

ExxonMobil Pipeline Company

**SCAT Area Transition Report
for B01**

Silvertip Pipeline Incident
Laurel, Montana

October 19, 2011



SCAT Area Transition Report for B01

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Laurel, Montana

Prepared for:
ExxonMobil Pipeline Company

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The observations described in this Report were made exclusively under the conditions at the time and subject to the limitations stated therein. It is understood by Client that ARCADIS has relied on the accuracy of documents, oral information, and other material and information provided by sources documented in this report, including but not limited to information provided by Client and Client's other contractors. ARCADIS has not independently verified any such information. The conclusions presented in the Report are based solely upon the observations and representations made by others.

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1. Executive Summary of Oil Removal Activities

This Shoreline Cleanup Assessment Technique (SCAT) Area Transition Report provides a summary of the SCAT surveys conducted to determine the extent of oiling along the riverbanks and floodplain within SCAT Area B01, as well as the oil remediation activities completed in this area based on the SCAT Team recommendations. This report also summarizes the environmental samples collected in SCAT Area B01. This report is intended to be read and used in conjunction with the Summary of Assessment and Oil Removal Activities report.

1.1 Land Ownership and Access Issues

Figure 1 provides an aerial map of SCAT Area B01, along with the (a) SCAT Area boundary, (b) parcel boundaries and respective property owners, and (c) access constraints identified during the oil cleanup process. The acreage surveyed in Area B01 is 28.5. There were no access issues for the left or right banks.

1.2 Cultural, Historic, and Natural Resource Constraints

No historic properties or cultural resources have been identified within this area that would affect oil removal activities.

Figure 2 summarizes the natural resources identified in this segment. International Bird Rescue and Resource Advisors from U.S. Fish and Wildlife Service conducted regular inspections of Area B01. Eight oiled Woodhouse's toads (*Bufo woodhousii*), two western terrestrial garter snakes (*Thamnophis elegans*), and a Leopard frog (*Rana pipiens*) were captured, cleaned, and released. An oiled bullfrog (*Rana catesbeiana*) was captured, cleaned, and transferred into the custody of the local zoo. In addition, one oiled Woodhouse's toad was captured but a record of its cleaning and release could not be found. One deceased lightly oiled red tailed hawk (*Buteo jamaicensis*) was identified and retained. One deceased beaver (*Castor canadensis*), a deceased American robin (*Turdus migratorius*), and three fish (unknown species) with no visible oiling were identified and retained. Three Wildlife Priority Cleanup Areas (WPCAs) were identified. Two of the WPCAs had pools with free product and sheen, one of which was associated with a debris pile. The third WPCA was a dense oiled debris pile that resulted in several oiled toads. The WPCAs were treated to reduce the potential for wildlife oiling and are no longer considered a wildlife hazard. A song sparrow (*Melospiza melodia*) nest was identified in Area B01.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area B01. The analytical results for the samples collected can be accessed through a publicly accessible database on the United States Environmental Protection Agency's (USEPA's) website. The approximate locations of samples collected within Area B01 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	LAMT0708DW4005	08-Jul-11	Water_Drinking	LAMT_277_DW002	45.69357	-108.63029
CTEH	LAMT0712DW201	12-Jul-11	Water_Drinking	LAMT_354_DW201	45.691892	-108.637139
CTEH	LAMT0729DW101	29-Jul-11	Water_Drinking	LAMT_458_DW101	45.692329	-108.63874
CTEH	LAMT0817SD402	17-Aug-11	Soil_River	SO-B01R-1	45.693427	-108.636734
CTEH	LAMT0822SO113	22-Aug-11	Soil_Surface	LAMT_560_SO113	45.69373	-108.630298
CTEH	LAMT0822SO114	22-Aug-11	Soil_Surface	LAMT_560_SO114	45.693563	-108.630679
CTEH	LAMT0822SO116	22-Aug-11	Soil_Surface	LAMT_560_SO116	45.69351	-108.630342
CTEH	LAMT0822SO117	22-Aug-11	Soil_Surface	LAMT_560_SO117	45.693293	-108.630922
CTEH	LAMT0822SO118	22-Aug-11	Soil_Surface	LAMT_560_SO118	45.693261	-108.630422
CTEH	LAMT0822SO121	22-Aug-11	Soil_Surface	LAMT_560_SO121	45.692985	-108.630605
CTEH	LAMT0822SOBKG123	22-Aug-11	Soil_Surface	LAMT_560_SOBKG123	45.693306	-108.630902
CTEH	LAMT0825SO606	25-Aug-11	Soil_River	B01LA	45.694302	-108.635678
MDEQ	B11070821-037	11-Jul-11	Soil_Surface	ST-JV-01	45.6931029	-108.631955
MDEQ	B11070821-038	11-Jul-11	Soil_Surface	ST-JV-01	45.6931029	-108.631955
MDEQ	B11070821-039	11-Jul-11	Soil_Surface	ST-JV-01	45.6931029	-108.631955
MDEQ	B11070821-040	11-Jul-11	Soil_Surface	ST-JV-01	45.6931029	-108.631955
MDEQ	B11070821-053	12-Jul-11	Soil_Surface	ST-JV-01	45.6931029	-108.631955
MDEQ	B11070821-054	12-Jul-11	Soil_Surface	ST-JV-01	45.6931029	-108.631955
MDEQ	B11070821-055	12-Jul-11	Soil_Surface	ST-JV-01	45.6931029	-108.631955
EPA	SPSE109_071311	13-Jul-11	Sediment	SPSE109	45.6934372	-108.6368539
EPA	SPSO104D02_071211	12-Jul-11	Soil_Surface	SPSO104	45.6931029	-108.6319551

Appendix A contains a summary of sample results with detections for this sample set. Detections with a result above the screening level are highlighted; for this set, there were four exceedances: two for vanadium, one for selenium, and one for total extractable hydrocarbons.

1.4 Summary of Initial SCAT Surveys

The SCAT teams used systematic evaluation criteria and treatment method tables approved by the National Oceanic and Atmospheric Administration to provide a standard approach for data collection and conducting field surveys. The forms and sketches from the initial SCAT surveys performed along the river bank (water edge) and floodplain within Area B01 are included in Appendix B. Figure 4 provides the

maximum oiling zones observed by the SCAT team during the initial surveys of Area B01.

1.5 Applicable Compiled Treatment Recommendations

The SCAT team developed compiled treatment recommendations (CTRs) providing approved treatment methods (ATMs) for each oiling zone identified during the initial SCAT surveys ([CTR No. 9](#) and [CTR No. 20](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area B01 in accordance with the ATMs identified in the CTRs. [Appendix I](#) of the Summary of Assessment and Oil Removal Activities report presents this data including: date range/days worked, average number of people working per day, equipment used, and various types of bags removed: oily debris, personal protective equipment (PPE), plastic, trash, super sacks, wood chips, and contaminated wood.

1.7 Pre-Inspection Survey Transmittal

SCAT Operations liaisons performed an inspection of the remediated areas of SCAT Area B01 and developed a Pre-Inspection Survey Transmittal (PIST) associated with the right bank within Area B01, which is presented in Appendix C.

1.8 Post-Inspection Survey Transmittal

SCAT Operations liaisons performed an inspection of the remediated areas of SCAT Area B01 and developed a Post Inspection Survey Transmittal (POST) associated with the left bank within Area B01, which is presented in Appendix D.

