014	10/30/14	1607	W		
8	CCB01-103014	10/30/14	1317	W		
9	CCB02-103114	10/31/14	930	W		
10	CCB03-103114	10/31/14	1340	W		

Custody Record MUST be Signed

Relinquished by (print): Erin M Lowden Date/Time: 11/10/14 1700 Signature: Erin M Lowden

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Date/Time: 11-10-14 17 Signature:

Sample Disposal: Return to Client: Lab Disposal:

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: See page 1

Project Name, PWS, Permit, Etc.

Sample Origin State:

EPA/State Compliance: Yes ☐ No ☐

Report Mail Address (Required):

Contact Name: Phone/Fax: Cell:

Sampler: (Please Print)

☐ No Hard Copy Email:

Invoice Contact & Phone:

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required):

☐ No Hard Copy Email:

Special Report/Formats:

☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

ANALYSIS REQUESTED

Standard Turnaround (TAT) — RUSH

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: hand del

Cooler ID(s): Y

Receipt Temp 4.2 TB

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N; Intact Y N; Signature Match Y N

LABORATORY USE ONLY H14110124

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	Total As, Cd, Cu, Pb, Zn	pH	SEE ATTACHED
1	CCB04-103114	10/31/14	1524	W	↓	↓	
2	CCB07-110414	11/4/14	1543	W	↓	↓	
3	CCB08-110614	11/6/14	800	W	↓	↓	
4	CCB09-110614	11/6/14	1545	W	↓	↓	
5							
6							
7							
8							
9							
10							

Custody Record MUST be Signed

Relinquished by (print): Erin M Lowden Date/Time: 11/10/14 1700 Signature: Erin M Lowden

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Wandwin Date/Time: 11-10-14 17[illegible] Signature:

Sample Disposal: Return to Client: Lab Disposal:

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.

ANALYTICAL SUMMARY REPORT

December 01, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110064

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 44 samples for MT DEQ-Federal Superfund on 11/5/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110064-001	3-143-1824	11/03/14 9:15	11/05/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14110064-002	3-143-2430	11/03/14 9:13	11/05/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14110064-003	3-143-3036	11/03/14 9:12	11/05/14	Soil	Same As Above
H14110064-004	3-147-3036	11/03/14 14:17	11/05/14	Soil	Same As Above
H14110064-005	3-147-3642	11/03/14 14:16	11/05/14	Soil	Same As Above
H14110064-006	3-147-4248	11/03/14 14:15	11/05/14	Soil	Same As Above
H14110064-007	3-148-2430	11/03/14 12:33	11/05/14	Soil	Same As Above
H14110064-008	3-148-3036	11/03/14 12:32	11/05/14	Soil	Same As Above
H14110064-009	3-148-3642	11/03/14 12:31	11/05/14	Soil	Same As Above
H14110064-010	3-149-1824	11/03/14 12:20	11/05/14	Soil	Same As Above
H14110064-011	3-149-2430	11/03/14 12:18	11/05/14	Soil	Same As Above
H14110064-012	3-149-2430d	11/03/14 12:19	11/05/14	Soil	Same As Above
H14110064-013	3-149-3036	11/03/14 12:17	11/05/14	Soil	Same As Above
H14110064-014	3-153-1218	11/03/14 9:36	11/05/14	Soil	Same As Above
H14110064-015	3-153-1824	11/03/14 9:35	11/05/14	Soil	Same As Above
H14110064-016	3-153-2430	11/03/14 9:34	11/05/14	Soil	Same As Above
H14110064-017	3-156-0006	11/03/14 16:07	11/05/14	Soil	Same As Above
H14110064-018	3-156-0612	11/03/14 16:06	11/05/14	Soil	Same As Above
H14110064-019	3-156-1218	11/03/14 16:04	11/05/14	Soil	Same As Above
H14110064-020	3-158-1824	11/03/14 11:38	11/05/14	Soil	Same As Above
H14110064-021	3-158-2430	11/03/14 11:39	11/05/14	Soil	Same As Above
H14110064-022	3-158-3036	11/03/14 11:40	11/05/14	Soil	Same As Above
H14110064-023	3-159-0612	11/03/14 11:21	11/05/14	Soil	Same As Above
H14110064-024	3-159-1218	11/03/14 11:22	11/05/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110064-025	3-159-1824	11/03/14 11:23	11/05/14	Soil	Same As Above
H14110064-026	3-160-0612	11/03/14 11:06	11/05/14	Soil	Same As Above
H14110064-027	3-160-1218	11/03/14 11:07	11/05/14	Soil	Same As Above
H14110064-028	3-160-1824	11/03/14 11:08	11/05/14	Soil	Same As Above
H14110064-029	3-161-1218	11/03/14 10:05	11/05/14	Soil	Same As Above
H14110064-030	3-161-1824	11/03/14 10:04	11/05/14	Soil	Same As Above
H14110064-031	3-161-2430	11/03/14 10:03	11/05/14	Soil	Same As Above
H14110064-032	3-164-6066	11/03/14 13:19	11/05/14	Soil	Same As Above
H14110064-033	3-164-6672	11/03/14 13:16	11/05/14	Soil	Same As Above
H14110064-034	3-164-7278	11/03/14 13:17	11/05/14	Soil	Same As Above
H14110064-035	3-167-1824	11/03/14 10:25	11/05/14	Soil	Same As Above
H14110064-036	3-167-2430	11/03/14 10:24	11/05/14	Soil	Same As Above
H14110064-037	3-167-2430d	11/03/14 10:23	11/05/14	Soil	Same As Above
H14110064-038	3-167-3036	11/03/14 10:22	11/05/14	Soil	Same As Above
H14110064-039	3-171-4248	11/03/14 14:57	11/05/14	Soil	Same As Above
H14110064-040	3-171-4854	11/03/14 15:15	11/05/14	Soil	Same As Above
H14110064-041	3-171-5460	11/03/14 15:16	11/05/14	Soil	Same As Above
H14110064-042	3-174-1218	11/03/14 10:42	11/05/14	Soil	Same As Above
H14110064-043	3-174-1824	11/03/14 10:43	11/05/14	Soil	Same As Above
H14110064-044	3-174-2430	11/03/14 10:44	11/05/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110064

Report Date: 12/01/14
Date Received: 11/05/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110064-001	3-143-1824	0	0	7.3	55	< 1	63	13	1730
H14110064-002	3-143-2430	0	0	7.7	8	1	53	8	294
H14110064-003	3-143-3036	0	0	7.8	10	< 1	54	15	256
H14110064-004	3-147-3036	0	0	7.0	305	5	1890	217	3170
H14110064-005	3-147-3642	0	0	7.9	91	9	816	109	2530
H14110064-006	3-147-4248	0	0	7.7	39	1	183	26	838
H14110064-007	3-148-2430	0	0	6.7	8	6	7800	10	1540
H14110064-008	3-148-3036	0	0	6.8	4	4	254	9	1090
H14110064-009	3-148-3642	0	0	6.6	4	< 1	85	9	332
H14110064-010	3-149-1824	0	0	7.0	37	15	21700	24	5000
H14110064-011	3-149-2430	0	0	7.5	6	< 1	202	11	461
H14110064-012	3-149-2430d	0	0	7.3	6	< 1	132	11	159
H14110064-013	3-149-3036	0	0	7.1	68	3	772	50	602
H14110064-014	3-153-1218	0	0	7.5	424	32	13500	266	3210
H14110064-015	3-153-1824	0	0	7.6	33	4	487	15	1510
H14110064-016	3-153-2430	0	0	7.7	21	< 1	88	18	369
H14110064-017	3-156-0006	0	0	7.4	115	5	847	115	1150
H14110064-018	3-156-0612	0	0	7.4	144	3	861	132	1210
H14110064-019	3-156-1218	0	0	7.3	134	4	737	122	1150
H14110064-020	3-158-1824	0	0	7.0	11	5	2360	15	1160
H14110064-021	3-158-2430	0	0	7.0	4	2	802	9	693
H14110064-022	3-158-3036	0	0	7.4	6	< 1	283	10	142
H14110064-023	3-159-0612	0	0	7.4	8	22	9970	28	5110
H14110064-024	3-159-1218	0	0	7.4	6	< 1	158	16	174
H14110064-025	3-159-1824	0	0	6.9	24	< 1	1490	37	292
H14110064-026	3-160-0612	0	0	6.9	83	16	36800	251	6120
H14110064-027	3-160-1218	0	0	7.6	65	2	830	54	1460
H14110064-028	3-160-1824	0	0	7.6	8	< 1	66	14	167
H14110064-029	3-161-1218	0	0	7.8	48	< 1	466	51	259
H14110064-030	3-161-1824	0	0	7.5	10	< 1	152	18	269
H14110064-031	3-161-2430	0	0	7.3	9	< 1	103	16	175
H14110064-032	3-164-6066	0	0	7.5	6	1	7510	8	459
H14110064-033	3-164-6672	0	0	7.5	14	< 1	6450	9	434
H14110064-034	3-164-7278	0	0	7.7	8	< 1	4190	5	350
H14110064-035	3-167-1824	0	0	7.6	41	3	367	29	2640
H14110064-036	3-167-2430	0	0	7.4	77	< 1	658	51	596
H14110064-037	3-167-2430d	0	0	7.2	34	< 1	391	33	269
H14110064-038	3-167-3036	0	0	7.1	118	< 1	318	56	235
H14110064-039	3-171-4248	0	0	7.6	17	< 1	202	37	173
H14110064-040	3-171-4854	0	0	7.7	7	< 1	42	23	107

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110064

Report Date: 12/01/14
Date Received: 11/05/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110064-041	3-171-5460	0	0	7.6	6	< 1	61	17	111
H14110064-042	3-174-1218	0	0	7.5	20	118	21700	17	17500
H14110064-043	3-174-1824	0	0	6.9	7	4	762	15	1560
H14110064-044	3-174-2430	0	0	6.8	6	2	229	15	940

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110064

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2								Analytical Run: SOIL PH METER_141119B		
Lab ID: ICV_1_141118_1	Initial Calibration Verification Standard									11/19/14 08:22
pH, sat. paste		10.1	s.u.	0.10	101	99	101			
Lab ID: ICV_1_141118_1	Initial Calibration Verification Standard									11/19/14 08:59
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141118_1	Initial Calibration Verification Standard									11/19/14 10:17
pH, sat. paste		9.98	s.u.	0.10	100	99	101			
Lab ID: ICV_1_141118_1	Initial Calibration Verification Standard									11/19/14 10:57
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_1_141118_1	Continuing Calibration Verification Standard									11/19/14 11:51
pH, sat. paste		7.01	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141118_1	Continuing Calibration Verification Standard									11/19/14 11:51
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141118_1	Initial Calibration Verification Standard									11/19/14 11:51
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141118_1	Continuing Calibration Verification Standard									11/19/14 11:53
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141118_1	Continuing Calibration Verification Standard									11/19/14 12:13
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141118_1	Continuing Calibration Verification Standard									11/19/14 12:14
pH, sat. paste		4.00	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141118_1	Initial Calibration Verification Standard									11/19/14 12:15
pH, sat. paste		9.99	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141118_1	Continuing Calibration Verification Standard									11/19/14 12:30
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141118_1	Continuing Calibration Verification Standard									11/19/14 12:49
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141118_1	Continuing Calibration Verification Standard									11/19/14 12:51
pH, sat. paste		3.98	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141118_1	Initial Calibration Verification Standard									11/19/14 12:51
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Method: ASAM10-3.2										Batch: 27037
Lab ID: H14110064-020ADUP	Sample Duplicate					Run: SOIL PH METER_141119B				11/19/14 12:08
pH, sat. paste		7.01	s.u.	0.10						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110064

