

ExxonMobil Pipeline Company

**SCAT Area Transition Report
for A28**

Silvertip Pipeline Incident
Laurel, Montana

October 31, 2011



SCAT Area Transition Report for A28

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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 assessment surveys conducted to determine the extent of oiling along the riverbanks and floodplain within SCAT Area A28, 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 A28. 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 & Access Issues

Figure 1 provides an aerial map of SCAT Area A28, 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 A28 is 135.1. There were access issues associated with a portion of the right bank.

1.2 Cultural, Historic, and Natural Resource Constraints

No historic properties or cultural resources have been identified within this segment 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 A28. Four oiled Woodhouse's toads (*Bufo woodhousii*) and a Copper's hawk (*Accipiter cooperii*) were captured, cleaned, and released. A lightly oiled red-tailed hawk (*Buteo jamaicensis*) was observed flying in this area. One Woodhouse's toad was captured and taken to the Wildlife Recovery Center for an oiling evaluation, determined to be un-oiled, and released. Two deceased fish (unknown species) and a bird (unknown species) with no visible oiling were collected and retained. A spotted sandpiper (*Actitis macularius*) nest and a bald eagle (*Haliaeetus leucocephalus*) nest were identified on the island portion of Area A28. The appropriate buffer zone for nesting bald eagles, depending on the type of activity, was maintained around the nest. In addition, four large stick nests that did not appear to be active were observed on the right bank; these nests were monitored for activity and to prevent damage during operations.

Three Wildlife Priority Cleanup Areas (WPCAs) were identified, all of which consisted of woody debris piles with transferable oil. Two of the WPCAs were treated to reduce

the potential for wildlife oiling and are no longer considered a wildlife hazard. As treatment of the 3rd WPCA, the DNRC plans to burn the debris pile to consume the oil. Upon completion of the burn, the need for additional treatment will be evaluated.

An Exception Memo was drafted for sheen observed on several pools within Area 28. The Exception Memo was closed administratively after further investigation revealed that the sheen was not hydrocarbon or incident related.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area A28. The analytical results for the sample collected can be accessed through the SCRIBE database. The approximate locations of samples collected within Area A28 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	BIMT0709 DW201	09-Jul-11	Water_Drinking	BIMT_319_DW201	45.6981926	-108.6566467
CTEH	BIMT0712DW303	12-Jul-11	Water_Drinking	BIMT_356_DW303	45.694011	-108.650812
CTEH	BIMT0816S0501	16-Aug-11	Soil_River	50-A28R	45.686209	-108.643756
CTEH	BIMT0818DW104	18-Aug-11	Water_Drinking	BIMT_546_DW104	45.693842	-108.65161
CTEH	LAMT0804IW201	04-Aug-11	Water_Irrigation	LAMT_350_IW201	45.683058	-108.653024
CTEH	LAMT0822S0102	22-Aug-11	Soil_Surface	LAMT_552_S0102	45.694022	-108.647837
CTEH	LAMT0822S0103	22-Aug-11	Soil_Surface	LAMT_552_S0103	45.692368	-108.647423
CTEH	LAMT0825S0601	25-Aug-11	Soil_River	A28L	45.686996	-108.651084
MDEQ	ST-071411-KW1	14-Jul-11	Soil_Surface	ST-KW-01	45.6841	-108.65371
MDEQ	ST-071511-BH1	15-Jul-11	Soil_Surface	ST-BH-01	45.68365	-108.65304
MDEQ	ST-071511-BH2	15-Jul-11	Soil_Surface	ST-BH-02	45.68466	-108.6525
MDEQ	ST-071611-BK-DW1	16-Jul-11	Water_Drinking	ST-BK-01	45.68823	-108.65681
EPA	SP5E108_071311	13-Jul-11	Sediment	SP5E108	45.6868961	-108.6442521
EPA	SP5O117001_071311	13-Jul-11	Soil_Surface	SP5O117	45.6941235	-108.6520678
EPA	SP5O123001_071411	14-Jul-11	Soil_Surface	SP5O123	45.685152	-108.6495481
EPA	SP5W02_070411	04-Jul-11	Water_Surface	SP5W02R	45.6870286	-108.6439241
EPA	SP5W98_070411	04-Jul-11	Water_Surface	SP5W98	45.6870286	-108.6439241

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, three exceedances are shown: one for selenium, one for vanadium, 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 A28 are included in Appendix B. Figure 4 provides the

maximum oiling zones observed by the SCAT team during the initial surveys of Area A28.

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 of Area A28 ([CTR No. 15](#), [CTR No. 40](#), and [CTR No. 63](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area A28 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 A28 and developed a Pre-Inspection Survey Transmittal (PIST) associated with the left and right banks within Area A28, 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 A28 and developed a Post Inspection Survey Transmittal (POST) associated with the right bank within Area A28, which is presented in Appendix D.

