

APPENDIX F
ALLUVIAL GROUNDWATER QUALITY DATA

APPENDIX F
OTTER CREEK MINE BASELINE REPORT 325A
SUMMARY OF ALLUVIAL GROUNDWATER QUALITY

OTTER CREEK WELL A9*

sys_loc_code sample_date sys_sample_code lab_sample_id				A9 7/8/2014 OCC-1407-001 H14070191-001		
chemical_name	result_unit	fraction	report_result_text	MINIMUM	MAXIMUM	MEAN
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	3560	3560	3560	3560
SODIUM ADSORPTION RATIO	unitless	NO MEAS	5.89	5.89	5.89	5.89

OTTER CREEK WELL AVF1-2

sys_loc_code sample_date sys_sample_code lab_sample_id				AVF1-2 10/21/2011 OTRCR-1110-406 H11100352-007	AVF1-2 1/26/2012 OTRCR-1201-151 H12010303-011	AVF1-2 4/23/2012 OCC-1204-500 H12040471-001	AVF1-2 9/5/2012 OCC-1209-700 H12090092-001	AVF1-2 11/16/2012 OCC-1211-209 H12110252-010	AVF1-2 3/5/2013 OCC-1303-350 H13030104-011	AVF1-2 5/15/2013 OCC-1305-146 H13050294-015	AVF1-2 7/31/2013 OCC-1307-601 H13080047-002	AVF1-2 1/7/2014 OCC-1401-805 H14010147-006	AVF1-2 3/18/2014 OCC-1403-403 H14030299-004	AVF1-2 5/15/2014 OCC-1405-037 H14050297-018	MINIMUM	MAXIMUM	MEAN
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text			
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	1600	1530	1790	1740	1640	1730	1740	1720	1820	1720	1740	1740	1530	1820	1709
SODIUM ADSORPTION RATIO	unitless	NO MEAS	5.23	5.22	5.13	5.15	5.27	5.26	5.21	5.36	5.34	5.38	5.36	5.28	5.13	5.38	5.27

OTTER CREEK WELL AVF2-2

sys_loc_code sample_date sys_sample_code lab_sample_id				AVF2-2 1/10/2012 OTRCR-1201-203 H12010179-004	AVF2-2 4/26/2012 OCC-1204-531 H12040471-032	AVF2-2 9/5/2012 OCC-1209-701 H12090092-002	AVF2-2 11/16/2012 OCC-1211-208 H12110252-009	AVF2-2 3/4/2013 OCC-1303-349 H13030104-010	AVF2-2 5/15/2013 OCC-1305-147 H13050294-016	AVF2-2 7/31/2013 OCC-1307-603 H13080047-004	AVF2-2 12/13/2013 OCC-1312-118 H13120229-019	AVF2-2 3/31/2014 OCC-1403-942 H14030353-003	AVF2-2 5/15/2014 OCC-1405-036 H14050297-017	MINIMUM	MAXIMUM	MEAN
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text			
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	3120	3330	3300	3060	3340	3320	3350	3440	3440	3390	3400	3060	3440	3317
SODIUM ADSORPTION RATIO	unitless	NO MEAS	6.04	5.83	5.92	6.02	6.16	6	6.16	6.23	6.21	5.99	5.93	5.83	6.23	6.04

OTTER CREEK WELL A8*

sys_loc_code sample_date sys_sample_code lab_sample_id				A8 6/18/2014 OCC-1406-444 H14060425-005		
chemical_name	result_unit	fraction	report_result_text	MINIMUM	MAXIMUM	MEAN
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	3610	3610	3610	3610
SODIUM ADSORPTION RATIO	unitless	NO MEAS	7.11	7.11	7.11	7.11