1.9 Summary of Final SCAT Surveys

Figure 5 shows the oiling conditions within Area B01 following completion of oil removal activities. The SCAT team performed final surveys of the left and right banks within SCAT Area B01 to confirm the agreed-upon cleanup endpoints identified in the applicable CTRs had been achieved. The final SCAT survey documentation is presented in Appendix E.

1.10 SCAT Area Conclusions

Based on the final SCAT surveys performed on the right bank and the POST associated with the left bank within Area B01, no further treatment is recommended for these segments. SCAT Segment Sign-Off Forms are included as Appendix F.



**SCAT Area Transition
Report for B01**

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Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for B01

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
Report for B01**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for B01

Prepared for:

Unified Command

Date

Unified Command – FOSC



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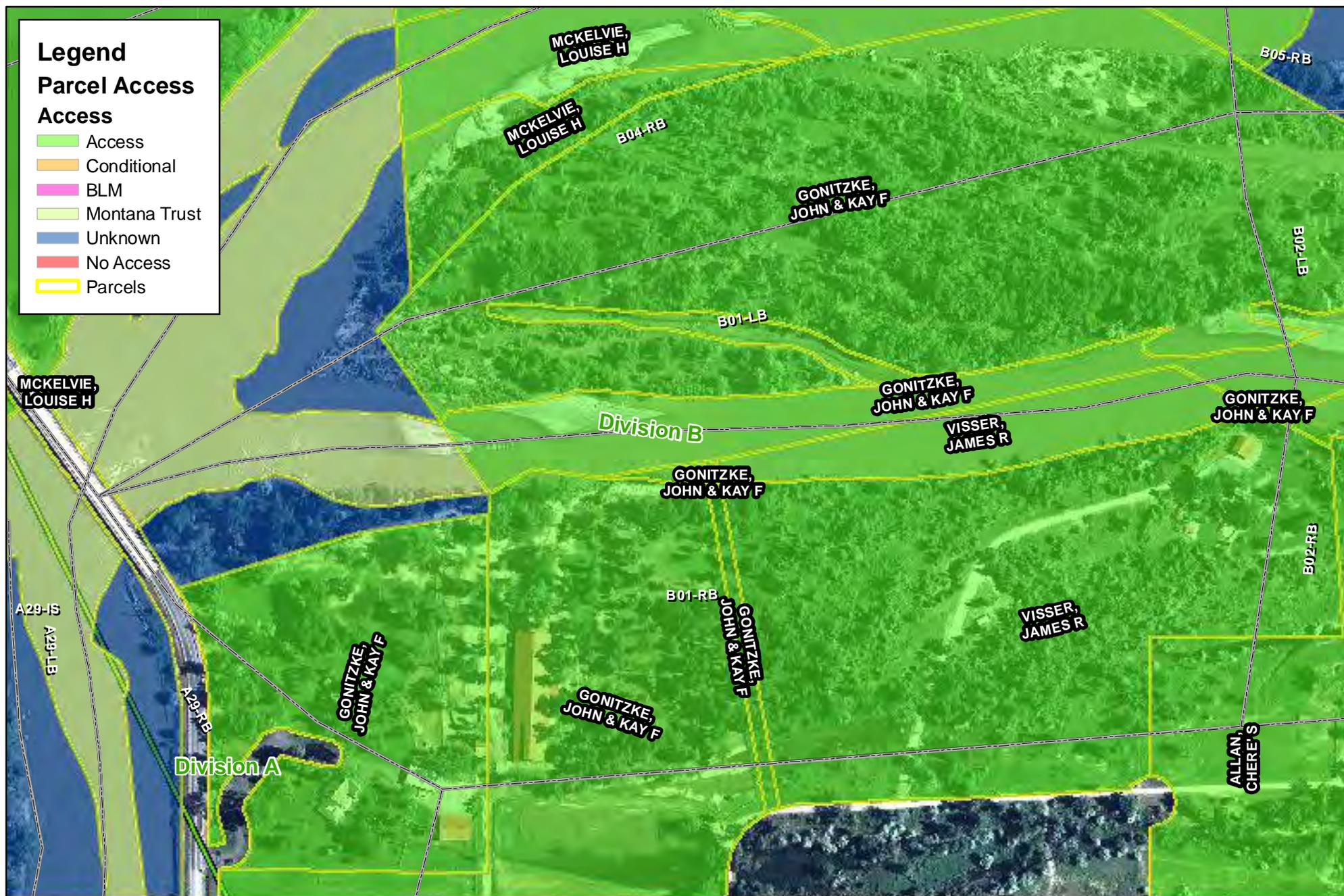
SCAT Area Transition Report for B01

Prepared for:

Unified Command

Date

Unified Command – MDEQ



Legend

Parcel Access

- Access
- Conditional
- BLM
- Montana Trust
- Unknown
- No Access
- Parcels

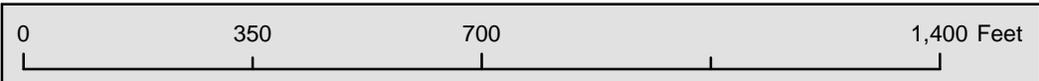
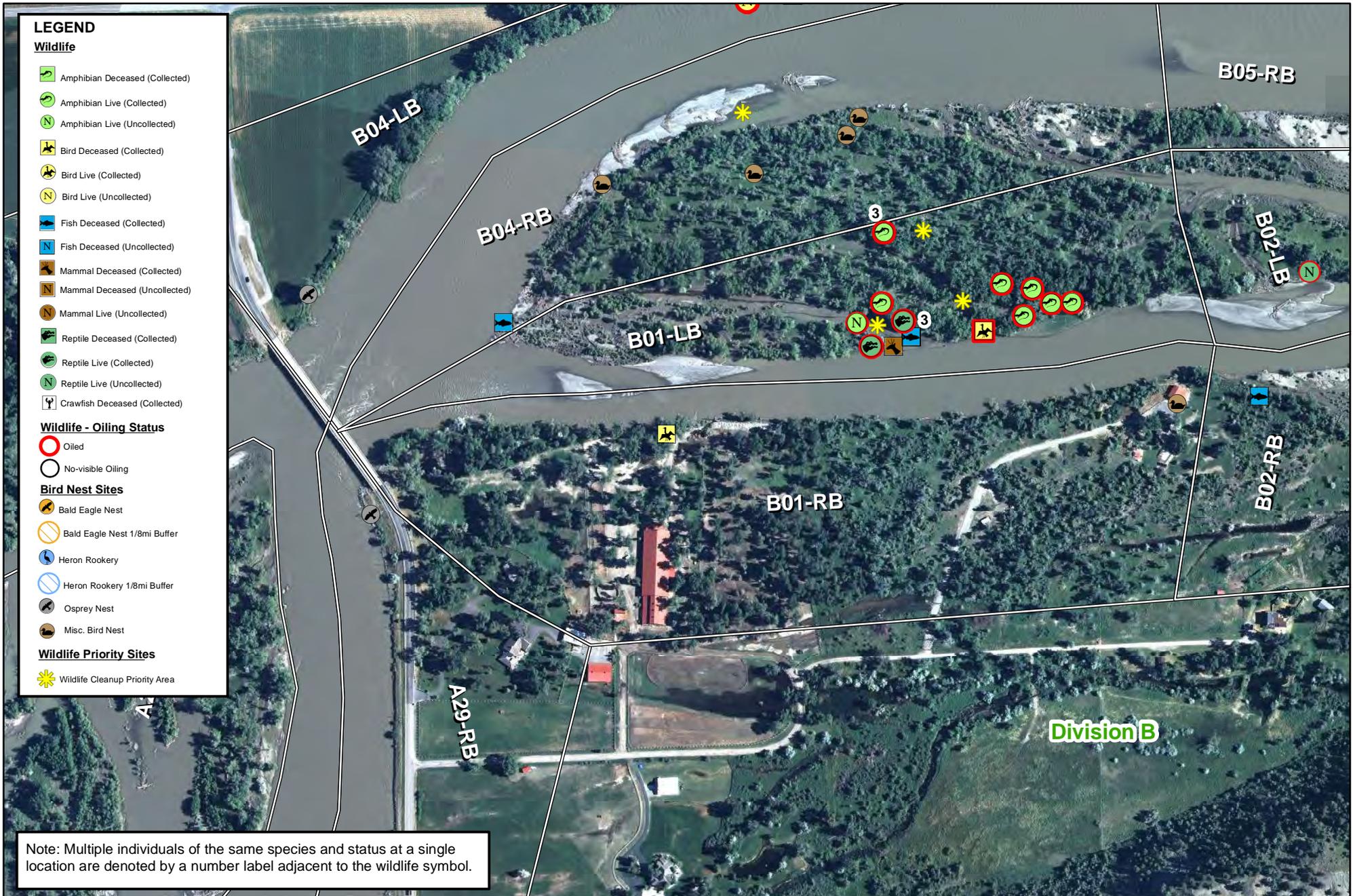