1.9 Summary of Final SCAT Surveys

Figure 5 shows the oiling conditions within Area A28 following completion of oil removal activities. The SCAT team performed reassessments of the left bank, right bank, and island within SCAT Area A28 to confirm the agreed-upon cleanup endpoints identified in the applicable CTRs had been achieved. The SCAT reassessment documentation is presented in Appendix E.

1.10 SCAT Area Conclusions

Based on the initial SCAT survey performed on the right bank, no oil was observed on a portion of the segment. Based on the final SCAT surveys performed on the remainder of the right bank, left bank, and island within Area A28, no further treatment is recommended for these segments. SCAT Area Sign-Off Forms are included as Appendix F.

A Wildlife Exception Memo was created to identify wildlife hazards in Area A28. Two of the areas identified in the Wildlife Exception Memo, labeled A28IS Debris Piles and Pools, were treated and are no longer considered a wildlife hazard. The third area, labeled A-28 Island (emergent) is scheduled to be burned by the DNRC. Upon completion of the burn, the need for additional treatment will be evaluated.

Another Exception Memo, labeled A-28 and A-29 Pools, was created for sheen on several pools; the Exception Memo was closed administratively after further investigation revealed that the sheen was not hydrocarbon or incident related. No additional work is required in this area. Details of the Exception Memos are described in Appendix G.



**SCAT Area Transition
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Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for A28

Prepared for:

Unified Command

Date

Unified Command – RP



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SCAT Area Transition Report for A28

Prepared for:

Unified Command

Date

Unified Command – FOSC



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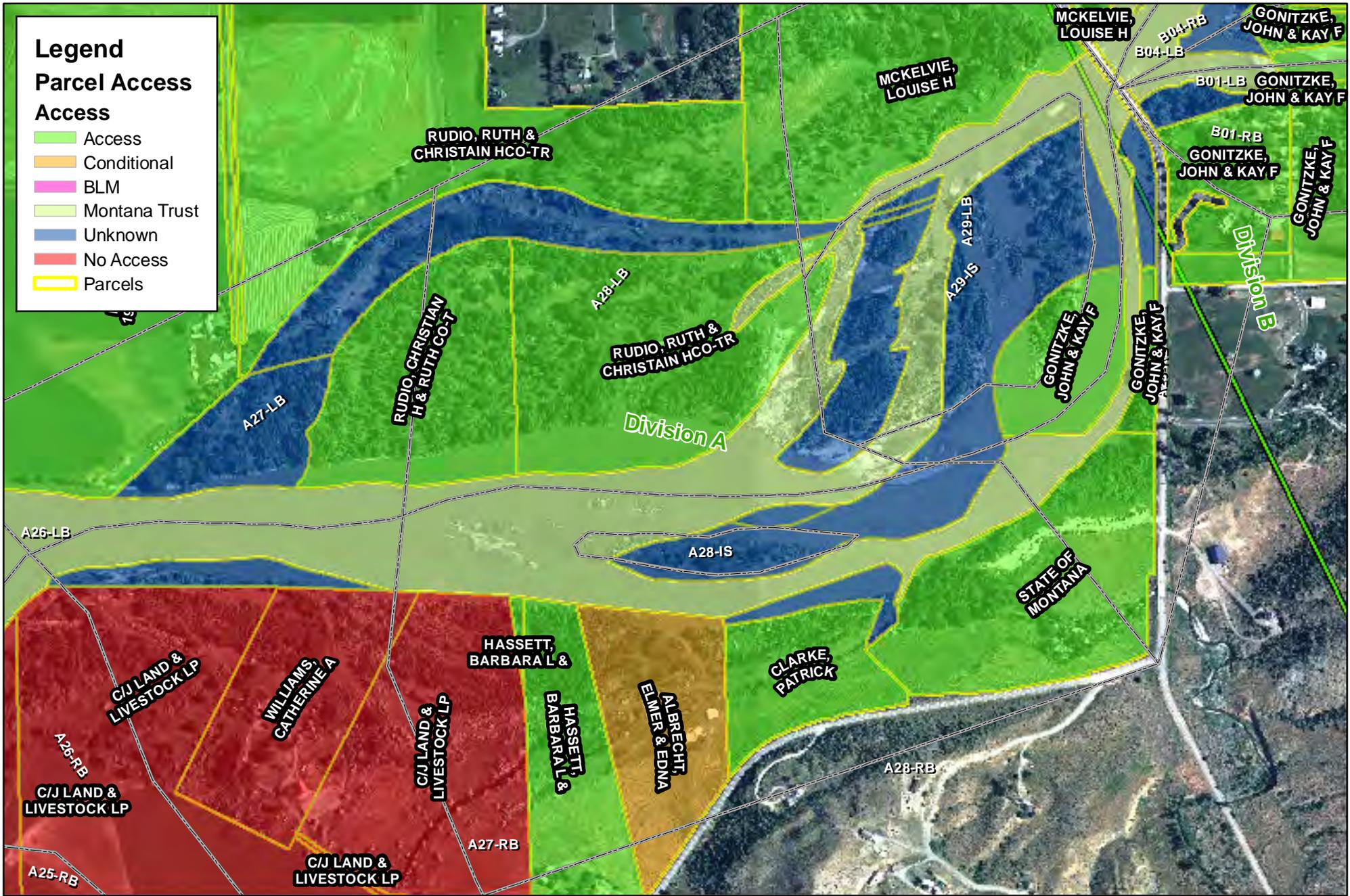
SCAT Area Transition Report for A28