OTTER CREEK WELL A1

sys_loc_code sample_date sys_sample_code lab_sample_id				A1 10/18/2011 OTRCR-1110-703 H11100344-004	A1 1/4/2012 OTRCR-1201-112 H12010106-013	A1 4/26/2012 OCC-1204-530 H12040471-031	A1 9/5/2012 OCC-1209-703 H12090092-004	A1 11/16/2012 OCC-1211-211A H12110252-012	A1 3/7/2013 OCC-1303-357 H13030183-003	A1 5/16/2013 OCC-1305-152 H13050294-021	A1 7/31/2013 OCC-1307-604 H13080047-005	A1 11/21/2013 OCC-1311-150 H13110493-011	A1 3/24/2014 OCC-1403-422 H14030353-008	A1 5/12/2014 OCC-1405-200 H14050292-001	MINIMUM	MAXIMUM	MEAN
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text			
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	2640	2470	2800	2700	2330	2420	2380	2320	2400	2470	2390	2370	2320	2800	2474
SODIUM ADSORPTION RATIO	unitless	NO MEAS	7.81	8.17	8.26	8.52	8.98	9.11	9.08	9.15	9.33	9.28	9.23	9.09	7.81	9.33	8.83

OTTER CREEK WELL AVF3-2

sys_loc_code sample_date sys_sample_code lab_sample_id				AVF3-2 10/20/2011 OTRCR-1110-400 H11100352-001	AVF3-2 1/10/2012 OTRCR-1201-200 H12010179-001	AVF3-2 4/25/2012 OCC-1204-518 H12040471-019	AVF3-2 9/5/2012 OCC-1209-707 H12090092-008	AVF3-2 11/15/2012 OCC-1211-204 H12110252-005	AVF3-2 2/25/2013 OCC-1302-100 H13020319-004	AVF3-2 5/14/2013 OCC-1305-143 H13050294-012	AVF3-2 7/31/2013 OCC-1307-607 H13080047-008	AVF3-2 11/21/2013 OCC-1311-154 H13110493-015	AVF3-2 4/15/2014 OCC-1404-103 H14040323-002	AVF3-2 5/13/2014 OCC-1405-209 H14050292-010	MINIMUM	MAXIMUM	MEAN
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text			
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	4370	4110	5000	4900	4520	4880	4900	4850	5020	5080	4860	4820	4110	5080	4776
SODIUM ADSORPTION RATIO	unitless	NO MEAS	6.59	6.31	6.83	6.2	6.38	6.5	6.27	6.57	6.48	6.29	6.53	6.53	6.2	6.83	6.46

OTTER CREEK WELL A6

sys_loc_code sample_date sys_sample_code lab_sample_id				A6 10/21/2011 OTRCR-1110-404 H11100352-005	A6 1/10/2012 OTRCR-1201-201 H12010179-002	A6 4/25/2012 OCC-1204-519 H12040471-020	A6 9/5/2012 OCC-1209-710 H12090092-011	A6 11/15/2012 OCC-1211-205 H12110252-006	A6 2/25/2013 OCC-1302-102 H13020319-006	A6 5/16/2013 OCC-1305-155 H13050294-024	A6 7/31/2013 OCC-1307-608 H13080047-009	A6 11/22/2013 OCC-1311-108 H13110493-007	A6 3/25/2014 OCC-1403-427 H14030353-013	A6 5/13/2014 OCC-1405-213 H14050292-014	MINIMUM	MAXIMUM	MEAN
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text			
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	4810	5750	6650	5800	5250	5600	5500	5420	5680	5680	5560	5470	4810	6650	5598
SODIUM ADSORPTION RATIO	unitless	NO MEAS	9.59	9.35	10.6	9.04	9.24	9.27	9.1	9.3	9.22	8.85	9.25	8.95	8.85	10.6	9.31

APPENDIX F
 OTTER CREEK MINE BASELINE REPORT 325A
 SUMMARY OF ALLUVIAL GROUNDWATER QUALITY

OTTER CREEK WELL AVF4-1

			sys_loc_code	AVF4-1	AVF4-1													
			sample_date	8/25/2011	11/21/2013													
			sys_sample_code	OTRCR-1108-852	OCC-1311-158													
			lab_sample_id	H11080526-003	H13110493-019													
chemical_name	result_unit	fraction	report_result_text	report_result_text											MINIMUM	MAXIMUM	MEAN	
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	4920	6120											4920	6120	5520	
SODIUM ADSORPTION RATIO	unitless	NO MEAS	7.12	8.83											7.12	8.83	7.98	