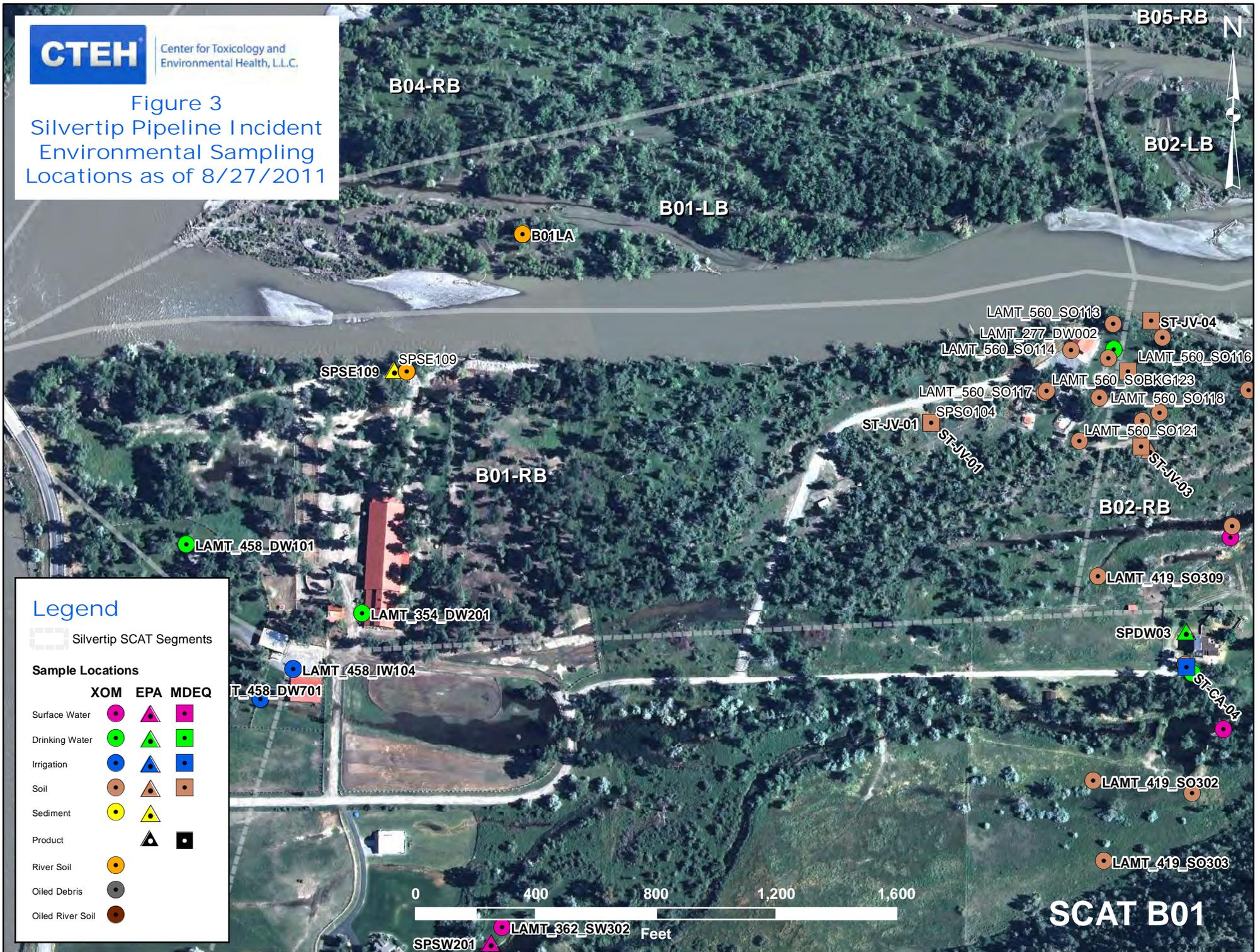
Figure 1



Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

Figure 2
Wildlife Resources

Figure 3
Silvertip Pipeline Incident
Environmental Sampling
Locations as of 8/27/2011

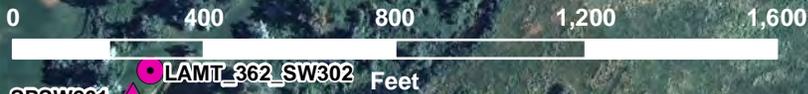


Legend

Silvertip SCAT Segments

Sample Locations

	XOM	EPA	MDEQ
Surface Water			
Drinking Water			
Irrigation			
Soil			
Sediment			
Product			
River Soil			
Oiled Debris			
Oiled River Soil			



SCAT B01



Figure 4 - Maximum SCAT Observations For SCAT Area: B01

	9999 Oiling Zone ID		Light Oiling
	Heavy Oiling		Very Light Oiling
	Moderate Oiling		No Oil Observed

220 0 220 440 Feet

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APPLIED SCIENCES, INC.