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27037
Lab ID: LCS-27037		Laboratory Control Sample				Run: SOIL PH METER_141119B				11/19/14 11:53
pH, sat. paste		7.71	s.u.	0.10	103	95	105			
Lab ID: H14110064-010ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 11:53
pH, sat. paste		7.02	s.u.	0.10				0.3	30	
Method: ASAM10-3.2										Batch: 27038
Lab ID: LCS-27038		Laboratory Control Sample				Run: SOIL PH METER_141119B				11/19/14 12:16
pH, sat. paste		7.69	s.u.	0.10	103	95	105			
Lab ID: H14110064-030ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 12:27
pH, sat. paste		7.57	s.u.	0.10				0.5	30	
Lab ID: H14110064-040ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 12:41
pH, sat. paste		7.69	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27039
Lab ID: LCS-27039		Laboratory Control Sample				Run: SOIL PH METER_141119B				11/19/14 12:52
pH, sat. paste		7.71	s.u.	0.10	103	95	105			
Lab ID: H14110064-044ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 12:56
pH, sat. paste		6.86	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110064

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141120A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							11/20/14 10:18	
Arsenic			0.810	mg/L	0.0085	101	90	110			
Cadmium			0.402	mg/L	0.0010	101	90	110			
Copper			0.776	mg/L	0.010	97	90	110			
Lead			0.807	mg/L	0.010	101	90	110			
Zinc			0.820	mg/L	0.010	102	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/20/14 10:32	
Arsenic			0.0116	mg/L	0.0085		0	0			
Cadmium			0.00275	mg/L	0.0010		0	0			
Copper			0.00160	mg/L	0.010		0	0			
Lead			-0.00826	mg/L	0.010		0	0			
Zinc			0.00184	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/20/14 10:37	
Arsenic			1.00	mg/L	0.0085	100	80	120			
Cadmium			0.926	mg/L	0.0010	93	80	120			
Copper			0.495	mg/L	0.010	99	80	120			
Lead			0.903	mg/L	0.010	90	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141121B		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							11/21/14 09:27	
Arsenic			0.825	mg/L	0.0085	103	90	110			
Cadmium			0.401	mg/L	0.0010	100	90	110			
Copper			0.800	mg/L	0.010	100	90	110			
Lead			0.813	mg/L	0.010	102	90	110			
Zinc			0.813	mg/L	0.010	102	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/21/14 09:42	
Arsenic			0.0121	mg/L	0.0085		0	0			
Cadmium			0.00430	mg/L	0.0010		0	0			
Copper			0.00332	mg/L	0.010		0	0			
Lead			-0.00491	mg/L	0.010		0	0			
Zinc			0.00280	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/21/14 09:46	
Arsenic			0.987	mg/L	0.0085	99	80	120			
Cadmium			0.885	mg/L	0.0010	89	80	120			
Copper			0.530	mg/L	0.010	106	80	120			
Lead			0.885	mg/L	0.010	89	80	120			
Zinc			0.991	mg/L	0.010	99	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110064

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**									Analytical Run: ICP2-HE_141124B	
Lab ID:	**ICV**	2	Initial Calibration Verification Standard							11/24/14 11:20	
Copper			0.782	mg/L	0.010	98	90	110			
Zinc			0.778	mg/L	0.010	97	90	110			
Lab ID:	**ICSA**	2	Interference Check Sample A							11/24/14 11:35	
Copper			0.0191	mg/L	0.010		0	0			
Zinc			0.0187	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	2	Interference Check Sample AB							11/24/14 11:39	
Copper			0.562	mg/L	0.010	112	80	120			
Zinc			1.01	mg/L	0.010	101	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110064

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27018	
Lab ID:	**MB-27018**	5	Method Blank				Run: ICP2-HE_141120A			11/20/14 11:46	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-27018**	5	Laboratory Fortified Blank				Run: ICP2-HE_141120A			11/20/14 11:50	
Arsenic			48.3	mg/kg	1.0	97	80	120			
Cadmium			24.2	mg/kg	1.0	97	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			47.7	mg/kg	1.0	95	80	120			
Zinc			49.9	mg/kg	1.0	99	80	120			
Lab ID:	**LCS-27018**	5	Laboratory Control Sample				Run: ICP2-HE_141120A			11/20/14 12:01	
Arsenic			291	mg/kg	1.9	85	72.3	106.4			
Cadmium			125	mg/kg	1.0	91	73	105.1			
Copper			256	mg/kg	1.2	91	77.5	109.6			
Lead			182	mg/kg	3.4	97	75.9	108.6			
Zinc			201	mg/kg	1.0	94	74.2	109.9			
Lab ID:	**H14110064-020APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141120A			11/20/14 13:36	
Arsenic			233	mg/kg	1.8	89	75	125			
Cadmium			117	mg/kg	1.0	90	75	125			
Copper			2590	mg/kg	1.1		75	125			A
Lead			233	mg/kg	3.2	87	75	125			
Zinc			1410	mg/kg	1.0		75	125			A
Lab ID:	**H14110064-020AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141120A			11/20/14 13:39	
Arsenic			55.0	mg/kg	1.7	90	75	125			
Cadmium			28.1	mg/kg	1.0	95	75	125			
Copper			2430	mg/kg	1.1		75	125			A
Lead			60.0	mg/kg	3.1	91	75	125			
Zinc			1230	mg/kg	1.0		75	125			A
Lab ID:	**H14110064-020AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141120A			11/20/14 13:43	
Arsenic			54.6	mg/kg	1.7	88	75	125	0.8	20	
Cadmium			28.5	mg/kg	1.0	96	75	125	1.6	20	
Copper			2360	mg/kg	1.1		75	125	3.2	20	A
Lead			64.8	mg/kg	3.1	100	75	125	7.8	20	
Zinc			1240	mg/kg	1.0		75	125	1.4	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110064

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 27027
Lab ID:	**MB-27027**	5	Method Blank				Run: ICP2-HE_141121B				11/21/14 14:44
Arsenic			0.6	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			2	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			2	mg/kg	0.09						
Lab ID:	**LFB-27027**	5	Laboratory Fortified Blank				Run: ICP2-HE_141121B				11/21/14 14:48
Arsenic			48.2	mg/kg	1.0	95	80	120			
Cadmium			24.2	mg/kg	1.0	97	80	120			
Copper			49.3	mg/kg	1.0	94	80	120			
Lead			47.9	mg/kg	1.0	96	80	120			
Zinc			49.7	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-27027**	5	Laboratory Control Sample				Run: ICP2-HE_141121B				11/21/14 14:52
Arsenic			291	mg/kg	1.8	86	72.3	106.4			
Cadmium			124	mg/kg	1.0	93	73	105.1			
Copper			254	mg/kg	1.1	92	77.5	109.6			
Lead			185	mg/kg	3.1	101	75.9	108.6			
Zinc			200	mg/kg	1.0	95	74.2	109.9			
Lab ID:	**H14110064-040APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141121B				11/21/14 16:27
Arsenic			232	mg/kg	1.9	85	75	125			
Cadmium			110	mg/kg	1.0	84	75	125			
Copper			294	mg/kg	1.2	96	75	125			
Lead			247	mg/kg	3.3	83	75	125			
Zinc			348	mg/kg	1.0	92	75	125			
Lab ID:	**H14110064-040AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141121B				11/21/14 16:31
Arsenic			52.8	mg/kg	1.8	87	75	125			
Cadmium			22.1	mg/kg	1.0	86	75	125			
Copper			99.8	mg/kg	1.1	114	75	125			
Lead			68.2	mg/kg	3.2	79	75	125			
Zinc			163	mg/kg	1.0	109	75	125			
Lab ID:	**H14110064-040AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141121B				11/21/14 16:35
Arsenic			51.9	mg/kg	1.8	85	75	125	1.7	20	
Cadmium			22.2	mg/kg	1.0	86	75	125	0.2	20	
Copper			93.6	mg/kg	1.1	102	75	125	6.4	20	
Lead			70.6	mg/kg	3.2	84	75	125	3.4	20	
Zinc			157	mg/kg	1.0	98	75	125	3.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110064

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**									Batch: 27094
Lab ID:	**MB-27094**	Method Blank				Run: ICP2-HE_141124B				11/24/14 14:07
Zinc		3	mg/kg	0.09						
Lab ID:	**LFB-27094**	Laboratory Fortified Blank				Run: ICP2-HE_141124B				11/24/14 14:11
Zinc		51.4	mg/kg	1.0	98	80	120			
Lab ID:	**LCS-27094**	Laboratory Control Sample				Run: ICP2-HE_141124B				11/24/14 14:14
Zinc		192	mg/kg	1.0	89	74.2	109.9			
Lab ID:	**H14110064-044APDS**	Post Digestion/Distillation Spike				Run: ICP2-HE_141124B				11/24/14 14:43
Zinc		1170	mg/kg	1.0	90	75	125			
Lab ID:	**H14110064-044AMS**	Sample Matrix Spike				Run: ICP2-HE_141124B				11/24/14 14:47
Zinc		1070	mg/kg	1.0		75	125			A
Lab ID:	**H14110064-044AMSD**	Sample Matrix Spike Duplicate				Run: ICP2-HE_141124B				11/24/14 14:51
Zinc		995	mg/kg	1.0		75	125	7.0	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110064