Prepared for:

Unified Command

Date

Unified Command – MDEQ



Legend

Parcel Access

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

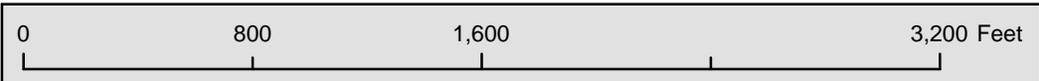


Figure 1

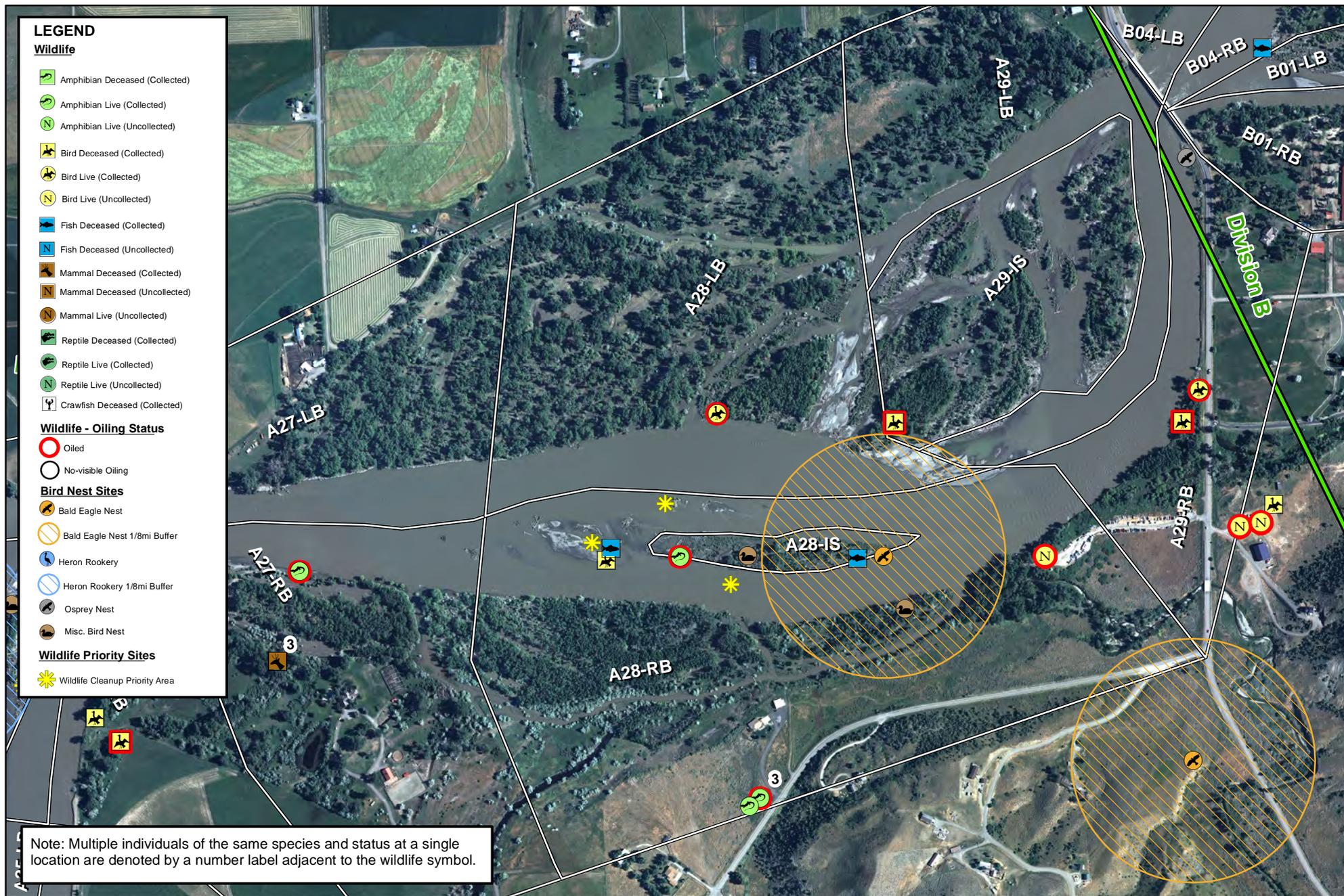
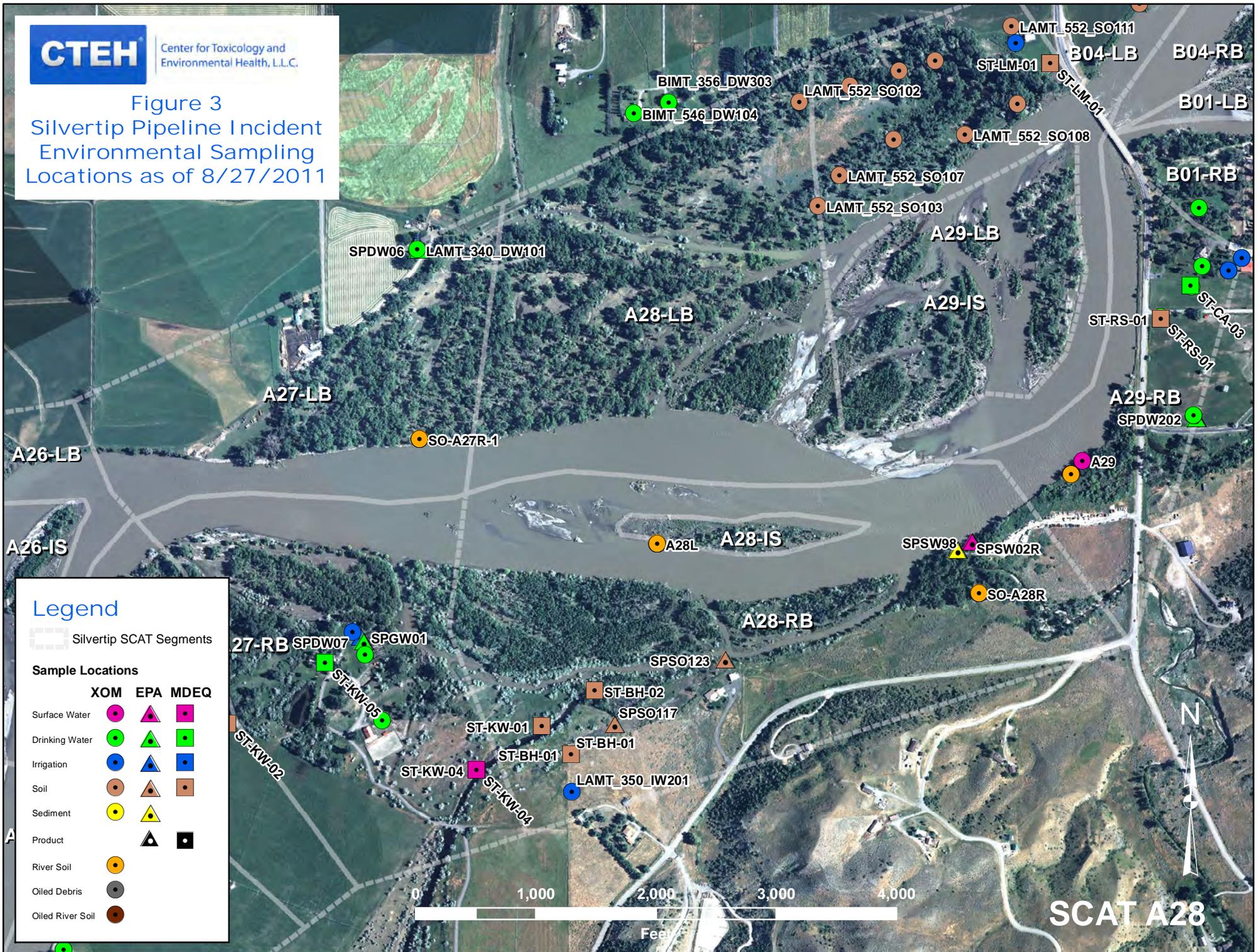