	9999 Oiling Zone ID	Light Oiling
	Heavy Oiling	Very Light Oiling
	Moderate Oiling	No Oil Observed

Figure 5 - Final SCAT Observations
For SCAT Area: B01



Appendix A

Sample Detection Summary



Detections in Samples Collected in SCAT Area B01

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
B11070821-053		Field	Soil_Surface	MA-VPH-MDEQ-REM	Total Purgeable Hydrocarbons	Y	2	200	J	mg/kg	no
LAMT0708DW4005	07/08/2011	Field	Water_Drinking	E524.2	m+p-Xylenes	Y	0.39	10000	J	ug/L	no
LAMT0708DW4005	07/08/2011	Field	Water_Drinking	E524.2	Toluene	Y	0.72	1000		ug/L	no
LAMT0708DW4005	07/08/2011	Field	Water_Drinking	MADEP VPH	Toluene	Y	2.7	1000		ug/L	no
LAMT0708DW4005	07/08/2011	Field	Water_Drinking	E524.2	Xylenes, Total	Y	0.39	10000	J	ug/L	no
LAMT0729DW101	07/29/2011	Field	Water_Drinking	E524.2	Chloroform	Y	0.17	70	J	ug/L	no
LAMT0729DW101	07/29/2011	Field	Water_Drinking	E524.2	Trihalomethanes, Total	Y	0.17	100	J	ug/L	no
LAMT0817SO402	08/17/2011	Field	Soil_River	EPA 6010	Arsenic	Y	15.3	40		mg/kg	no
LAMT0817SO402	08/17/2011	Field	Soil_River	EPA 6010	Barium	Y	132	820		mg/kg	no
LAMT0817SO402	08/17/2011	Field	Soil_River	EPA 6010	Cadmium	Y	0.87	3.8		mg/kg	no
LAMT0817SO402	08/17/2011	Field	Soil_River	EPA 6010	Chromium	Y	22.8	280		mg/kg	no
LAMT0817SO402	08/17/2011	Field	Soil_River	EPA 6010	Lead	Y	7.9	400		mg/kg	no
LAMT0817SO402	08/17/2011	Field	Soil_River	EPA 9060	Mean Total Organic Carbon	Y	4540	NA		mg/kg	no
LAMT0817SO402	08/17/2011	Field	Soil_River	EPA 6010	Nickel	Y	14.1	150		mg/kg	no
LAMT0817SO402	08/17/2011	Field	Soil_River	EPA 9060	RSD%	Y	7.5	NA		%	no
LAMT0817SO402	08/17/2011	Field	Soil_River	MADEP EPH	Total Extractable Hydrocarbons	Y	16.8	200		mg/kg	no
LAMT0817SO402	08/17/2011	Field	Soil_River	EPA 9060	Total Organic Carbon	Y	4940	NA		mg/kg	no
LAMT0817SO402	08/17/2011	Field	Soil_River	EPA 6010	Vanadium	Y	43.1	39		mg/kg	YES
LAMT0822SO113	08/22/2011	Field	Soil_Surface	EPA 6010	Arsenic	Y	7.6	40		mg/kg	no
LAMT0822SO113	08/22/2011	Field	Soil_Surface	EPA 6010	Barium	Y	128	820	J-	mg/kg	no
LAMT0822SO113	08/22/2011	Field	Soil_Surface	EPA 6010	Cadmium	Y	0.22	3.8	J-	mg/kg	no
LAMT0822SO113	08/22/2011	Field	Soil_Surface	EPA 6010	Chromium	Y	19.8	280	J-	mg/kg	no
LAMT0822SO113	08/22/2011	Field	Soil_Surface	EPA 6010	Lead	Y	19.8	400		mg/kg	no
LAMT0822SO113	08/22/2011	Field	Soil_Surface	EPA 6010	Nickel	Y	15.5	150	J-	mg/kg	no
LAMT0822SO113	08/22/2011	Field	Soil_Surface	EPA 6010	Selenium	Y	1.5	2.6	J-	mg/kg	no
LAMT0822SO113	08/22/2011	Field	Soil_Surface	EPA 6010	Vanadium	Y	36.1	39	J-	mg/kg	no
LAMT0822SO114	08/22/2011	Field	Soil_Surface	EPA 6010	Arsenic	Y	4.3	40		mg/kg	no
LAMT0822SO114	08/22/2011	Field	Soil_Surface	EPA 6010	Barium	Y	81	820	J-	mg/kg	no
LAMT0822SO114	08/22/2011	Field	Soil_Surface	EPA 6010	Cadmium	Y	0.35	3.8	J-	mg/kg	no
LAMT0822SO114	08/22/2011	Field	Soil_Surface	EPA 6010	Chromium	Y	14.4	280	J-	mg/kg	no
LAMT0822SO114	08/22/2011	Field	Soil_Surface	EPA 6010	Lead	Y	16.6	400		mg/kg	no



Detections in Samples Collected in SCAT Area B01

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
LAMT0822SO114	08/22/2011	Field	Soil_Surface	EPA 6010	Nickel	Y	9.7	150	J-	mg/kg	no
LAMT0822SO114	08/22/2011	Field	Soil_Surface	EPA 6010	Selenium	Y	1.2	2.6	J-	mg/kg	no
LAMT0822SO114	08/22/2011	Field	Soil_Surface	EPA 6010	Vanadium	Y	23.9	39	J-	mg/kg	no
LAMT0822SO116	08/22/2011	Field	Soil_Surface	EPA 6010	Arsenic	Y	6.1	40		mg/kg	no
LAMT0822SO116	08/22/2011	Field	Soil_Surface	EPA 6010	Barium	Y	81.1	820	J-	mg/kg	no
LAMT0822SO116	08/22/2011	Field	Soil_Surface	EPA 6010	Cadmium	Y	0.19	3.8	J-	mg/kg	no
LAMT0822SO116	08/22/2011	Field	Soil_Surface	EPA 6010	Chromium	Y	13.8	280	J-	mg/kg	no
LAMT0822SO116	08/22/2011	Field	Soil_Surface	EPA 6010	Lead	Y	21.2	400		mg/kg	no
LAMT0822SO116	08/22/2011	Field	Soil_Surface	EPA 6010	Nickel	Y	11.6	150	J-	mg/kg	no
LAMT0822SO116	08/22/2011	Field	Soil_Surface	EPA 8260	p-Isopropyltoluene	Y	11.5	NA		ug/kg	no
LAMT0822SO116	08/22/2011	Field	Soil_Surface	EPA 6010	Selenium	Y	0.79	2.6	J-	mg/kg	no
LAMT0822SO116	08/22/2011	Field	Soil_Surface	MADEP EPH	Total Extractable Hydrocarbons	Y	16.7	200		mg/kg	no
LAMT0822SO116	08/22/2011	Field	Soil_Surface	EPA 6010	Vanadium	Y	25	39	J-	mg/kg	no
LAMT0822SO117	08/22/2011	Field	Soil_Surface	EPA 6010	Arsenic	Y	5.3	40		mg/kg	no
LAMT0822SO117	08/22/2011	Field	Soil_Surface	EPA 6010	Barium	Y	74.9	820	J-	mg/kg	no
LAMT0822SO117	08/22/2011	Field	Soil_Surface	EPA 6010	Cadmium	Y	0.79	3.8	J-	mg/kg	no
LAMT0822SO117	08/22/2011	Field	Soil_Surface	EPA 6010	Chromium	Y	13.9	280	J-	mg/kg	no
LAMT0822SO117	08/22/2011	Field	Soil_Surface	EPA 6010	Lead	Y	17.9	400		mg/kg	no
LAMT0822SO117	08/22/2011	Field	Soil_Surface	EPA 6010	Nickel	Y	10.7	150	J-	mg/kg	no
LAMT0822SO117	08/22/2011	Field	Soil_Surface	EPA 6010	Selenium	Y	1.2	2.6	J-	mg/kg	no
LAMT0822SO117	08/22/2011	Field	Soil_Surface	MADEP EPH	Total Extractable Hydrocarbons	Y	37.5	200		mg/kg	no
LAMT0822SO117	08/22/2011	Field	Soil_Surface	EPA 6010	Vanadium	Y	22.9	39	J-	mg/kg	no
LAMT0822SO118	08/22/2011	Field	Soil_Surface	EPA 6010	Arsenic	Y	4	40		mg/kg	no
LAMT0822SO118	08/22/2011	Field	Soil_Surface	EPA 6010	Barium	Y	101	820	J-	mg/kg	no
LAMT0822SO118	08/22/2011	Field	Soil_Surface	EPA 6010	Cadmium	Y	0.9	3.8	J-	mg/kg	no
LAMT0822SO118	08/22/2011	Field	Soil_Surface	EPA 6010	Chromium	Y	18.7	280	J-	mg/kg	no
LAMT0822SO118	08/22/2011	Field	Soil_Surface	EPA 6010	Lead	Y	16.2	400		mg/kg	no
LAMT0822SO118	08/22/2011	Field	Soil_Surface	EPA 6010	Nickel	Y	14.4	150	J-	mg/kg	no
LAMT0822SO118	08/22/2011	Field	Soil_Surface	EPA 6010	Selenium	Y	1.2	2.6	J-	mg/kg	no
LAMT0822SO118	08/22/2011	Field	Soil_Surface	MADEP EPH	Total Extractable Hydrocarbons	Y	24.5	200		mg/kg	no
LAMT0822SO118	08/22/2011	Field	Soil_Surface	EPA 6010	Vanadium	Y	33.8	39	J-	mg/kg	no