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141122A		
Lab ID:	**ICV STD**	4	Initial Calibration Verification Standard							11/21/14 10:35	
Arsenic			0.0601	mg/L	0.0010	100	90	110			
Cadmium			0.0316	mg/L	0.0010	105	90	110			
Copper			0.0621	mg/L	0.0010	103	90	110			
Lead			0.0597	mg/L	0.0010	100	90	110			
Lab ID:	**ICV STD**	4	Initial Calibration Verification Standard							11/22/14 20:57	
Arsenic			0.0606	mg/L	0.0010	101	90	110			
Cadmium			0.0316	mg/L	0.0010	105	90	110			
Copper			0.0618	mg/L	0.0010	103	90	110			
Lead			0.0598	mg/L	0.0010	100	90	110			
Method:	**SW6020**									Batch: 27018	
Lab ID:	**MB-27018**	3	Method Blank				Run: ICPMS204-B_141122A			11/21/14 11:07	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27018**	3	Laboratory Control Sample				Run: ICPMS204-B_141122A			11/21/14 11:11	
Arsenic			316	mg/kg	1.0	92	72.3	106.4			
Cadmium			127	mg/kg	1.0	93	73	105.1			
Lead			193	mg/kg	1.0	103	75.9	108.6			
Lab ID:	**LFB-27018**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141122A			11/21/14 11:16	
Arsenic			49.0	mg/kg	1.0	98	80	120			
Cadmium			24.7	mg/kg	1.0	99	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H14110064-020APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141122A			11/21/14 12:45	
Arsenic			2290	mg/kg	1.0	94	75	125			
Cadmium			1110	mg/kg	1.0	91	75	125			
Lead			2270	mg/kg	1.0	93	75	125			
Lab ID:	**H14110064-020AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141122A			11/21/14 12:49	
Arsenic			58.1	mg/kg	1.0	98	75	125			
Cadmium			27.9	mg/kg	1.0	94	75	125			
Lead			61.9	mg/kg	1.0	97	75	125			
Lab ID:	**H14110064-020AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141122A			11/21/14 12:53	
Arsenic			58.5	mg/kg	1.0	98	75	125	0.8	20	
Cadmium			28.5	mg/kg	1.0	96	75	125	2.3	20	
Lead			61.7	mg/kg	1.0	96	75	125	0.4	20	
Method:	**SW6020**									Batch: 27094	
Lab ID:	**MB-27094**	4	Method Blank				Run: ICPMS204-B_141122A			11/22/14 21:55	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110064

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 27094
Lab ID:	**MB-27094**	4	Method Blank				Run: ICPMS204-B_141122A			11/22/14 21:55	
Copper			ND	mg/kg	0.7						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27094**	4	Laboratory Control Sample				Run: ICPMS204-B_141122A			11/22/14 21:59	
Arsenic			314	mg/kg	1.0	92	72.3	106.4			
Cadmium			123	mg/kg	1.0	90	73	105.1			
Copper			278	mg/kg	1.0	99	77.5	109.6			
Lead			184	mg/kg	1.0	98	75.9	108.6			
Lab ID:	**LFB-27094**	4	Laboratory Fortified Blank				Run: ICPMS204-B_141122A			11/22/14 22:03	
Arsenic			49.4	mg/kg	1.0	99	80	120			
Cadmium			24.9	mg/kg	1.0	100	80	120			
Copper			51.6	mg/kg	1.0	103	80	120			
Lead			47.4	mg/kg	1.0	95	80	120			
Lab ID:	**H14110064-044APDS**	4	Post Digestion/Distillation Spike				Run: ICPMS204-B_141122A			11/22/14 22:47	
Arsenic			2590	mg/kg	1.0	97	75	125			
Cadmium			1230	mg/kg	1.0	92	75	125			
Copper			2750	mg/kg	1.0	95	75	125			
Lead			2540	mg/kg	1.0	95	75	125			
Lab ID:	**H14110064-044AMS**	4	Sample Matrix Spike				Run: ICPMS204-B_141122A			11/22/14 22:51	
Arsenic			55.3	mg/kg	1.0	100	75	125			
Cadmium			25.2	mg/kg	1.0	96	75	125			
Copper			343	mg/kg	1.0		75	125			A
Lead			61.8	mg/kg	1.0	96	75	125			
Lab ID:	**H14110064-044AMSD**	4	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141122A			11/22/14 22:56	
Arsenic			55.5	mg/kg	1.0	100	75	125	0.3	20	
Cadmium			24.8	mg/kg	1.0	94	75	125	1.7	20	
Copper			242	mg/kg	1.0		75	125	35	20	AR
Lead			62.1	mg/kg	1.0	97	75	125	0.4	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

R - RPD exceeds advisory limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 12/01/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110064

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141125A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/25/14 10:30	
Arsenic			0.0589	mg/L	0.0010	98	90	110			
Cadmium			0.0315	mg/L	0.0010	105	90	110			
Lead			0.0595	mg/L	0.0010	99	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/25/14 23:56	
Arsenic			0.0595	mg/L	0.0010	99	90	110			
Cadmium			0.0312	mg/L	0.0010	104	90	110			
Lead			0.0592	mg/L	0.0010	99	90	110			
Method:	**SW6020**										Batch: 27027
Lab ID:	**MB-27027**	3	Method Blank				Run: ICPMS204-B_141125A			11/25/14 11:13	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-27027**	3	Laboratory Control Sample				Run: ICPMS204-B_141125A			11/25/14 11:17	
Arsenic			318	mg/kg	1.0	93	72.3	106.4			
Cadmium			128	mg/kg	1.0	93	73	105.1			
Lead			195	mg/kg	1.0	104	75.9	108.6			
Lab ID:	**LFB-27027**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141125A			11/25/14 11:22	
Arsenic			49.4	mg/kg	1.0	99	80	120			
Cadmium			24.9	mg/kg	1.0	100	80	120			
Lead			50.0	mg/kg	1.0	100	80	120			
Lab ID:	**H14110064-040APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141125A			11/25/14 12:50	
Arsenic			2500	mg/kg	1.0	98	75	125			
Cadmium			1190	mg/kg	1.0	93	75	125			
Lead			2510	mg/kg	1.0	97	75	125			
Lab ID:	**H14110064-040AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141125A			11/25/14 12:55	
Arsenic			59.1	mg/kg	1.0	102	75	125			
Cadmium			24.2	mg/kg	1.0	93	75	125			
Lead			75.4	mg/kg	1.0	102	75	125			
Lab ID:	**H14110064-040AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141125A			11/25/14 13:00	
Arsenic			59.3	mg/kg	1.0	102	75	125	0.3	20	
Cadmium			24.6	mg/kg	1.0	95	75	125	1.5	20	
Lead			74.9	mg/kg	1.0	101	75	125	0.6	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund

H14110064

Login completed by: Wanda Johnson

Date Received: 11/5/2014

Reviewed by: BL2000\rwilliams

Received by: AHN

Reviewed Date: 11/6/2014

Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	3.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

COC states "3-143-1824" bag states "3-143-18-24"", "3-143-2430" bag states "3-143-24-30"", "3-143-3036" bag states "3-143-30-36"", used ID from COC. Wj 11/5/14

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: hand

Cooler ID(s): 4

Receipt Temp: 3.6 °C

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N

Intact: Y N

Signature Match: Y N

LABORATORY USE ONLY: #14110064

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH
1	3-143-1824	11/3/14	09:15	S	★	★									◉	◯
2	3-143-2430	11/3/14	09:13	S	★	★									◉	◯
3	3-143-3036	11/3/14	09:12	S	★	★									◉	◯
4	3-147-3036	11/3/14	14:17	S	★	★									◉	◯
5	3-147-3642	11/3/14	14:16	S	★	★									◉	◯
6	3-147-4248	11/3/14	14:15	S	★	★									◉	◯
7	3-148-2430	11/3/14	12:33	S	★	★									◉	◯
8	3-148-3036	11/3/14	12:32	S	★	★									◉	◯
9	3-148-3642	11/3/14	12:31	S	★	★									◉	◯
10	3-149-1824	11/3/14	12:20	S	★	★									◉	◯

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
S K Hamylauer	11/4/14 1444				
S					

Received by Laboratory: Austin Vasquez Date/Time: 11/5/14 1444 Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: hand

Cooler ID(s): 4

Receipt Temp: 3.6 °C

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N

Intact Y N

Signature Match Y N

LABORATORY USE ONLY: H110064

ANALYSIS REQUESTED

Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH
1	3-149-2430	11/3/14	12:18	S	★	★									◉	◯
2	3-149-2430d	11/3/14	12:19	S	★	★									◉	◯
3	3-149-3036	11/3/14	12:17	S	★	★									◉	◯
4	3-153-1218	11/3/14	09:36	S	★	★									◉	◯
5	3-153-1824	11/3/14	09:35	S	★	★									◉	◯
6	3-153-2430	11/3/14	09:34	S	★	★									◉	◯
7	3-156-0006	11/3/14	16:07	S	★	★									◉	◯
8	3-156-0612	11/3/14	16:06	S	★	★									◉	◯
9	3-156-1218	11/3/14	16:04	S	★	★									◉	◯
10	3-158-1824	11/3/14	11:38	S	★	★									◉	◯

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
K Bourgham	11/4/14 1444				
Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:

Received by Laboratory: Austin Newpass Date/Time: 11/5/14 1444 Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH
1 3-158-2430	11/3/14	11:39	S	★	★									◉	◯
2 3-158-3036	11/3/14	11:40	S	★	★									◉	◯
3 3-159-0612	11/3/14	11:21	S	★	★									◉	◯
4 3-159-1218	11/3/14	11:22	S	★	★									◉	◯
5 3-159-1824	11/3/14	11:23	S	★	★									◉	◯
6 3-160-0612	11/3/14	11:06	S	★	★									◉	◯
7 3-160-1218	11/3/14	11:07	S	★	★									◉	◯
8 3-160-1824	11/3/14	11:08	S	★	★									◉	◯
9 3-161-1218	11/3/14	10:05	S	★	★									◉	◯
10 3-161-1824	11/3/14	10:04	S	★	★									◉	◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: hand

Cooler ID(s): 4

Receipt Temp: 3.6 °C

On Ice: (Y) N

Custody Seal: On Bottle Y (N); On Cooler Y (N)

Intact: Y N

Signature Match: Y N

LABORATORY USE ONLY: H141100604

Custody Record MUST be Signed

Relinquished by (print): R. Hainzhauer Date/Time: 11/4/14 14:44 Signature:

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Austin Neuroass Date/Time: 11/5/14 14:45 Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

☐ No Hard Copy Email:

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

ANALYSIS REQUESTED

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids
Vegetation Bioassay Other
DW - Drinking Water

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu,Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH
1 3-161-2430	11/3/14	10:03	S	★	★									◉	◯
2 3-164-6066	11/3/14	13:19	S	★	★									◉	◯
3 3-164-6672	11/3/14	13:16	S	★	★									◉	◯
4 3-164-7278	11/3/14	13:17	S	★	★									◉	◯
5 3-167-1824	11/3/14	10:25	S	★	★									◉	◯
6 3-167-2430	11/3/14	10:24	S	★	★									◉	◯
7 3-167-2430d	11/3/14	10:23	S	★	★									◉	◯
8 3-167-3036	11/3/14	10:22	S	★	★									◉	◯
9 3-171-4248	11/3/14	14:57	S	★	★									◉	◯
10 3-171-4854	11/3/14	15:15	S	★	★									◉	◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