Figure 2
Wildlife Resources

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



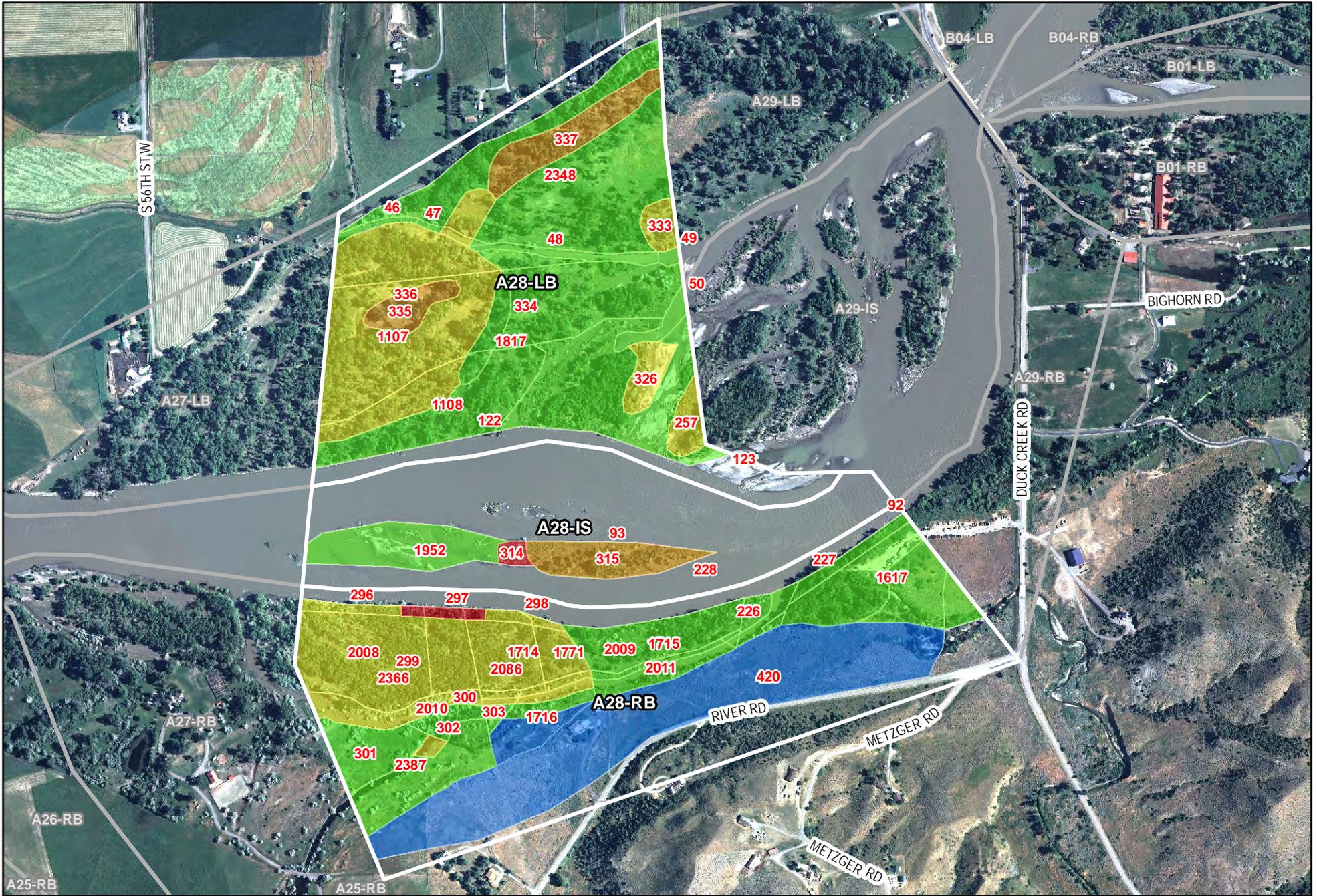
Legend

Silvertip SCAT Segments

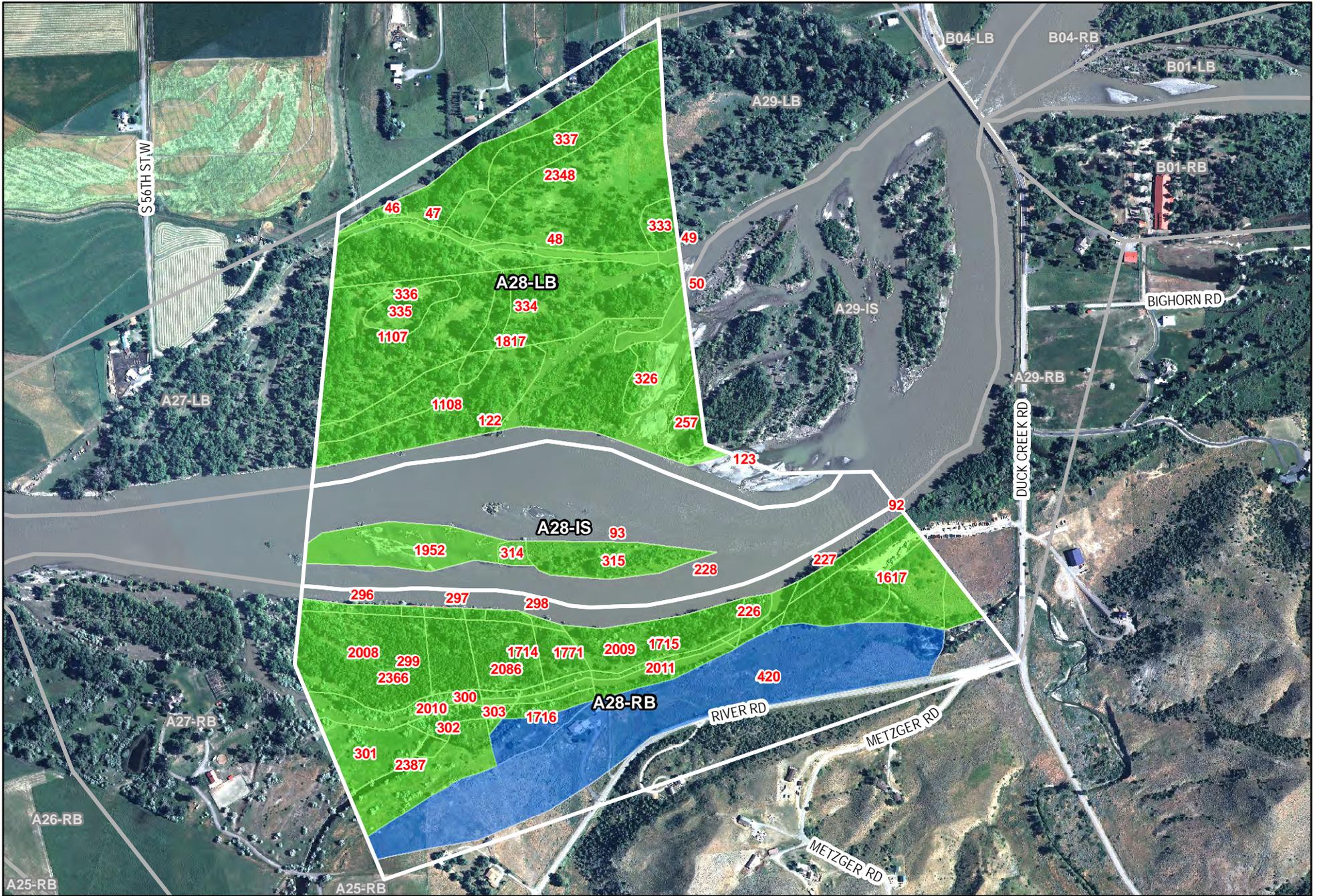
Sample Locations

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

SCAT A28



 <p>9999 Oiling Zone ID  Heavy Oiling  Moderate Oiling</p>	<p> Light Oiling  Very Light Oiling  No Oil Observed</p>	<p>Figure 4 - Maximum SCAT Observations For SCAT Area: A28</p> <p>550 0 550 1,100 Feet</p>	
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<p>↑ 9999 Oiling Zone ID</p> <p>● Heavy Oiling</p> <p>● Moderate Oiling</p>	<p>● Light Oiling</p> <p>● Very Light Oiling</p> <p>● No Oil Observed</p>	<p>Figure 5 - Final SCAT Observations</p> <p>For SCAT Area: A28</p> <p>550 0 550 1,100 Feet</p>	<p>A28 POLARIS APPLIED SCIENCES, INC.</p>
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Appendix A