Detections in Samples Collected in SCAT Area B01

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
LAMT0822SO121	08/22/2011	Field	Soil_Surface	EPA 6010	Arsenic	Y	5.8	40		mg/kg	no
LAMT0822SO121	08/22/2011	Field	Soil_Surface	EPA 6010	Barium	Y	94.3	820	J-	mg/kg	no
LAMT0822SO121	08/22/2011	Field	Soil_Surface	EPA 6010	Cadmium	Y	0.42	3.8	J-	mg/kg	no
LAMT0822SO121	08/22/2011	Field	Soil_Surface	EPA 6010	Chromium	Y	15.7	280	J-	mg/kg	no
LAMT0822SO121	08/22/2011	Field	Soil_Surface	EPA 6010	Lead	Y	18.6	400		mg/kg	no
LAMT0822SO121	08/22/2011	Field	Soil_Surface	EPA 7471	Mercury	Y	0.021	1		mg/kg	no
LAMT0822SO121	08/22/2011	Field	Soil_Surface	EPA 6010	Nickel	Y	13.6	150	J-	mg/kg	no
LAMT0822SO121	08/22/2011	Field	Soil_Surface	EPA 6010	Selenium	Y	0.93	2.6	J-	mg/kg	no
LAMT0822SO121	08/22/2011	Field	Soil_Surface	MADEP EPH	Total Extractable Hydrocarbons	Y	19.5	200		mg/kg	no
LAMT0822SO121	08/22/2011	Field	Soil_Surface	EPA 6010	Vanadium	Y	28.7	39	J-	mg/kg	no
LAMT0822SOBKG123	08/22/2011	Field	Soil_Surface	EPA 6010	Arsenic	Y	6.4	40		mg/kg	no
LAMT0822SOBKG123	08/22/2011	Field	Soil_Surface	EPA 6010	Barium	Y	82.2	820	J-	mg/kg	no
LAMT0822SOBKG123	08/22/2011	Field	Soil_Surface	EPA 6010	Cadmium	Y	1	3.8	J-	mg/kg	no
LAMT0822SOBKG123	08/22/2011	Field	Soil_Surface	EPA 6010	Chromium	Y	16.4	280	J-	mg/kg	no
LAMT0822SOBKG123	08/22/2011	Field	Soil_Surface	EPA 6010	Lead	Y	19.2	400		mg/kg	no
LAMT0822SOBKG123	08/22/2011	Field	Soil_Surface	EPA 6010	Nickel	Y	11.8	150	J-	mg/kg	no
LAMT0822SOBKG123	08/22/2011	Field	Soil_Surface	EPA 6010	Selenium	Y	0.96	2.6	J-	mg/kg	no
LAMT0822SOBKG123	08/22/2011	Field	Soil_Surface	MADEP EPH	Total Extractable Hydrocarbons	Y	15.7	200		mg/kg	no
LAMT0822SOBKG123	08/22/2011	Field	Soil_Surface	EPA 6010	Vanadium	Y	29.5	39	J-	mg/kg	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 6010	Arsenic	Y	9	40		mg/kg	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 6010	Barium	Y	171	820		mg/kg	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 6010	Cadmium	Y	0.26	3.8		mg/kg	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 6010	Chromium	Y	27.5	280		mg/kg	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 6010	Lead	Y	23.8	400		mg/kg	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 9060	Mean Total Organic Carbon	Y	13500	NA		mg/kg	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 7471	Mercury	Y	0.019	1		mg/kg	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 6010	Nickel	Y	20.4	150		mg/kg	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 9060	RSD%	Y	23.6	NA		%	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 6010	Selenium	Y	3.3	2.6		mg/kg	YES
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 9060	Total Organic Carbon	Y	17900	NA		mg/kg	no
LAMT0825SO606	08/25/2011	Field	Soil_River	EPA 6010	Vanadium	Y	48.3	39		mg/kg	YES



Detections in Samples Collected in SCAT Area B01

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
SPSO104D02_071211	07/12/2011	Field	Soil_Surface	MADEP EPH	Total Extractable Hydrocarbons	Y	4800	200		mg/kg	YES



Appendix B

Initial SCAT Survey Forms
and Sketches

DB/G/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 07/19/2011	Time (24h): std / daylight 0900 1135 hrs to hrs	Water Level low - mean <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: B1 Left Bank <u>(Right Bank)</u> Island		Operations Division: A		
Survey by: <u>(Foot)</u> ATV / Boat / Helicopter / Overlook / _____ <u>(Sun)</u> Clouds / Fog / Rain / Snow / Windy / Calm				
Air Temp + / - _____ deg C				

2 SURVEY TEAM #	name	organization	contact phone number
	Bruce Kvam <i>[Signature]</i>	Polaris Applied Sciences, LLC	(206)-953-6904
	Aaron Anderson <i>[Signature]</i>	MTDEQ	(406) 431-2583
	Patrick Kriske <i>[Signature]</i>	USCG	(415) 596-6587

3 SEGMENT Total Segment/Reach Length 781 m Segment/Reach Length Surveyed 781 m

Start GPS: LATITUDE 45 deg. 4135 min. LONGITUDE 45 deg. 4137 min. Datum: WGS 84

End GPS: LATITUDE 108 deg. 3825 min. LONGITUDE 108 deg. 3748 min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp _____ Shelf _____ **Manmade:** Solid _____ Permeable _____ (type) _____ **Wetland:** Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud _____ Sand _____ Mixed _____ Pebble/Cobble S Boulder _____ Peat/Organic _____ **Vegetated Bank:** S **Wooded Upland:** P

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse _____ **Other:** _____ If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate **complete for primary**

Cliff or Bluff: _____ Est Height _____ m canyon _____ manmade _____ meander _____ confined or leveed _____ Substrate Type: mixed

Sloped: <5 (>5°) (15°) (30°) straight P braided _____ oxbow _____ flood plain valley S Forested/ Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 50 m est. water depth: <1m 1-3m 3-10 m >10m _____ m

shoal(s) present Y / N point bar present Y / N bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean (bank full) / overbank flow est. change over next 7 days: (falling) - same - rising

5 OPERATIONAL FEATURES Suitable backshore staging Y / N Access: Direct from backshore Y / N Alongshore from next segment Y / N

Debris Y / N oiled Y / N amount 30 bags or _____ trucks access restrictions

Oiled trees/shrubs Y / N River Current strong Y / N Other Features: _____

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)			
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
A				X	340	90	5			<u>(X)</u>	X		X									rock, small woody debris, grass, trees
B				X	280	19	15			<u>(X)</u>	X		X									rock, small woody debris, grass, trees
C			X		161	1	<1				<u>(X)</u>		X									Grass, trees

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench — e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Oil band height: 8 cm

Treatment Recommendations:

Zone A: Remove any remaining pooled oil with sorbents. Cut and remove oil coated vegetation smaller than 1" diameter. Remove oil coated debris smaller than 4" diameter. Wipe any larger oil coated vegetation and debris. Remove oil coated sediments with hand tools. Wipe oil coated cobble.