OTTER CREEK WELL A7

			sys_loc_code	A7	A7	A7	A7	A7	A7	A7	A7	A7	A7	A7				
			sample_date	8/24/2011	10/21/2011	1/11/2012	4/25/2012	9/6/2012	11/15/2012	3/4/2013	5/14/2013	7/31/2013	11/22/2013	3/20/2014	5/14/2014			
			sys_sample_code	OTRCR-1108-854	OTRCR-1110-403	OTRCR-1201-206	OCC-1204-523	OCC-1209-723	OCC-1211-302	OCC-1303-346	OCC-1305-133	OCC-1307-609	OCC-1311-109	OCC-1403-414	OCC-1405-218			
			lab_sample_id	H11080526-005	H11100352-004	H12010179-007	H12040471-024	H12090092-024	H12110239-003	H13030104-007	H13050294-001	H13080047-010	H13110493-008	H14030299-015	H14050292-019			
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	MINIMUM	MAXIMUM	MEAN
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	3280	3200	3920	3800	3610	3870	3860	3820	3940	4200	3840	3800	3200	4200	3762	
SODIUM ADSORPTION RATIO	unitless	NO MEAS	6.51	6.51	7.22	6.43	6.95	6.88	6.5	6.41	6.9	6.55	6.76	6.69	6.41	7.22	6.69	

OTTER CREEK WELL A3

			sys_loc_code	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3	A3				
			sample_date	8/24/2011	10/21/2011	1/11/2012	4/25/2012	9/6/2012	11/15/2012	3/4/2013	5/14/2013	7/31/2013	12/13/2013	3/18/2014	5/14/2014			
			sys_sample_code	OTRCR-1108-850	OTRCR-1110-402	OTRCR-1201-205	OCC-1204-524	OCC-1209-722	OCC-1211-301	OCC-1303-345	OCC-1305-139	OCC-1307-610	OCC-1312-116	OCC-1403-405	OCC-1405-219			
			lab_sample_id	H11080526-001	H11100352-003	H12010179-006	H12040471-025	H12090092-023	H12110239-002	H13030104-006	H13050294-007	H13080047-011	H13120229-017	H14030299-006	H14050292-020			
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	MINIMUM	MAXIMUM	MEAN
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	2930	2760	3460	3400	3140	3390	3370	3320	3430	3430	3340	3310	2760	3460	3273	
SODIUM ADSORPTION RATIO	unitless	NO MEAS	5.19	5.35	5.2	5.24	5.54	5.59	5.26	5.41	5.46	5.61	5.7	5.42	5.19	5.7	5.41	

ALL OTTER CREEK STATIONS

															MINIMUM	MAXIMUM	MEAN
SC (UMHOS/CM AT 25 C)															1530	6650	3418
SODIUM ADSORPTION RATIO															5.13	10.60	6.27

HOME CREEK WELL AVF5-1

			sys_loc_code	AVF5-1	AVF5-1	AVF5-1	AVF5-1	AVF5-1	AVF5-1	AVF5-1	AVF5-1	AVF5-1	AVF5-1	AVF5-1				
			sample_date	6/23/2011	10/21/2011	1/26/2012	4/23/2012	9/5/2012	11/16/2012	3/7/2013	5/15/2013	7/31/2013	11/22/2013	3/18/2014	5/15/2014			
			sys_sample_code	OTRCR-1106-017	OTRCR-1110-405	OTRCR-1201-149	OCC-1204-501	OCC-1209-702	OCC-1211-207	OCC-1303-356	OCC-1305-144	OCC-1307-602	OCC-1311-107	OCC-1403-402	OCC-1405-038			
			lab_sample_id	H11060450-017	H11100352-006	H12010303-009	H12040471-002	H12090092-003	H12110252-008	H13030183-002	H13050294-013	H13080047-003	H13110493-006	H14030299-003	H14050297-019			
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	MINIMUM	MAXIMUM	MEAN
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	1400	1300	1560	1530	1430	1550	1590	1570	1620	1620	1700	1650	1660	1300	1700	1547
SODIUM ADSORPTION RATIO	unitless	NO MEAS	3.1	3.02	2.94	2.93	3.01	3.06	3.12	3.11	3.08	3.08	3.08	3.2	3.05	2.93	3.2	3.06

HOME CREEK WELL A2

			sys_loc_code	A2													
			sample_date	6/23/2011													
			sys_sample_code	OTRCR-1106-213													
			lab_sample_id	H11060448-014													
chemical_name	result_unit	fraction	report_result_text											MINIMUM	MAXIMUM	MEAN	
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	3050											3050	3050	3050	
SODIUM ADSORPTION RATIO	unitless	NO MEAS	7.17											7.17	7.17	7.17	