Sample Detection Summary



Detections in Samples Collected in SCAT Area A28

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 6010	Arsenic	Y	3.5	40		mg/kg	no
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 6010	Barium	Y	116	820		mg/kg	no
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 6010	Cadmium	Y	0.33	3.8		mg/kg	no
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 6010	Chromium	Y	11.3	280		mg/kg	no
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 6010	Lead	Y	16.4	400		mg/kg	no
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 9060	Mean Total Organic Carbon	Y	29000	NA		mg/kg	no
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 6010	Nickel	Y	12.6	150		mg/kg	no
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 9060	RSD%	Y	7.7	NA		%	no
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 6010	Selenium	Y	2	2.6		mg/kg	no
BIMT0816SO501	08/16/2011	Field	Soil_River	MADEP EPH	Total Extractable Hydrocarbons	Y	30.1	200		mg/kg	no
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 9060	Total Organic Carbon	Y	31200	NA		mg/kg	no
BIMT0816SO501	08/16/2011	Field	Soil_River	EPA 6010	Vanadium	Y	20.7	39		mg/kg	no
LAMT0822SO102	08/22/2011	Field	Soil_Surface	EPA 6010	Arsenic	Y	6.1	40		mg/kg	no
LAMT0822SO102	08/22/2011	Field	Soil_Surface	EPA 6010	Barium	Y	113	820		mg/kg	no
LAMT0822SO102	08/22/2011	Field	Soil_Surface	EPA 6010	Cadmium	Y	0.22	3.8		mg/kg	no
LAMT0822SO102	08/22/2011	Field	Soil_Surface	EPA 6010	Chromium	Y	18.9	280		mg/kg	no
LAMT0822SO102	08/22/2011	Field	Soil_Surface	EPA 6010	Lead	Y	13.6	400		mg/kg	no
LAMT0822SO102	08/22/2011	Field	Soil_Surface	EPA 7471	Mercury	Y	0.034	1		mg/kg	no
LAMT0822SO102	08/22/2011	Field	Soil_Surface	EPA 6010	Nickel	Y	15	150		mg/kg	no
LAMT0822SO102	08/22/2011	Field	Soil_Surface	EPA 6010	Selenium	Y	0.92	2.6		mg/kg	no
LAMT0822SO102	08/22/2011	Field	Soil_Surface	EPA 6010	Vanadium	Y	31.7	39		mg/kg	no
LAMT0822SO103	08/22/2011	Field	Soil_Surface	EPA 6010	Arsenic	Y	2.6	40		mg/kg	no
LAMT0822SO103	08/22/2011	Field	Soil_Surface	EPA 6010	Barium	Y	45.3	820		mg/kg	no
LAMT0822SO103	08/22/2011	Field	Soil_Surface	EPA 6010	Cadmium	Y	0.078	3.8		mg/kg	no
LAMT0822SO103	08/22/2011	Field	Soil_Surface	EPA 6010	Chromium	Y	7.5	280		mg/kg	no
LAMT0822SO103	08/22/2011	Field	Soil_Surface	EPA 6010	Lead	Y	5.4	400		mg/kg	no
LAMT0822SO103	08/22/2011	Field	Soil_Surface	EPA 7471	Mercury	Y	0.032	1		mg/kg	no
LAMT0822SO103	08/22/2011	Field	Soil_Surface	EPA 6010	Nickel	Y	6.4	150		mg/kg	no
LAMT0822SO103	08/22/2011	Field	Soil_Surface	EPA 6010	Vanadium	Y	12.4	39		mg/kg	no
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 6010	Arsenic	Y	8.3	40		mg/kg	no
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 6010	Barium	Y	156	820		mg/kg	no



Detections in Samples Collected in SCAT Area A28

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
LAMT0825SO601	08/25/2011	Field	Soil_River	MADEP VPH	Benzene	Y	0.036	0.04		mg/kg	no
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 6010	Cadmium	Y	0.22	3.8		mg/kg	no
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 6010	Chromium	Y	23.3	280		mg/kg	no
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 6010	Lead	Y	20.4	400		mg/kg	no
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 9060	Mean Total Organic Carbon	Y	1460	NA		mg/kg	no
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 6010	Nickel	Y	15.8	150		mg/kg	no
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 9060	RSD%	Y	19.8	NA		%	no
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 6010	Selenium	Y	2.8	2.6		mg/kg	YES
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 9060	Total Organic Carbon	Y	1720	NA		mg/kg	no
LAMT0825SO601	08/25/2011	Field	Soil_River	EPA 6010	Vanadium	Y	45.4	39		mg/kg	YES
ST-071411-KW1		Field	Soil_Surface	8260B	1,2-Dichloroethane-d4	Y	74	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8270C	2,4,6-Tribromophenol	Y	79	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8270C	2-Fluorobiphenyl	Y	76	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8260B	Dibromofluoromethane	Y	85	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8270C	Nitrobenzene-D5	Y	74	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8270C	o-Fluorophenol	Y	75	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8015M-MDEQ-REM	o-Terphenyl	Y	86	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8260B	p-Bromofluorobenzene	Y	84	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8270C	Phenol-d5	Y	74	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8270C	Terphenyl-d14	Y	79	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8260B	Toluene-d8	Y	94	NA		%	no
ST-071411-KW1		Field	Soil_Surface	8015M-MDEQ-REM	Total Extractable Hydrocarbons	Y	29	200		mg/kg	no
ST-071511-BH1		Field	Soil_Surface	8260B	1,2-Dichloroethane-d4	Y	84	NA		%	no
ST-071511-BH1		Field	Soil_Surface	8270C	2,4,6-Tribromophenol	Y	71	NA		%	no
ST-071511-BH1		Field	Soil_Surface	8270C	2-Fluorobiphenyl	Y	68	NA		%	no
ST-071511-BH1		Field	Soil_Surface	8260B	Dibromofluoromethane	Y	90	NA		%	no
ST-071511-BH1		Field	Soil_Surface	8270C	Nitrobenzene-D5	Y	67	NA		%	no
ST-071511-BH1		Field	Soil_Surface	8270C	o-Fluorophenol	Y	66	NA		%	no
ST-071511-BH1		Field	Soil_Surface	8015M-MDEQ-REM	o-Terphenyl	Y	95	NA		%	no
ST-071511-BH1		Field	Soil_Surface	8260B	p-Bromofluorobenzene	Y	99	NA		%	no
ST-071511-BH1		Field	Soil_Surface	8270C	Phenol-d5	Y	71	NA		%	no