BK photos 1-29; AA photos 112-174

(for ALL sub-segments record: sub-segment ID, length, length surveyed and GPS start/end fixes)

Sketch Yes/No Photos (Yes) / No (Roll # _____ Frames _____) Video Tape Yes/No (tape# _____)



Segment B1, Zone A.



Segment B1, Zone B.

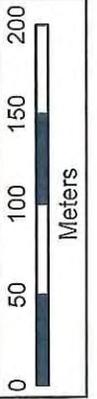


Segment B1, Zone C.

108°37'40"W 108°37'45"W 108°37'50"W 108°37'55"W 108°38'0"W 108°38'5"W 108°38'10"W 108°38'15"W 108°38'20"W 108°38'25"W



45°41'25"N 45°41'30"N 45°41'35"N 45°41'40"N 45°41'45"N
108°37'40"W 108°37'45"W 108°37'50"W 108°37'55"W 108°38'0"W 108°38'5"W 108°38'10"W 108°38'15"W 108°38'20"W 108°38'25"W



COMMENTS:

DATE: 07/19/2011

TEAM: 2

B01 -

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (16-17-18/08/11)	Time (24h): std / daylight	Water Level
Segment/Reach ID: B1	<u>Left Bank</u> / Right Bank / Island			low - mean - bankfull - overbank
Operations Division:			<u>12h00</u> hrs to <u>15h30</u> hrs	<u>(falling)</u> - steady - rising
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- <u>30</u> deg C	

2 SURVEY TEAM # 5	name	organization	contact phone number
Merlo Gauvreau		Polaris	
Chris Arrondondo		Cardno Entrix	
Cindy Santiago		EPA	<u>Cindy C. Santiago</u>
Jay Watson <u>Betsy Howard</u>		FWP <u>MT DEC</u>	<u>Betsy Howard</u>
Shawn Danforth			

3 SEGMENT Total Segment/Reach Length 735 m Segment/Reach Length Surveyed 735 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp _____ Shelf _____ Manmade: Solid _____ Permeable _____ (type) _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud S Sand S Mixed S Pebble/Cobble S Boulder _____ Peat/Organic _____ Vegetated Bank S Wooded Upland P

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse _____ Other: _____ If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: Est Height _____ m canyon _____ manmade _____ meander _____ confined or leveed _____ Substrate Type: Sand _____

Sloped: (>5°)(15°)(30°) straight _____ braided _____ oxbow _____ flood plain valley _____ Forested (Vegetated) / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 60 m est. water depth: <1m (1-3m) 3-10m >10m _____ m

shoal(s) present Y (N) point bar present Y (N) bar-shoal substrate: silt / sand / gravel (cobble) boulder / bedrock / debris

seasonal water level: low / (mean) bank full / overbank flow est. change over next 7 days: (falling) - same - rising

5 OPERATIONAL FEATURES Suitable backshore staging Y/N Access: Direct from backshore Y (N) Alongshore from next segment Y (N)

Debris (Y) (N) oiled (Y) (N) amount _____ bags or 10 trucks access restrictions _____

Oiled trees/shrubs (Y) (N) River Current strong (Y) (N) Other Features: _____

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
A				X	200	66	10			<u>(X)</u>	X							X				Trees, debris
B				X	270	100	20			<u>(X)</u>	X						X					VG, debris
C			X		575	.3	80			<u>(X)</u>	X						X					VG, S, PC
D				X	200	134	10			<u>(X)</u>	X						X					VG debris

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench - e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR				

8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Zone:A-B-D: Cut and remove the coated vegetation remove oil coated debris; Recommend ATM 1-2-3.

Zone A: WP22: Large debris pile use of the ATM 10 to open the debris piles and remove oil coated debris.

Zone C: Do not cut oiled roots to limit erosion, wiping roots when possible or treatment whit dust fixative ATM 9, for pebble cobble use a rake to expose stain area for natural attenuation. Use ATM 1 for coated vegetation

(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)

Sketch (Yes) / No Photos (Yes) / No Roll # _____ Frames _____ Video Tape (Yes) / No Tape # _____

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION
 Segment/Reach ID: B1 Left Bank / Right Bank / Island
 Date (16-17-18/08/11) Time (24h): std / daylight
 Operations Division: 12h00 hrs to 15h30 hrs (falling) - steady - rising
 Survey by: Foot / ATV / Boat / Helicopter / Overlook / Sun / Clouds / Fog / Rain / Snow / Windy / Calm Air Temp +/- 30 deg C

2 SURVEY TEAM # 5
 name organization contact phone number
 Merlo Gauvreau Polaris
 Chris Arrendondo Cardno Entrix
 Cindy Santiago EPA
~~Jan Warran~~ Betsy Hovda ~~FWP~~ MT DFR
 Shawn Danforth

3 SEGMENT Total Segment/Reach Length 735 m Segment/Reach Length Surveyed 735 m
 Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____
 End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED
 Bedrock: Cliff/Ramp _____ Shelf _____ Manmade: Solid _____ Permeable _____ (type) _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____
 Sediment Bank: Clay/Mud S Sand S Mixed S Pebble/Cobble S Boulder _____ Peat/Organic _____ Vegetated Bank S Wooded Upland P
 Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse _____ Other: _____ If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate complete for primary
 Cliff or Bluff: _____ Est Height _____ m canyon _____ manmade _____ meander _____ confined or leveed _____ Substrate Type: Sand
 Sloped: (>5°)(15°)(30°) straight _____ braided _____ oxbow _____ flood plain valley _____ Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate
 est. width: <1m 1-10m 10-100m >100m 60 m est. water depth: <1m (1-3 m) 3-10m >10m _____ m
 shoal(s) present Y (N) point bar present Y (N) bar-shoal substrate: silt / sand / gravel (cobble) boulder / bedrock / debris
 seasonal water level: low / (mean) bank full / overbank flow est. change over next 7 days: (falling) - same - rising

5 OPERATIONAL FEATURES Suitable backshore staging Y/(N) Access: Direct from backshore Y/(N) Alongshore from next segment Y/(N)
 Debris Y/(N) oiled Y/(N) amount _____ bags or 10 trucks access restrictions
 Oiled trees/shrubs Y/(N) River Current strong Y/(N) Other Features: _____

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

1669
1670
1671
1672

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)	
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO
A				X	200	66	10			(X)	X							X			Trees, debris
B				X	270	100	20			(X)	X						X				VG, debris
C			X		575	.3	80			(X)	X						X				VG, S, PC
D				X	200	134	10			(X)	X						X				VG debris