LABORATORY USE ONLY

Shipped by: hand

Cooler ID(s): 4

Receipt Temp: 3.6 °C

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N

Intact Y N

Signature Match Y N

H14110064

Custody Record MUST be Signed

Relinquished by (print): R. Mountsauer Date/Time: 11/4/14 14:44 Signature:

Received by (print): Date/Time: Signature:

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Austin Newparis Date/Time: 11/5/14 14:45 Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin: State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print)

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

ANALYSIS REQUESTED

SEE ATTACHED

Standard Turnaround (TAT) ◯ RUSH ◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: hand

Cooler ID(s): 4

Receipt Temp: 3.6 °C ØTB

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N

Intact: Y N

Signature Match: Y N

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu,Pb, Zn	pH									SEE ATTACHED	Standard Turnaround (TAT)	RUSH
1	3-171-5460	11/3/14	15:16	S	★	★										◉	◯
2	3-174-1218	11/3/14	10:42	S	★	★										◉	◯
3	3-174-1824	11/3/14	10:43	S	★	★										◉	◯
4	3-174-2430	11/3/14	10:44	S	★	★										◉	◯
5																◉	◯
6																◉	◯
7																◉	◯
8																◉	◯
9																◉	◯
10																◉	◯

LABORATORY USE ONLY: H14110064

Custody Record MUST be Signed

Relinquished by (print): L. Hainzhaeser Date/Time: 11/4/14 14:45 Signature:

Received by (print): Date/Time: Signature:

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Austin Newpaus Date/Time: 11/5/14 1425 Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ANALYTICAL SUMMARY REPORT

November 19, 2014

MT DEQ-Federal Superfund
PO Box 200901
Helena, MT 59620-0901

Work Order: H14110012

Project Name: 130500 DEQ Clark Fork River Phases 3 and 4

Energy Laboratories Inc Helena MT received the following 75 samples for MT DEQ-Federal Superfund on 11/3/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
H14110012-001	3-008-0612	10/30/14 9:05	11/03/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Soil Preparation
H14110012-002	3-008-1218	10/30/14 9:03	11/03/14	Soil	Metals by ICP/ICPMS, Total pH, Saturated Paste Digestion, Total Metals Saturated Paste Extraction
H14110012-003	3-008-1824	10/30/14 9:02	11/03/14	Soil	Same As Above
H14110012-004	3-021-2430	10/30/14 9:45	11/03/14	Soil	Same As Above
H14110012-005	3-021-3036	10/30/14 10:40	11/03/14	Soil	Same As Above
H14110012-006	3-021-3642	10/30/14 10:42	11/03/14	Soil	Same As Above
H14110012-007	3-032-3642	10/30/14 10:21	11/03/14	Soil	Same As Above
H14110012-008	3-032-4248	10/30/14 10:20	11/03/14	Soil	Same As Above
H14110012-009	3-055-1824	10/30/14 10:58	11/03/14	Soil	Same As Above
H14110012-010	3-055-2430	10/30/14 10:56	11/03/14	Soil	Same As Above
H14110012-011	3-055-3036	10/30/14 10:54	11/03/14	Soil	Same As Above
H14110012-012	3-082-3036	10/30/14 11:31	11/03/14	Soil	Same As Above
H14110012-013	3-082-3642	10/30/14 11:27	11/03/14	Soil	Same As Above
H14110012-014	3-082-4248	10/30/14 11:29	11/03/14	Soil	Same As Above
H14110012-015	3-090-0612	10/30/14 14:53	11/03/14	Soil	Same As Above
H14110012-016	3-090-1218	10/30/14 14:52	11/03/14	Soil	Same As Above
H14110012-017	3-090-1824	10/30/14 14:51	11/03/14	Soil	Same As Above
H14110012-018	3-091-0006	10/30/14 12:04	11/03/14	Soil	Same As Above
H14110012-019	3-091-0612	10/30/14 12:02	11/03/14	Soil	Same As Above
H14110012-020	3-091-1218	10/30/14 12:00	11/03/14	Soil	Same As Above
H14110012-021	3-095-3642	10/31/14 8:14	11/03/14	Soil	Same As Above
H14110012-022	3-095-4248	10/31/14 8:13	11/03/14	Soil	Same As Above
H14110012-023	3-096-3036	10/30/14 15:17	11/03/14	Soil	Same As Above
H14110012-024	3-096-3642	10/30/14 15:16	11/03/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110012-025	3-096-4248	10/30/14 15:15	11/03/14	Soil	Same As Above
H14110012-026	3-097-1824	10/30/14 13:33	11/03/14	Soil	Same As Above
H14110012-027	3-097-2430	10/30/14 13:32	11/03/14	Soil	Same As Above
H14110012-028	3-097-3036	10/30/14 13:31	11/03/14	Soil	Same As Above
H14110012-029	3-098-0612	10/30/14 14:15	11/03/14	Soil	Same As Above
H14110012-030	3-098-1218	10/30/14 14:14	11/03/14	Soil	Same As Above
H14110012-031	3-098-1824	10/30/14 14:13	11/03/14	Soil	Same As Above
H14110012-032	3-100-1218	10/31/14 10:34	11/03/14	Soil	Same As Above
H14110012-033	3-100-1824	10/31/14 10:35	11/03/14	Soil	Same As Above
H14110012-034	3-100-2430	10/31/14 10:38	11/03/14	Soil	Same As Above
H14110012-035	3-104-0006	10/31/14 8:48	11/03/14	Soil	Same As Above
H14110012-036	3-104-0612	10/31/14 8:47	11/03/14	Soil	Same As Above
H14110012-037	3-104-1218	10/31/14 8:46	11/03/14	Soil	Same As Above
H14110012-038	3-100-1218D	10/31/14 10:33	11/03/14	Soil	Same As Above
H14110012-039	3-114-1824	10/31/14 8:59	11/03/14	Soil	Same As Above
H14110012-040	3-114-2430	10/31/14 8:58	11/03/14	Soil	Same As Above
H14110012-041	3-114-3036	10/31/14 8:57	11/03/14	Soil	Same As Above
H14110012-042	3-115-0612	10/31/14 9:16	11/03/14	Soil	Same As Above
H14110012-043	3-115-1218	10/31/14 9:15	11/03/14	Soil	Same As Above
H14110012-044	3-115-1824	10/31/14 9:14	11/03/14	Soil	Same As Above
H14110012-045	3-116-1218	10/31/14 10:03	11/03/14	Soil	Same As Above
H14110012-046	3-116-1824	10/31/14 10:02	11/03/14	Soil	Same As Above
H14110012-047	3-116-2430	10/31/14 10:01	11/03/14	Soil	Same As Above
H14110012-048	3-118-2430	10/31/14 13:03	11/03/14	Soil	Same As Above
H14110012-049	3-118-3036	10/31/14 13:02	11/03/14	Soil	Same As Above
H14110012-050	3-118-3642	10/31/14 13:01	11/03/14	Soil	Same As Above
H14110012-051	3-123-1824	10/31/14 11:12	11/03/14	Soil	Same As Above
H14110012-052	3-123-2430	10/31/14 11:11	11/03/14	Soil	Same As Above
H14110012-053	3-123-3036	10/31/14 11:10	11/03/14	Soil	Same As Above
H14110012-054	3-125-1824	10/31/14 13:49	11/03/14	Soil	Same As Above
H14110012-055	3-125-2430	10/31/14 13:48	11/03/14	Soil	Same As Above
H14110012-056	3-125-3036	10/31/14 13:47	11/03/14	Soil	Same As Above
H14110012-057	3-132-3642	10/31/14 12:31	11/03/14	Soil	Same As Above
H14110012-058	3-132-4248	10/31/14 12:30	11/03/14	Soil	Same As Above
H14110012-059	3-132-4854	10/31/14 12:29	11/03/14	Soil	Same As Above
H14110012-060	3-133-3036	10/31/14 11:29	11/03/14	Soil	Same As Above
H14110012-061	3-133-3642	10/31/14 11:28	11/03/14	Soil	Same As Above

ANALYTICAL SUMMARY REPORT

H14110012-062	3-133-4248	10/31/14 11:27	11/03/14	Soil	Same As Above
H14110012-063	3-134-1218	10/31/14 14:21	11/03/14	Soil	Same As Above
H14110012-064	3-134-1824	10/31/14 14:20	11/03/14	Soil	Same As Above
H14110012-065	3-134-2430	10/31/14 14:19	11/03/14	Soil	Same As Above
H14110012-066	3-138-3036	10/31/14 14:37	11/03/14	Soil	Same As Above
H14110012-067	3-138-3642	10/31/14 14:36	11/03/14	Soil	Same As Above
H14110012-068	3-138-4248	10/31/14 14:35	11/03/14	Soil	Same As Above
H14110012-069	3-152-1218	10/31/14 15:00	11/03/14	Soil	Same As Above
H14110012-070	3-152-1824	10/31/14 14:59	11/03/14	Soil	Same As Above
H14110012-071	3-152-2430	10/31/14 14:58	11/03/14	Soil	Same As Above
H14110012-072	3-089-0612	10/30/14 13:07	11/03/14	Soil	Same As Above
H14110012-073	3-089-1218	10/30/14 13:04	11/03/14	Soil	Same As Above
H14110012-074	3-089-1218D	10/30/14 13:05	11/03/14	Soil	Same As Above
H14110012-075	3-089-1824	10/30/14 13:03	11/03/14	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 3161 E. Lyndale Ave., Helena, MT 59604, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110012