THREE MILE CREEK WELL AVF6-3

			sys_loc_code	AVF6-3	AVF6-3	AVF6-3	AVF6-3	AVF6-3	AVF6-3	AVF6-3	AVF6-3	AVF6-3	AVF6-3	AVF6-3				
			sample_date	8/24/2011	10/18/2011	1/10/2012	5/2/2012	9/5/2012	12/5/2012	3/5/2013	5/15/2013	7/31/2013	12/12/2013	3/24/2014	5/12/2014			
			sys_sample_code	OTRCR-1108-851	OTRCR-1110-702	OTRCR-1201-202	OCC-1205-553	OCC-1209-704	OCC-1212-251	OCC-1303-353	OCC-1305-149	OCC-1307-605	OCC-1312-113	OCC-1403-424	OCC-1405-202			
			lab_sample_id	H11080526-002	H11100344-003	H12010179-003	H12050095-014	H12090092-005	H12120120-013	H13030104-014	H13050294-018	H13080047-006	H13120229-014	H14030353-010	H14050292-003			
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	MINIMUM	MAXIMUM	MEAN
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	2630	2500	3020	3000	2820	3030	3020	3000	3100	3110	3040	3020	2500	3110	2941	
SODIUM ADSORPTION RATIO	unitless	NO MEAS	6.14	6.45	6.32	6.53	6.53	6.81	6.57	6.57	6.65	6.73	6.6	6.64	6.14	6.81	6.55	

**APPENDIX F
 OTTER CREEK MINE BASELINE REPORT 325A
 SUMMARY OF ALLUVIAL GROUNDWATER QUALITY**

THREE MILE CREEK WELL A5

			A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5	A5			
			8/25/2011	10/18/2011	1/12/2012	5/1/2012	9/6/2012	12/5/2012	3/5/2013	5/15/2013	7/30/2013	1/7/2014	3/21/2014	5/15/2014			
			OTRCR-1108-853	OTRCR-1110-700	OTRCR-1201-132	OCC-1205-543	OCC-1209-711	OCC-1212-253	OCC-1303-354	OCC-1305-151	OCC-1307-600	OCC-1401-100	OCC-1403-419	OCC-1405-225			
			H11080526-004	H11100344-001	B12011023-013	H12050095-004	H12090092-012	H12120120-015	H13030104-015	H13050294-020	H13080047-001	H14010145-001	H14030299-020	H14050292-026			
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	MINIMUM	MAXIMUM	MEAN
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	3450	3360	3940	3660	3520	3470	3620	3530	3760	3440	3480	3320	3320	3940	3546
SODIUM ADSORPTION RATIO	unitless	NO MEAS	5.28	5.39	6.17	5.62	6.02	6.31	6	5.79	5.85	5.84	5.91	5.45	5.28	6.31	5.80

TEN MILE CREEK ALLUVIUM A4

			A4	A4	A4	A4	A4	A4	A4	A4	A4	A4	A4	A4			
			6/22/2011	10/21/2011	1/11/2012	4/25/2012	9/6/2012	11/15/2012	3/4/2013	5/14/2013	7/31/2013	1/7/2014	3/18/2014	5/14/2014			
			OTRCR-1106-009	OTRCR-1110-401	OTRCR-1201-204	OCC-1204-525	OCC-1209-721	OCC-1211-300	OCC-1303-344	OCC-1305-138	OCC-1307-611	OCC-1401-806	OCC-1403-404	OCC-1405-220			
			H11060450-009	H11100352-002	H12010179-005	H12040471-026	H12090092-022	H12110239-001	H13030104-005	H13050294-006	H13080047-012	H14010147-007	H14030299-005	H14050292-021			
chemical_name	result_unit	fraction	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	report_result_text	MINIMUM	MAXIMUM	MEAN
SC (UMHOS/CM AT 25 C)	umhos/cm	NO MEAS	2790	2600	3150	3100	2870	3110	3100	3080	3180	3100	3160	3100	2600	3180	3028
SODIUM ADSORPTION RATIO	unitless	NO MEAS	4.83	4.73	4.64	4.68	4.95	4.89	4.66	4.86	4.86	4.92	4.74	4.74	4.64	4.95	4.79