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench - e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes/No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR				

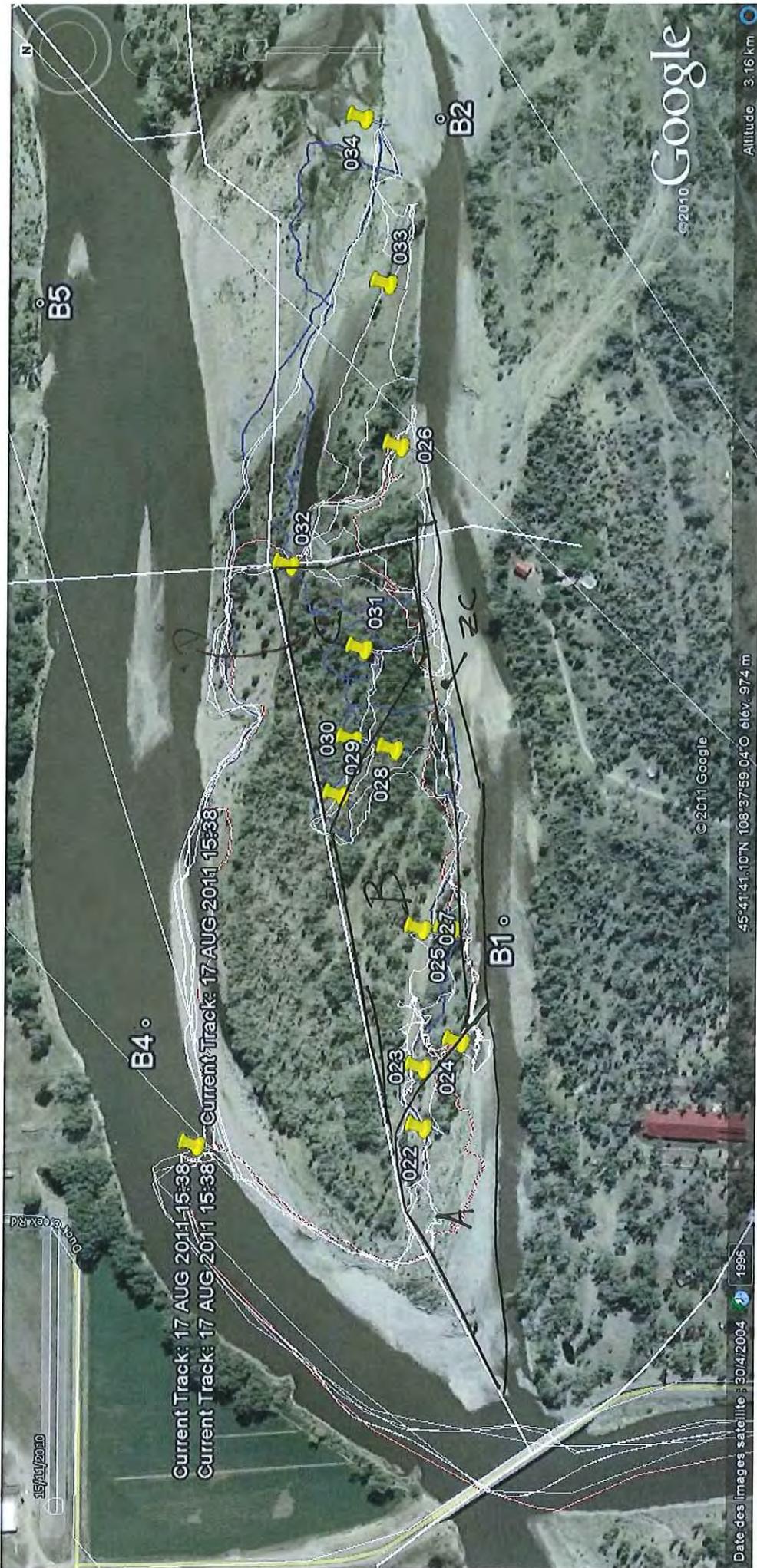
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Zone: A-B-D: Cut and remove the coated vegetation remove oil coated debris; Recommend ATM 1-2-3.
 Zone A: WP22: Large debris pile use of the ATM 10 to open the debris piles and remove oil coated debris.
 Zone C: Do not cut oiled roots to limit erosion, wiping roots when possible or treatment whit dust fixative ATM 9, for pebble cobble use a rake to expose stain area for natural attenuation. Use ATM 1 for coated vegetation

(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)
 Sketch (es) No Photos Yes/No (Roll # _____ Frames _____) Video Tape Yes/No (Tape # _____)

CA Signature received 3/23/11

August 18 Team #5, B1



Page 2



Appendix C

Pre-Inspection Survey Transmittal

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: August 6, 2011

Segment: B-1 RB and B-2 RB

Team: RP SCAT Liaison Gary Reiter Signed: 

USCG SCAT Liaison Truman Skang Signed: 

EPA SCAT Liaison Fred Stroud Signed: 

Segment meets criteria? YES NO

RBOS attached? YES NO

If NO:

Location Sketch attached? YES NO

CTR continue? YES NO

Comments:

Work specified in earlier visit was not completed. Contractor team completed required work site prior to departure of SCAT Liaison personnel.



Division B Segments 01-R and 02-R.

CTR-9 Oiling Zones

19 July 2011



Appendix D

Post-Inspection Survey Transmittal

POST

Post Inspection Survey Transmittal

Segment ~~B 4 RB~~ B01-LB
CK 8/31/11

Date of Survey 8-30-11

SCAT Team Member Charles Pons Signed: [Signature]

SCAT Team Member Guff Miller Signed: [Signature]

SCAT Team Member [Signature] Signed: [Signature]

Segment FAILED ReSCAT

Segment Conditionally PASSES ReSCAT

IF the Segment FAILED ReSCAT, another ReSCAT is required after treatment has been completed.
IF the Segment Conditionally PASSES ReSCAT, a SCAT/Ops Liaison will verify treatment completion.

Describe the zone requiring further treatment. Comment on oiling conditions, relevant portions of the CTR(s), the appropriate ATMs to use, GPS waypoints, additional comments, etc. Attach map.

Zone B on attached map has >10% cover of shrub + coastal veg + debris
Ops need to continue to remove the coastal material.

Zone Dimensions: Length 415 Width 86 GPS Waypoint: Lat. _____ Long. _____
(required) (center of zone)

Estimated Work Effort: Number of People 20 Hours of Work 5 Applicable CTR(s) _____
(required)

The undersigned attests that the above treatment has been completed and the identified area meets the Approved Treatment Methods Target Endpoints.