Report Date: 11/19/14
Date Received: 11/03/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110012-001	3-008-0612	0	0	7.8	56	1	739	34	538
H14110012-002	3-008-1218	0	0	7.7	38	< 1	504	33	429
H14110012-003	3-008-1824	0	0	7.5	9	< 1	54	19	101
H14110012-004	3-021-2430	0	0	7.0	23	10	6280	22	1640
H14110012-005	3-021-3036	0	0	7.6	10	12	282	11	1410
H14110012-006	3-021-3642	0	0	7.6	5	< 1	70	11	496
H14110012-007	3-032-3642	0	0	7.4	163	19	1610	136	4290
H14110012-008	3-032-4248	0	0	7.3	306	3	1410	199	2760
H14110012-009	3-055-1824	0	0	7.6	1600	14	12100	999	3590
H14110012-010	3-055-2430	0	0	7.7	152	1	844	90	640
H14110012-011	3-055-3036	0	0	7.6	30	< 1	204	25	265
H14110012-012	3-082-3036	0	0	7.2	91	23	827	31	3140
H14110012-013	3-082-3642	0	0	6.6	108	< 1	126	19	1460
H14110012-014	3-082-4248	0	0	7.3	77	< 1	114	24	506
H14110012-015	3-090-0612	0	0	7.3	379	4	2350	247	1490
H14110012-016	3-090-1218	0	0	7.6	183	7	1550	130	1710
H14110012-017	3-090-1824	0	0	7.6	38	2	179	27	840
H14110012-018	3-091-0006	0	0	8.2	120	< 1	592	68	344
H14110012-019	3-091-0612	0	0	8.2	14	< 1	59	14	75
H14110012-020	3-091-1218	0	0	8.0	10	< 1	48	11	55
H14110012-021	3-095-3642	0	0	6.8	193	6	2020	203	1410
H14110012-022	3-095-4248	0	0	7.5	625	2	2100	128	1300
H14110012-023	3-096-3036	0	0	7.4	322	5	2570	374	1300
H14110012-024	3-096-3642	0	0	7.4	35	< 1	194	37	150
H14110012-025	3-096-4248	0	0	6.4	94	3	828	92	511
H14110012-026	3-097-1824	0	0	7.8	206	3	1770	183	875
H14110012-027	3-097-2430	0	0	7.6	27	< 1	147	31	129
H14110012-028	3-097-3036	0	0	7.8	17	< 1	161	28	110
H14110012-029	3-098-0612	0	0	7.8	461	11	6650	892	2630
H14110012-030	3-098-1218	0	0	7.8	29	< 1	156	24	244
H14110012-031	3-098-1824	0	0	7.7	37	< 1	251	32	163
H14110012-032	3-100-1218	0	0	7.7	980	18	12200	992	4250
H14110012-033	3-100-1824	0	0	7.8	22	< 1	150	22	188
H14110012-034	3-100-2430	0	0	7.5	16	< 1	93	26	129
H14110012-035	3-104-0006	0	0	7.8	91	3	786	97	728
H14110012-036	3-104-0612	0	0	7.6	112	4	674	99	946
H14110012-037	3-104-1218	0	0	7.6	115	4	786	120	1090
H14110012-038	3-100-1218D	0	0	7.8	1100	19	11800	927	4510
H14110012-039	3-114-1824	0	0	7.6	629	9	5700	1620	3140
H14110012-040	3-114-2430	0	0	7.6	163	2	816	130	539

LABORATORY ANALYTICAL REPORT

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund
Project: 130500 DEQ Clark Fork River Phases 3 and 4
Workorder: H14110012

Report Date: 11/19/14
Date Received: 11/03/14

		Analysis		pH-SatPst	As-T	Cd-T	Cu-T	Pb-T	Zn-T
		Units		s_u_	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Client Sample ID**	**Up**	**Low**	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**
H14110012-041	3-114-3036	0	0	7.9	6	< 1	27	11	52
H14110012-042	3-115-0612	0	0	7.7	116	8	2070	82	2060
H14110012-043	3-115-1218	0	0	7.8	17	< 1	62	18	99
H14110012-044	3-115-1824	0	0	7.8	7	< 1	46	15	66
H14110012-045	3-116-1218	0	0	7.2	1340	23	7550	668	6790
H14110012-046	3-116-1824	0	0	7.4	908	2	835	93	724
H14110012-047	3-116-2430	0	0	7.1	87	< 1	285	15	552
H14110012-048	3-118-2430	0	0	8.1	19	< 1	150	22	90
H14110012-049	3-118-3036	0	0	7.5	7	< 1	41	11	62
H14110012-050	3-118-3642	0	0	7.4	7	< 1	39	11	57
H14110012-051	3-123-1824	0	0	7.7	13	2	273	16	344
H14110012-052	3-123-2430	0	0	7.6	167	< 1	957	104	301
H14110012-053	3-123-3036	0	0	7.9	12	< 1	73	16	67
H14110012-054	3-125-1824	0	0	7.3	1320	15	12000	907	3670
H14110012-055	3-125-2430	0	0	7.3	40	< 1	140	24	130
H14110012-056	3-125-3036	0	0	7.6	11	< 1	37	14	75
H14110012-057	3-132-3642	0	0	7.2	308	4	1720	175	1580
H14110012-058	3-132-4248	0	0	7.0	340	20	4400	260	6630
H14110012-059	3-132-4854	0	0	7.2	134	3	1820	59	1720
H14110012-060	3-133-3036	0	0	5.9	11	16	333	20	3060
H14110012-061	3-133-3642	0	0	6.7	4	2	25	12	1440
H14110012-062	3-133-4248	0	0	7.4	28	2	2460	21	773
H14110012-063	3-134-1218	0	0	6.8	2030	15	21100	1170	4300
H14110012-064	3-134-1824	0	0	7.2	1300	7	5460	405	2270
H14110012-065	3-134-2430	0	0	7.8	112	< 1	285	57	217
H14110012-066	3-138-3036	0	0	7.6	115	< 1	445	78	402
H14110012-067	3-138-3642	0	0	7.7	13	< 1	52	21	105
H14110012-068	3-138-4248	0	0	6.9	12	< 1	32	13	179
H14110012-069	3-152-1218	0	0	7.6	830	12	8700	2000	3790
H14110012-070	3-152-1824	0	0	7.8	149	3	840	359	1230
H14110012-071	3-152-2430	0	0	7.8	65	< 1	463	81	249
H14110012-072	3-089-0612	0	0	7.6	76	12	7220	18	3580
H14110012-073	3-089-1218	0	0	7.8	15	< 1	138	20	124
H14110012-074	3-089-1218D	0	0	7.8	9	< 1	42	14	79
H14110012-075	3-089-1824	0	0	7.8	9	< 1	57	18	106

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2									Analytical Run: SOIL PH METER_141119B	
Lab ID: CCV_1_141118_1		Continuing Calibration Verification Standard								11/19/14 08:21
pH, sat. paste		7.07	s.u.	0.10	101	98.6	101.4			
Lab ID: CCV1_1_141118_1		Continuing Calibration Verification Standard								11/19/14 08:22
pH, sat. paste		3.99	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141118_1		Initial Calibration Verification Standard								11/19/14 08:22
pH, sat. paste		10.1	s.u.	0.10	101	99	101			
Lab ID: CCV_3_141118_1		Continuing Calibration Verification Standard								11/19/14 08:41
pH, sat. paste		7.05	s.u.	0.10	101	98.6	101.4			
Lab ID: CCV_1_141118_1		Continuing Calibration Verification Standard								11/19/14 08:57
pH, sat. paste		7.03	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141118_1		Continuing Calibration Verification Standard								11/19/14 08:58
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141118_1		Initial Calibration Verification Standard								11/19/14 08:59
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141118_1		Continuing Calibration Verification Standard								11/19/14 09:13
pH, sat. paste		7.03	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141118_1		Continuing Calibration Verification Standard								11/19/14 10:15
pH, sat. paste		7.00	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141118_1		Continuing Calibration Verification Standard								11/19/14 10:16
pH, sat. paste		4.01	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141118_1		Initial Calibration Verification Standard								11/19/14 10:17
pH, sat. paste		9.98	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141118_1		Continuing Calibration Verification Standard								11/19/14 10:34
pH, sat. paste		6.99	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV_1_141118_1		Continuing Calibration Verification Standard								11/19/14 10:55
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Lab ID: CCV1_1_141118_1		Continuing Calibration Verification Standard								11/19/14 10:56
pH, sat. paste		3.98	s.u.	0.10	100	97.5	102.5			
Lab ID: ICV_1_141118_1		Initial Calibration Verification Standard								11/19/14 10:57
pH, sat. paste		10.0	s.u.	0.10	100	99	101			
Lab ID: CCV_3_141118_1		Continuing Calibration Verification Standard								11/19/14 11:12
pH, sat. paste		7.02	s.u.	0.10	100	98.6	101.4			
Method: ASAM10-3.2									Batch: 27030	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASAM10-3.2										Batch: 27030
Lab ID: LCS-27030		Laboratory Control Sample				Run: SOIL PH METER_141119B				11/19/14 08:25
pH, sat. paste		7.67	s.u.	0.10	103	95	105			
Lab ID: H14110012-010ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 08:39
pH, sat. paste		7.67	s.u.	0.10				0.0	30	
Lab ID: H14110012-020ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 08:52
pH, sat. paste		8.01	s.u.	0.10				0.1	30	
Method: ASAM10-3.2										Batch: 27031
Lab ID: LCS-27031		Laboratory Control Sample				Run: SOIL PH METER_141119B				11/19/14 09:00
pH, sat. paste		7.71	s.u.	0.10	103	95	105			
Lab ID: H14110012-030ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 09:11
pH, sat. paste		7.80	s.u.	0.10				0.3	30	
Lab ID: H14110012-040ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 10:11
pH, sat. paste		7.52	s.u.	0.10				0.4	30	
Method: ASAM10-3.2										Batch: 27032
Lab ID: LCS-27032		Laboratory Control Sample				Run: SOIL PH METER_141119B				11/19/14 10:18
pH, sat. paste		7.71	s.u.	0.10	103	95	105			
Lab ID: H14110012-050ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 10:32
pH, sat. paste		7.32	s.u.	0.10				0.4	30	
Lab ID: H14110012-060ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 10:45
pH, sat. paste		5.93	s.u.	0.10				0.2	30	
Method: ASAM10-3.2										Batch: 27033
Lab ID: LCS-27033		Laboratory Control Sample				Run: SOIL PH METER_141119B				11/19/14 10:58
pH, sat. paste		7.72	s.u.	0.10	103	95	105			
Lab ID: H14110012-070ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 11:10
pH, sat. paste		7.83	s.u.	0.10				0.3	30	
Lab ID: H14110012-075ADUP		Sample Duplicate				Run: SOIL PH METER_141119B				11/19/14 11:17
pH, sat. paste		7.81	s.u.	0.10				0.1	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.7**								Analytical Run: ICP2-HE_141113C		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							11/13/14 11:19	
Arsenic			0.788	mg/L	0.0085	99	90	110			
Cadmium			0.387	mg/L	0.0010	97	90	110			
Copper			0.792	mg/L	0.010	99	90	110			
Lead			0.787	mg/L	0.010	98	90	110			
Zinc			0.796	mg/L	0.010	99	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/13/14 11:34	
Arsenic			-0.00322	mg/L	0.0085		0	0			
Cadmium			-0.00113	mg/L	0.0010		0	0			
Copper			0.00316	mg/L	0.010		0	0			
Lead			-0.0321	mg/L	0.010		0	0			
Zinc			0.00155	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/13/14 11:38	
Arsenic			0.981	mg/L	0.0085	98	80	120			
Cadmium			0.902	mg/L	0.0010	90	80	120			
Copper			0.506	mg/L	0.010	101	80	120			
Lead			0.905	mg/L	0.010	90	80	120			
Zinc			0.992	mg/L	0.010	99	80	120			
Method:	**E200.7**								Analytical Run: ICP2-HE_141114A		
Lab ID:	**ICV**	5	Initial Calibration Verification Standard							11/14/14 13:12	
Arsenic			0.792	mg/L	0.0085	99	90	110			
Cadmium			0.384	mg/L	0.0010	96	90	110			
Copper			0.794	mg/L	0.010	99	90	110			
Lead			0.767	mg/L	0.010	96	90	110			
Zinc			0.798	mg/L	0.010	100	90	110			
Lab ID:	**ICSA**	5	Interference Check Sample A							11/14/14 13:26	
Arsenic			0.00508	mg/L	0.0085		0	0			
Cadmium			-0.000620	mg/L	0.0010		0	0			
Copper			0.000420	mg/L	0.010		0	0			
Lead			-0.00566	mg/L	0.010		0	0			
Zinc			0.00438	mg/L	0.010		0	0			
Lab ID:	**ICSAB**	5	Interference Check Sample AB							11/14/14 13:31	
Arsenic			0.988	mg/L	0.0085	99	80	120			
Cadmium			0.902	mg/L	0.0010	90	80	120			
Copper			0.510	mg/L	0.010	102	80	120			
Lead			0.911	mg/L	0.010	91	80	120			
Zinc			1.00	mg/L	0.010	100	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Analytical Run: ICPMS204-B_141117A	
Lab ID: ICSA	3	Interference Check Sample A							11/18/14 10:54	
Arsenic		8.10E-05	mg/L	0.0050						
Cadmium		0.000463	mg/L	0.0010						
Lead		0.000228	mg/L	0.010						
Lab ID: ICSAB	3	Interference Check Sample AB							11/18/14 10:58	
Arsenic		0.0103	mg/L	0.0050	103	70	130			
Cadmium		0.00927	mg/L	0.0010	93	70	130			
Lead		0.000236	mg/L	0.010		0	0			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 26959
Lab ID:	**MB-26959**	5	Method Blank				Run: ICP2-HE_141113C				11/14/14 06:51
Arsenic			0.4	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			0.8	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-26959**	5	Laboratory Fortified Blank				Run: ICP2-HE_141113C				11/14/14 06:55
Arsenic			44.8	mg/kg	1.0	89	80	120			
Cadmium			21.9	mg/kg	1.0	87	80	120			
Copper			47.5	mg/kg	1.0	95	80	120			
Lead			44.2	mg/kg	1.0	87	80	120			
Zinc			46.1	mg/kg	1.0	91	80	120			
Lab ID:	**LCS-26959**	5	Laboratory Control Sample				Run: ICP2-HE_141113C				11/14/14 06:59
Arsenic			279	mg/kg	1.8	81	72.3	106.4			
Cadmium			116	mg/kg	1.0	84	73	105.1			
Copper			257	mg/kg	1.1	92	77.5	109.6			
Lead			174	mg/kg	3.2	92	75.9	108.6			
Zinc			188	mg/kg	1.0	88	74.2	109.9			
Lab ID:	**H14110012-020APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141113C				11/14/14 09:01
Arsenic			237	mg/kg	1.8	90	75	125			
Cadmium			109	mg/kg	1.0	86	75	125			
Copper			277	mg/kg	1.1	91	75	125			
Lead			235	mg/kg	3.2	90	75	125			
Zinc			284	mg/kg	1.0	91	75	125			
Lab ID:	**H14110012-020AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141113C				11/14/14 09:12
Arsenic			54.4	mg/kg	1.8	93	75	125			
Cadmium			21.7	mg/kg	1.0	89	75	125			
Copper			96.9	mg/kg	1.1	99	75	125			
Lead			56.9	mg/kg	3.1	99	75	125			
Zinc			103	mg/kg	1.0	98	75	125			
Lab ID:	**H14110012-020AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141113C				11/14/14 09:15
Arsenic			55.1	mg/kg	1.8	94	75	125	1.3	20	
Cadmium			21.6	mg/kg	1.0	88	75	125	0.6	20	
Copper			95.3	mg/kg	1.1	96	75	125	1.7	20	
Lead			57.1	mg/kg	3.1	99	75	125	0.3	20	
Zinc			103	mg/kg	1.0	98	75	125	0.4	20	
Method:	**SW6010B**										Batch: 26976
Lab ID:	**MB-26976**	5	Method Blank				Run: ICP2-HE_141113C				11/14/14 09:19
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 26976
Lab ID:	**MB-26976**	5	Method Blank				Run: ICP2-HE_141113C			11/14/14 09:19	
Lead			ND	mg/kg	0.6						
Zinc			0.4	mg/kg	0.09						
Lab ID:	**LFB-26976**	5	Laboratory Fortified Blank				Run: ICP2-HE_141113C			11/14/14 09:23	
Arsenic			46.4	mg/kg	1.0	93	80	120			
Cadmium			22.9	mg/kg	1.0	92	80	120			
Copper			47.1	mg/kg	1.0	94	80	120			
Lead			45.8	mg/kg	1.0	92	80	120			
Zinc			47.2	mg/kg	1.0	94	80	120			
Lab ID:	**LCS-26976**	5	Laboratory Control Sample				Run: ICP2-HE_141113C			11/14/14 09:27	
Arsenic			298	mg/kg	1.9	83	72.3	106.4			
Cadmium			124	mg/kg	1.0	87	73	105.1			
Copper			265	mg/kg	1.1	91	77.5	109.6			
Lead			182	mg/kg	3.3	94	75.9	108.6			
Zinc			201	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H14110012-040APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141113C			11/14/14 11:02	
Arsenic			369	mg/kg	1.8	83	75	125			
Cadmium			104	mg/kg	1.0	83	75	125			
Copper			1000	mg/kg	1.1	76	75	125			
Lead			337	mg/kg	3.2	84	75	125			
Zinc			738	mg/kg	1.0	81	75	125			
Lab ID:	**H14110012-040AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141113C			11/14/14 11:05	
Arsenic			208	mg/kg	1.7	93	75	125			
Cadmium			23.4	mg/kg	1.0	90	75	125			
Copper			843	mg/kg	1.1		75	125			A
Lead			174	mg/kg	3.1	91	75	125			
Zinc			594	mg/kg	1.0		75	125			A
Lab ID:	**H14110012-040AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141113C			11/14/14 11:09	
Arsenic			200	mg/kg	1.7	75	75	125	4.2	20	
Cadmium			22.3	mg/kg	1.0	86	75	125	5.0	20	
Copper			841	mg/kg	1.1		75	125	0.2	20	A
Lead			171	mg/kg	3.1	84	75	125	2.0	20	
Zinc			568	mg/kg	1.0		75	125	4.5	20	A

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 26985
Lab ID:	**MB-26985**	5	Method Blank				Run: ICP2-HE_141114A			11/14/14 13:46	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-26985**	5	Laboratory Fortified Blank				Run: ICP2-HE_141114A			11/14/14 13:50	
Arsenic			45.8	mg/kg	1.0	92	80	120			
Cadmium			22.1	mg/kg	1.0	88	80	120			
Copper			48.1	mg/kg	1.0	96	80	120			
Lead			44.7	mg/kg	1.0	89	80	120			
Zinc			46.4	mg/kg	1.0	92	80	120			
Lab ID:	**LCS-26985**	5	Laboratory Control Sample				Run: ICP2-HE_141114A			11/14/14 13:53	
Arsenic			287	mg/kg	1.8	84	72.3	106.4			
Cadmium			118	mg/kg	1.0	86	73	105.1			
Copper			263	mg/kg	1.1	94	77.5	109.6			
Lead			174	mg/kg	3.2	93	75.9	108.6			
Zinc			194	mg/kg	1.0	91	74.2	109.9			
Lab ID:	**H14110012-060APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141114A			11/14/14 15:36	
Arsenic			238	mg/kg	1.9	87	75	125			
Cadmium			123	mg/kg	1.0	82	75	125			
Copper			559	mg/kg	1.1	87	75	125			
Lead			237	mg/kg	3.3	82	75	125			
Zinc			3230	mg/kg	1.0		75	125			A
Lab ID:	**H14110012-060AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141114A			11/14/14 15:39	
Arsenic			56.2	mg/kg	1.8	90	75	125			
Cadmium			37.1	mg/kg	1.0	81	75	125			
Copper			375	mg/kg	1.1		75	125			A
Lead			67.1	mg/kg	3.2	85	75	125			
Zinc			3020	mg/kg	1.0		75	125			A
Lab ID:	**H14110012-060AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141114A			11/14/14 15:43	
Arsenic			50.5	mg/kg	1.8	78	75	125	11	20	
Cadmium			36.2	mg/kg	1.0	78	75	125	2.5	20	
Copper			383	mg/kg	1.1		75	125	2.0	20	A
Lead			62.9	mg/kg	3.2	77	75	125	6.5	20	
Zinc			2950	mg/kg	1.0		75	125	2.2	20	A
Method:	**SW6010B**										Batch: 26986
Lab ID:	**MB-26986**	5	Method Blank				Run: ICP2-HE_141114A			11/14/14 15:46	
Arsenic			ND	mg/kg	0.4						
Cadmium			ND	mg/kg	0.01						
Copper			ND	mg/kg	0.2						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