[Signature] LAUREN GLUSHIK / POLARIS 07 SEP 11
Sign Name Print Name/ Affiliation Date

[Signature] Robert Ashton / MDEQ 9/7/2011
Sign Name Print Name/ Affiliation Date



Appendix E

Final SCAT Survey Forms
and Sketches

DB/G

1 GENERAL INFORMATION		Date (dd/mm/yy) 30/08/11	Time (24h): std / daylight 8:30 hrs to 1000 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: B01 <u>Left Bank</u> / Right Bank / Island		Operations Division: B		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - ___ deg C

2 SURVEY TEAM # 1 and 3	Name	Organization	Signature
Josh Hofkes	Cardno ENTRIX		<i>[Signature]</i>
Tom Freeman	Polaris		<i>[Signature]</i>
Tom Bovington	DEQ		<i>[Signature]</i>
Griff Miller	EPA		<i>[Signature]</i>
Chuck Pons	Cardno ENTRIX		<i>[Signature]</i>
Terry Tanner	EPA		<i>[Signature]</i>
Mark Peterson	DEQ		<i>[Signature]</i>

3 SEGMENT Total Segment/Reach Length 650 m Segment/Reach Length Surveyed 650 m

Start GPS: LATITUDE ___ deg. ___ min. LONGITUDE ___ deg. ___ min. Datum: ___

End GPS: LATITUDE ___ deg. ___ min. LONGITUDE ___ deg. ___ min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp ___ Shelf ___ Manmade: Solid ___ Permeable ___ (type) ___ Wetland: Swamp ___ Bog/Fen ___ Marsh ___

Sediment Bank: Clay/Mud ___ Sand S Mixed P Pebble/Cobble S Boulder ___ Peat/Organic ___ Vegetated Bank: S Wooded Upland: S

Sediment Flat: Clay/Mud ___ Sand ___ Mixed/Coarse ___ Other: ___ If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: ___ Est Height ___ m canyon ___ manmade ___ meander ___ confined or leveed ___ Substrate Type: Sand

Sloped: ___ (>5°)(15°)(30°) straight ___ braided P oxbow ___ flood plain valley ___ Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m est. water depth: <1m 1-3m 3-10m >10m ___ m

shoal(s) present Y/N point bar present Y/N bar-shoal substrate: silt/sand/gravel/cobble/boulder/bedrock/debris

seasonal water level: low/near/bank full/overbank flow est. change over next 7 days: falling - same - rising

5 OPERATIONAL FEATURES Suitable backshore staging Y/N Access: Direct from backshore Y/N Alongshore from next segment Y/N

Debris Y/N oiled Y/N amount 100 bags or 100 trucks access restrictions

Oiled trees/shrubs Y/N River Current strong Y/N Other Features:

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)				
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO		
A				X	215	86	0															P	Sand
B				X	415	86	100%			S	P											P	Sand

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench - e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)					
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO				

8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Zone A - No further treatment

Zone B - Spontaneous ~~Recovery~~ Recovery areas of stand total debris vegetation

Opti can continue to treat Zone B per CTR

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

D13/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>D1</u>	Left Bank / Right Bank / Island	<u>2-9-11</u>	<u>1120</u> hrs to <u>1200</u> hrs	low - <u>near</u> - bankfull - overbank
Operations Division: <u>B</u>				falling <u>near</u> - rising
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /	<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm			Air Temp +/- <u>25</u> deg C

2 SURVEY TEAM # <u>3</u>	Name	Organization	Signature
	<u>Charles Pen</u>	<u>Canada ENVIRONMENTAL</u>	<u>Charles Pen</u>
	<u>Steve Opp</u>	<u>DEQ</u>	<u>Steve Opp</u>
	<u>TERRI HANER</u>	<u>U.S. EPA</u>	<u>Terri Haner</u>

3 SEGMENT Total Segment/Reach Length 785 m Segment/Reach Length Surveyed 785 m

Start GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min. Datum: _____

End GPS: LATITUDE _____ deg. _____ min. LONGITUDE _____ deg. _____ min.

4A RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE those OILED

Bedrock: Cliff/Ramp _____ Shelf _____ Manmade: Solid _____ Permeable _____ (type) _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

Sediment Bank: Clay/Mud _____ Sand S Mixed P Pebble/Cobble S Boulder _____ Peat/Organic _____ Vegetated Bank: S Wooded Upland S

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse _____ Other: _____ If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: _____ Est Height _____ m canyon _____ manmade _____ meander _____ confined or leveed _____ Substrate Type: S-1

Sloped: (>5°)(15°)(30°) straight _____ braided X oxbow _____ flood plain valley _____ Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 100m 120 est. water depth: <1m 1.3m 3-10m >10m _____ m

shoal(s) present N point bar present N bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / near / bank full / overbank flow est. change over next 7 days: falling near - same - rising

5 OPERATIONAL FEATURES Suitable backshore staging Y / N Access: Direct from backshore N Alongshore from next segment N

Debris: N oiled N amount _____ bags or _____ trucks access restrictions

Oiled trees/shrubs N River Current strong N Other Features:

6 SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zone/s that correspond to primary shoreline type

2049
2050

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)	
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO		
A					600	50	0														X	S-1
B					185	50	41				P						P					S-1

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench — e.g., "A1"

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER								WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)				
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR	NO									

8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Zone A - No o.i. observed
 Zone B - Less than 41 sites vis
 No further treatment

Sketch Yes / No Photos Yes / No Frames/Photographer: _____

9/2/2016

9-2-11

T-3

BM

B4

B04-RB

N45°41'41.28"

B01-LB

W108°38'13.92"

B1

B01-RB

W108°37'48"

005

ACTIVE LOG 022 ACTIVE LOG 023

ACTIVE LOG 005



B

A

© 2011 Google

45°41'37.81" N 108°38'05.33" W elev 3196 ft

4/30/2004 1996

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Appendix F

Completed SCAT Segment
Sign-Off Forms

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment ~~B4D~~ B01-LB Date of Survey 8-30-11
CR 4/31/11

Dates of Initial SCAT Assessments _____
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 20

Segment has been treated by Operations or an Operations Hotshot Team YES NO

Segment Assessment Complete¹

Partial Segment Assessment

The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.

This Segment is Conditionally Approved
(See attached Post Inspection Survey Transmittal (POST))

The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).

[Signature] GRIFF MILLER / EPA 8-31-11
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] TOM BOVINGTON / DEQ 8-31-11
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] Charles Pons / Corduro ENTRIX _____
Sign Name Print Name/ Affiliation Date
RP Representative (SCAT RP Representative)

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

¹ A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment BIR Date of Survey 9-2-11

Dates of Initial SCAT Assessments 19 JUL 11 (IC)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 9

Segment has been treated by Operations or an Operations Hotshot Team YES NO

Segment Assessment Complete¹

Partial Segment Assessment

The undersigned are in agreement that the above segment or partial segment meets the Approved Treatment Methods Target Endpoints.

This Segment is Conditionally Approved
(See attached Post Inspection Survey Transmittal (POST))

The undersigned are in agreement that the above segment meets the Approved Treatment Methods Target Endpoints conditional upon completion of the treatment identified in the attached Post Inspection Survey Transmittal (POST).

[Signature] TERRY TANNER / U.S. EPA 9/3/11
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] Steve Opp / DEQ 9/2/11
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] Charles Post / Cordus ENTRIX 9-2-11
Sign Name Print Name/ Affiliation Date
RP Representative (SCAT RP Representative)

Once all applicable SCAT Segments (i.e. LB, RB, and IS) within a particular SCAT Area (i.e. A21) have been successfully signed-off during a formal SCAT Assessment, the SCAT Area will achieve the Response Endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ.

¹ A Segment Sign-Off Assessment is considered complete when all accessible lands that have not already been signed-off by a claims liaison have been surveyed. If any previous SCAT Assessments were conducted, all lands that were originally recommended for treatment must be re-surveyed in the Sign-Off Assessment. If the conducted survey does not meet these conditions it is considered a Partial Assessment. Multiple Partial Assessments that meet the conditions of a Complete Assessment may together constitute a Complete Sign-Off Assessment.