A - The analyte level was greater than four times the spike level. In accordance with the method % recovery is not calculated.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6010B**										Batch: 26986
Lab ID:	**MB-26986**	5	Method Blank				Run: ICP2-HE_141114A				11/14/14 15:46
Lead			ND	mg/kg	0.6						
Zinc			0.3	mg/kg	0.09						
Lab ID:	**LFB-26986**	5	Laboratory Fortified Blank				Run: ICP2-HE_141114A				11/14/14 15:50
Arsenic			47.7	mg/kg	1.0	95	80	120			
Cadmium			23.4	mg/kg	1.0	94	80	120			
Copper			48.6	mg/kg	1.0	97	80	120			
Lead			46.4	mg/kg	1.0	93	80	120			
Zinc			48.3	mg/kg	1.0	96	80	120			
Lab ID:	**LCS-26986**	5	Laboratory Control Sample				Run: ICP2-HE_141114A				11/14/14 15:54
Arsenic			284	mg/kg	1.7	85	72.3	106.4			
Cadmium			117	mg/kg	1.0	88	73	105.1			
Copper			254	mg/kg	1.1	93	77.5	109.6			
Lead			170	mg/kg	3.1	94	75.9	108.6			
Zinc			187	mg/kg	1.0	90	74.2	109.9			
Lab ID:	**H14110012-075APDS**	5	Post Digestion/Distillation Spike				Run: ICP2-HE_141114A				11/14/14 17:37
Arsenic			232	mg/kg	1.9	85	75	125			
Cadmium			108	mg/kg	1.0	81	75	125			
Copper			293	mg/kg	1.2	89	75	125			
Lead			235	mg/kg	3.4	83	75	125			
Zinc			336	mg/kg	1.0	87	75	125			
Lab ID:	**H14110012-075AMS**	5	Sample Matrix Spike				Run: ICP2-HE_141114A				11/14/14 17:40
Arsenic			53.2	mg/kg	1.8	89	75	125			
Cadmium			21.2	mg/kg	1.0	83	75	125			
Copper			100	mg/kg	1.1	85	75	125			
Lead			62.3	mg/kg	3.2	91	75	125			
Zinc			157	mg/kg	1.0	98	75	125			
Lab ID:	**H14110012-075AMSD**	5	Sample Matrix Spike Duplicate				Run: ICP2-HE_141114A				11/14/14 17:44
Arsenic			53.8	mg/kg	1.9	90	75	125	1.2	20	
Cadmium			21.9	mg/kg	1.0	85	75	125	3.0	20	
Copper			105	mg/kg	1.1	93	75	125	4.3	20	
Lead			64.5	mg/kg	3.3	94	75	125	3.4	20	
Zinc			159	mg/kg	1.0	102	75	125	1.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**								Analytical Run: ICPMS204-B_141114A		
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/14/14 11:48	
Arsenic			0.0599	mg/L	0.0010	100	90	110			
Cadmium			0.0313	mg/L	0.0010	104	90	110			
Lead			0.0580	mg/L	0.0010	97	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/14/14 18:30	
Arsenic			0.0598	mg/L	0.0010	100	90	110			
Cadmium			0.0317	mg/L	0.0010	106	90	110			
Lead			0.0599	mg/L	0.0010	100	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/15/14 16:18	
Arsenic			0.0599	mg/L	0.0010	100	90	110			
Cadmium			0.0315	mg/L	0.0010	105	90	110			
Lead			0.0592	mg/L	0.0010	99	90	110			
Method:	**SW6020**										Batch: 26959
Lab ID:	**MB-26959**	3	Method Blank				Run: ICPMS204-B_141114A			11/15/14 23:47	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-26959**	3	Laboratory Control Sample				Run: ICPMS204-B_141114A			11/15/14 23:51	
Arsenic			331	mg/kg	1.0	97	72.3	106.4			
Cadmium			131	mg/kg	1.0	96	73	105.1			
Lead			199	mg/kg	1.0	107	75.9	108.6			
Lab ID:	**LFB-26959**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141114A			11/15/14 23:56	
Arsenic			49.1	mg/kg	1.0	98	80	120			
Cadmium			24.9	mg/kg	1.0	100	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H14110012-020APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141114A			11/16/14 01:45	
Arsenic			2400	mg/kg	1.0	97	75	125			
Cadmium			1140	mg/kg	1.0	93	75	125			
Lead			2430	mg/kg	1.0	99	75	125			
Lab ID:	**H14110012-020AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141114A			11/16/14 01:49	
Arsenic			59.6	mg/kg	1.0	101	75	125			
Cadmium			23.3	mg/kg	1.0	95	75	125			
Lead			58.1	mg/kg	1.0	97	75	125			
Lab ID:	**H14110012-020AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141114A			11/16/14 01:53	
Arsenic			59.6	mg/kg	1.0	101	75	125	0.0	20	
Cadmium			23.1	mg/kg	1.0	94	75	125	1.1	20	
Lead			57.6	mg/kg	1.0	96	75	125	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS204-B_141117A	
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/17/14 10:22	
Arsenic			0.0598	mg/L	0.0010	100	90	110			
Cadmium			0.0321	mg/L	0.0010	107	90	110			
Lead			0.0597	mg/L	0.0010	100	90	110			
Lab ID:	**ICV STD**	3	Initial Calibration Verification Standard							11/17/14 16:11	
Arsenic			0.0592	mg/L	0.0010	99	90	110			
Cadmium			0.0315	mg/L	0.0010	105	90	110			
Lead			0.0598	mg/L	0.0010	100	90	110			
Method:	**SW6020**									Batch: 26976	
Lab ID:	**MB-26976**	2	Method Blank				Run: ICPMS204-B_141117A			11/18/14 00:48	
Cadmium			ND	mg/kg	0.2						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-26976**	2	Laboratory Control Sample				Run: ICPMS204-B_141117A			11/18/14 00:53	
Cadmium			135	mg/kg	1.0	99	73	105.1			
Lead			201	mg/kg	1.0	107	75.9	108.6			
Lab ID:	**LFB-26976**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141117A			11/18/14 00:57	
Cadmium			25.3	mg/kg	1.0	101	80	120			
Lead			48.6	mg/kg	1.0	97	80	120			
Lab ID:	**H14110012-040APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141117A			11/18/14 02:08	
Cadmium			1090	mg/kg	1.0	90	75	125			
Lead			2410	mg/kg	1.0	94	75	125			
Lab ID:	**H14110012-040AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141117A			11/18/14 02:11	
Cadmium			25.3	mg/kg	1.0	96	75	125			
Lead			187	mg/kg	1.0	94	75	125			
Lab ID:	**H14110012-040AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141117A			11/18/14 02:16	
Cadmium			25.2	mg/kg	1.0	95	75	125	0.4	20	
Lead			190	mg/kg	1.0	100	75	125	1.7	20	
Method:	**SW6020**									Batch: 26985	
Lab ID:	**MB-26985**	3	Method Blank				Run: ICPMS204-B_141117A			11/18/14 02:33	
Arsenic			ND	mg/kg	0.3						
Cadmium			ND	mg/kg	0.2						
Lead			0.3	mg/kg	0.2						
Lab ID:	**LCS-26985**	3	Laboratory Control Sample				Run: ICPMS204-B_141117A			11/18/14 02:38	
Arsenic			328	mg/kg	1.0	96	72.3	106.4			
Cadmium			133	mg/kg	1.0	97	73	105.1			
Lead			199	mg/kg	1.0	106	75.9	108.6			
Lab ID:	**LFB-26985**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141117A			11/18/14 02:42	
Arsenic			48.2	mg/kg	1.0	96	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Helena, MT Branch

Client: MT DEQ-Federal Superfund **Report Date:** 11/19/14

Project: 130500 DEQ Clark Fork River Phases 3 and 4 **Work Order:** H14110012

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**										Batch: 26985
Lab ID:	**LFB-26985**	3	Laboratory Fortified Blank				Run: ICPMS204-B_141117A				11/18/14 02:42
Cadmium			24.4	mg/kg	1.0	98	80	120			
Lead			47.1	mg/kg	1.0	94	80	120			
Lab ID:	**H14110012-060APDS**	3	Post Digestion/Distillation Spike				Run: ICPMS204-B_141117A				11/18/14 03:58
Arsenic			2430	mg/kg	1.0	96	75	125			
Cadmium			1150	mg/kg	1.0	90	75	125			
Lead			2410	mg/kg	1.0	95	75	125			
Lab ID:	**H14110012-060AMS**	3	Sample Matrix Spike				Run: ICPMS204-B_141117A				11/18/14 04:01
Arsenic			61.2	mg/kg	1.0	98	75	125			
Cadmium			41.3	mg/kg	1.0	93	75	125			
Lead			68.3	mg/kg	1.0	95	75	125			
Lab ID:	**H14110012-060AMSD**	3	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141117A				11/18/14 04:06
Arsenic			60.3	mg/kg	1.0	96	75	125	1.5	20	
Cadmium			41.5	mg/kg	1.0	94	75	125	0.4	20	
Lead			68.0	mg/kg	1.0	95	75	125	0.5	20	
Method:	**SW6020**										Batch: 26986
Lab ID:	**MB-26986**	2	Method Blank				Run: ICPMS204-B_141117A				11/18/14 04:15
Arsenic			ND	mg/kg	0.3						
Lead			ND	mg/kg	0.2						
Lab ID:	**LCS-26986**	2	Laboratory Control Sample				Run: ICPMS204-B_141117A				11/18/14 04:19
Arsenic			322	mg/kg	1.0	94	72.3	106.4			
Lead			198	mg/kg	1.0	106	75.9	108.6			
Lab ID:	**LFB-26986**	2	Laboratory Fortified Blank				Run: ICPMS204-B_141117A				11/18/14 04:24
Arsenic			49.7	mg/kg	1.0	99	80	120			
Lead			48.0	mg/kg	1.0	96	80	120			
Lab ID:	**H14110012-075APDS**	2	Post Digestion/Distillation Spike				Run: ICPMS204-B_141117A				11/18/14 05:12
Arsenic			2470	mg/kg	1.0	96	75	125			
Lead			2480	mg/kg	1.0	95	75	125			
Lab ID:	**H14110012-075AMS**	2	Sample Matrix Spike				Run: ICPMS204-B_141117A				11/18/14 05:16
Arsenic			58.7	mg/kg	1.0	98	75	125			
Lead			66.9	mg/kg	1.0	95	75	125			
Lab ID:	**H14110012-075AMSD**	2	Sample Matrix Spike Duplicate				Run: ICPMS204-B_141117A				11/18/14 05:21
Arsenic			59.3	mg/kg	1.0	98	75	125	0.9	20	
Lead			67.5	mg/kg	1.0	96	75	125	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

MT DEQ-Federal Superfund H14110012

Login completed by: Wanda Johnson
Date Received: 11/3/2014
Reviewed by: BL2000\rwilliams
Received by: wjj
Reviewed Date: 11/4/2014
Carrier name: Hand Del

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☑	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	°C See Comments		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Cooler 1 was received at 0.3C, Cooler 2 at 0.7C on ice. COC does not have "-" between depths on the sample bags.
Wj 11/3/14

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats: ☐ DW ☐ POTW/WWTP ☐ State: ☐ Other: ☐ EDD/EDT (Electronic Data) Format: ☐ LEVEL IV ☐ NELAC

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin: State: MT

EPA/State Compliance: Yes ○ No ●

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print): M.Peters, S.Lambert

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Shipped by: handdel

Cooler ID(s): Y

Receipt Temp: See comments

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N; Intact Y N; Signature Match Y N

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments
1 3-008-0612	10/30/14	09:05	S	★	★									●	○	Cooler 1 - 0.3
2 3-008-1218	10/30/14	09:03	S	★	★									●	○	Cooler 2 - 0.7
3 3-008-1824	10/30/14	09:02	S	★	★									●	○	
4 3-021-2430	10/30/14	09:45	S	★	★									●	○	
5 3-021-3036	10/30/14	10:40	S	★	★									●	○	
6 3-021-3642	10/30/14	10:42	S	★	★									●	○	
7 3-032-3642	10/30/14	10:21	S	★	★									●	○	
8 3-032-4248	10/30/14	10:20	S	★	★									●	○	
9 3-055-1824	10/30/14	10:58	S	★	★									●	○	
10 3-055-2430	10/30/14	10:56	S	★	★									●	○	

LABORATORY USE ONLY #14110012

Custody Record MUST be Signed

Relinquished by (print): R. Mainhausen Date/Time: 11/3/2014 1429 Signature:

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Wanda Johns Date/Time: 11-3-14 14 Signature:

Sample Disposal: Return to Client: ○ Lab Disposal: ○

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◯ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print) M.Peters, S.Lambert

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH
1														●	◯
2 3-055-3036	10/30/14	10:54	S	★	★									●	◯
3 3-082-3036	10/30/14	11:31	S	★	★									●	◯
4 3-082-3642	10/30/14	11:27	S	★	★									●	◯
5 3-082-4248	10/30/14	11:29	S	★	★									●	◯
6 3-090-0612	10/30/14	14:53	S	★	★									●	◯
7 3-090-1218	10/30/14	14:52	S	★	★									●	◯
8 3-090-1824	10/30/14	14:51	S	★	★									●	◯
9 3-091-0006	10/30/14	12:04	S	★	★									●	◯
10 3-091-0612	10/30/14	12:02	S	★	★									●	◯

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:
Cooler 1 - 0.3
Cooler 2 0.7

Shipped by: hunddel
Cooler ID(s): Y
Receipt Temp: see comments °C
On Ice: Y N
Custody Seal: On Bottle Y N; On Cooler Y N
Intact Y N
Signature Match Y N

LABORATORY USE ONLY H14110012

Custody Record MUST be Signed

Relinquished by (print): K. Hansen Date/Time: 11/3/2014 14:29 Signature:
Relinquished by (print): Date/Time: Signature:
Received by (print): Date/Time: Signature:
Received by (print): Date/Time: Signature:
Received by Laboratory: Wanda Dm Date/Time: 11-3-14 14:24 Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ● No ○

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print) M.Peters, S.Lambert

☐ No Hard Copy Email:

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: hand del

Cooler ID(s): Y

Receipt Temp: see comments °C

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N; Intact Y N; Signature Match Y N

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
1	3-091-1218	10/30/14	12:00	S	★	★									●	○	Cooler 1 - 0.3	H14110012
2	3-095-3642	10/31/14	08:14	S	★	★									●	○	Cooler 2 - 0.7	
3	3-095-4248	10/31/14	08:13	S	★	★									●	○		
4	3-096-3036	10/30/14	15:17	S	★	★									●	○		
5	3-096-3642	10/30/14	15:16	S	★	★									●	○		
6	3-096-4248	10/30/14	15:15	S	★	★									●	○		
7	3-097-1824	10/30/14	13:33	S	★	★									●	○		
8	3-097-2430	10/30/14	13:32	S	★	★									●	○		
9	3-097-3036	10/30/14	13:31	S	★	★									●	○		
10	3-098-0612	10/30/14	14:15	S	★	★									●	○		

C2

Custody Record MUST be Signed

Relinquished by (print): L. Hainzhauser Date/Time: 11/3/14 1429 Signature:

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Wanderson Date/Time: 11-3-14 1424 Signature:

Sample Disposal: Return to Client: ○ Lab Disposal: ○

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ◉ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM Phone/Fax: (406) 441-1413 Cell: (406) 465-0898

Sampler: (Please Print) M.Peters,S.Lambert

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ POTW/WWTP ☐ State: ☐ Other:
☐ EDD/EDT (Electronic Data) Format: ☐ LEVEL IV ☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: hand del

Cooler ID(s): 4

Receipt Temp: See comments

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N; Intact Y N; Signature Match Y N

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	
1	3-098-1218	10/30/14	14:14	S	★	★									◉	◯	cooler 1 - 0.3
2	3-098-1824	10/30/14	14:13	S	★	★									◉	◯	cooler 2 - 0.7
3	3-100-1218	10/31/14	10:34	S	★	★									◉	◯	
4	3-100-1824	10/31/14	10:35	S	★	★									◉	◯	
5	3-100-2430	10/31/14	10:38	S	★	★									◉	◯	
6	3-104-0006	10/31/14	08:48	S	★	★									◉	◯	
7	3-104-0612	10/31/14	08:47	S	★	★									◉	◯	
8	3-104-1218	10/31/14	08:46	S	★	★									◉	◯	
9	3-100-1218D	10/31/14	10:33	S	★	★									◉	◯	
10	3-114-1824	10/31/14	08:59	S	★	★									◉	◯	

LABORATORY USE ONLY: 1H14110012

Custody Record MUST be Signed

Relinquished by (print): R. Hainzhausen Date/Time: 11/3/2014 1429 Signature:

Received by (print): Date/Time: Signature:

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

Received by Laboratory: Wanda Jones Date/Time: 11-3-14 14:22 Signature:

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin State: MT

EPA/State Compliance: Yes ● No ○

Report Mail Address (Required):
50 West 14 street, Suite 200
Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print) M.Peters, S.Lambert

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required):
PO box 200901
Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data)
Format:
☐ LEVEL IV
☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: handdel

Cooler ID(s): Y

Receipt Temp: see comments

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N; Intact Y N; Signature Match Y N

LABORATORY USE ONLY: 1+14110612

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	
1	3-114-2430	10/31/14	08:58	S	★	★									●	○	Cooler 1 - 0.3
2	3-114-3036	10/31/14	08:57	S	★	★									●	○	Cooler 2 - 0.7
3	3-115-0612	10/31/14	09:16	S	★	★									●	○	
4	3-115-1218	10/31/14	09:15	S	★	★									●	○	
5	3-115-1824	10/31/14	09:14	S	★	★									●	○	
6	3-116-1218	10/31/14	10:03	S	★	★									●	○	
7	3-116-1824	10/31/14	10:02	S	★	★									●	○	
8	3-116-2430	10/31/14	10:01	S	★	★									●	○	
9	3-118-2430	10/31/14	13:03	S	★	★									●	○	
10	3-118-3036	10/31/14	13:02	S	★	★									●	○	

C1

Custody Record MUST be Signed

Relinquished by (print): R. Hainstauer Date/Time: 11/3/2014 1429 Signature:

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Wanda Jones Date/Time: 11-3-14 14:24 Signature:

Sample Disposal: Return to Client: ○ Lab Disposal: ○

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin: State: MT

EPA/State Compliance: Yes ◉ No ◯

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print) M.Peters, S.Lambert

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV
☐ NELAC

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: Randel

Cooler ID(s): 1

Receipt Temp: see comments

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N; Intact Y N; Signature Match Y N

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments
1	3-118-3642	10/31/14	13:01	S	★	★									◉	◯	Cooler - 1 -0.3
2	3-123-1824	10/31/14	11:12	S	★	★									◉	◯	Cooler 2 0.7
3	3-123-2430	10/31/14	11:11	S	★	★									◉	◯	
4	3-123-3036	10/31/14	11:10	S	★	★									◉	◯	
5	3-125-1824	10/31/14	13:49	S	★	★									◉	◯	
6	3-125-2430	10/31/14	13:48	S	★	★									◉	◯	
7	3-125-3036	10/31/14	13:47	S	★	★									◉	◯	
8	3-132-3642	10/31/14	12:31	S	★	★									◉	◯	
9	3-132-4248	10/31/14	12:30	S	★	★									◉	◯	
10	3-132-4854	10/31/14	12:29	S	★	★									◉	◯	

C1

LABORATORY USE ONLY: A14110012

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
K. Hamrhausen	11/3/14 1429				
Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
Sample Disposal: Return to Client: ◯		Lab Disposal: ◯	Received by Laboratory:	Date/Time: 11-3-14 14	Signature:

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

Page 7 of 8

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin: State: MT

EPA/State Compliance: Yes ● No ○

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print): M.Peters, S.Lambert

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Special Report/Formats:
☐ DW ☐ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format:
☐ State: ☐ LEVEL IV
☐ Other: ☐ NELAC

Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page

Shipped by: hand del

Cooler ID(s): Y

Receipt Temp: See comment °C

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N; Intact Y N; Signature Match Y N

Comments:

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	total AS, Cd, Cu, Pb, Zn	pH								SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
1	3-133-3036	10/31/14	11:29	S	★	★									●	○	Cooler 1 - 0.3	H14110012
2	3-133-3642	10/31/14	11:28	S	★	★									●	○	Cooler 2 - 0.7	
3	3-133-4248	10/31/14	11:27	S	★	★									●	○		
4	3-134-1218	10/31/14	14:21	S	★	★									●	○		
5	3-134-1824	10/31/14	14:20	S	★	★									●	○		
6	3-134-2430	10/31/14	14:19	S	★	★									●	○		
7	3-138-3036	10/31/14	14:37	S	★	★									●	○		
8	3-138-3642	10/31/14	14:36	S	★	★									●	○		
9	3-138-4248	10/31/14	14:35	S	★	★									●	○		
10	3-152-1218	10/31/14	15:00	S	★	★									●	○		

C1

Custody Record MUST be Signed

Relinquished by (print): K. Rainhanger Date/Time: 11/29/2014 1429 Signature:

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Wanda John Date/Time: 11-3-14 14 Signature:

Sample Disposal: Return to Client: ○ Lab Disposal: ○

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

Page 8 of 8

PLEASE PRINT (Provide as much information as possible.)

Company Name: MDEQ-Remediation Division

Report Mail Address (Required): 50 West 14 street, Suite 200, Helena Montana 59601

☐ No Hard Copy Email:

Invoice Address (Required): PO box 200901, Helena, MT 56620-0901

☐ No Hard Copy Email:

Special Report/Formats:
☐ DW ☐ POTW/WWTP ☐ State: ☐ Other:
☐ EDD/EDT (Electronic Data) Format:
☐ LEVEL IV ☐ NELAC

Project Name, PWS, Permit, Etc.: DEQ-Clark Fork River - Phases 3 and 4

Sample Origin: State: MT

EPA/State Compliance: Yes ◉ No ◯

Contact Name: Bill Bucher, CDM

Phone/Fax: (406) 441-1413

Cell: (406) 465-0898

Sampler: (Please Print): M. Peters, S.Lambert

Invoice Contact & Phone: Brian Bartkowiak, DEQ (406) 461-3070

Purchase Order:

Quote/Bottle Order:

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: hand de

Cooler ID(s): 4

Receipt Temp: see comments C

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N; Intact Y N; Signature Match Y N

LABORATORY USE ONLY: 1411 0013

ANALYSIS REQUESTED

Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	total AS, Cd, Cu, Pb, Zn	pH	SEE ATTACHED	Standard Turnaround (TAT)	RUSH	
1	3-152-1824	10/31/14	14:59	S	★	★		◉	◯	Cooler - 1 - 03
2	3-152-2430	10/31/14	14:58	S	★	★		◉	◯	Cooler 2-0.7
3	3-089-0612	10/30/14	13:07	S	★	★		◉	◯	
4	3-089-1218	10/30/14	13:04	S	★	★		◉	◯	
5	3-089-1218D	10/30/14	13:05	S	★	★		◉	◯	
6	3-089-1824	10/30/14	13:03	S	★	★		◉	◯	
7								◉	◯	
8								◉	◯	
9								◉	◯	
10								◉	◯	

Custody Record MUST be Signed

Relinquished by (print): K. Meinthausen Date/Time: 11/29/14 1429 Signature:

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Wanda John Date/Time: 11-3-14 14 Signature:

Sample Disposal: Return to Client: ◯ Lab Disposal: ◯

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.