Detections in Samples Collected in SCAT Area A28

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
ST-071511-BH1		Field	Soil_Surface	8270C	Terphenyl-d14	Y	74	NA		%	no
ST-071511-BH1		Field	Soil_Surface	8260B	Toluene-d8	Y	93	NA		%	no
ST-071511-BH1		Field	Soil_Surface	8015M-MDEQ-REM	Total Extractable Hydrocarbons	Y	97	200		mg/kg	no
ST-071511-BH2		Field	Soil_Surface	8260B	1,2-Dichloroethane-d4	Y	68	NA		%	no
ST-071511-BH2		Field	Soil_Surface	8270C	2,4,6-Tribromophenol	Y	78	NA		%	no
ST-071511-BH2		Field	Soil_Surface	MA-EPH-MDEQ-REM	2-Bromonaphthalene	Y	75	NA		%	no
ST-071511-BH2		Field	Soil_Surface	MA-EPH-MDEQ-REM	2-Fluorobiphenyl	Y	77	NA		%	no
ST-071511-BH2		Field	Soil_Surface	8270C	2-Fluorobiphenyl	Y	77	NA		%	no
ST-071511-BH2		Field	Soil_Surface	MA-EPH-MDEQ-REM	C11-C22 Aromatics	Y	72	400		mg/kg	no
ST-071511-BH2		Field	Soil_Surface	MA-EPH-MDEQ-REM	C19-C36 Aliphatics	Y	81	20000		mg/kg	no
ST-071511-BH2		Field	Soil_Surface	MA-EPH-MDEQ-REM	C9-C18 Aliphatics	Y	23	200		mg/kg	no
ST-071511-BH2		Field	Soil_Surface	8260B	Dibromofluoromethane	Y	75	NA		%	no
ST-071511-BH2		Field	Soil_Surface	8270C	Nitrobenzene-D5	Y	74	NA		%	no
ST-071511-BH2		Field	Soil_Surface	MA-EPH-MDEQ-REM	Octadecane, 1-chloro-	Y	89	NA		%	no
ST-071511-BH2		Field	Soil_Surface	8270C	o-Fluorophenol	Y	66	NA		%	no
ST-071511-BH2		Field	Soil_Surface	MA-EPH-MDEQ-REM	o-Terphenyl	Y	86	NA		%	no
ST-071511-BH2		Field	Soil_Surface	8260B	p-Bromofluorobenzene	Y	84	NA		%	no
ST-071511-BH2		Field	Soil_Surface	8270C	Phenol-d5	Y	70	NA		%	no
ST-071511-BH2		Field	Soil_Surface	8270C	Terphenyl-d14	Y	74	NA		%	no
ST-071511-BH2		Field	Soil_Surface	8260B	Toluene-d8	Y	79	NA		%	no
ST-071511-BH2		Field	Soil_Surface	MA-EPH-MDEQ-REM	Total Extractable Hydrocarbons	Y	234	200		mg/kg	YES
ST-071611-BK-DW1		Field	Water_Drinking	524.2	1,2-Dichloroethane-d4	Y	104	NA		%	no
ST-071611-BK-DW1		Field	Water_Drinking	525.2	2-Nitro-M-Xylene	Y	98	NA		%	no
ST-071611-BK-DW1		Field	Water_Drinking	8015M-MDEQ-REM	o-Terphenyl	Y	84	NA		%	no
ST-071611-BK-DW1		Field	Water_Drinking	524.2	p-Bromofluorobenzene	Y	110	NA		%	no
ST-071611-BK-DW1		Field	Water_Drinking	525.2	Perylene-d12	Y	89	NA		%	no
ST-071611-BK-DW1		Field	Water_Drinking	525.2	Pyrene-d10	Y	104	NA		%	no
ST-071611-BK-DW1		Field	Water_Drinking	524.2	Toluene-d8	Y	110	NA		%	no
ST-071611-BK-DW1		Field	Water_Drinking	525.2	Triphenyl phosphate	Y	94	NA		%	no



Detections in Samples Collected in SCAT Area A28

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
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Appendix B

Initial SCAT Survey Forms
and Sketches

DB/A

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 11-Jul-2011	Time (24h): std / daylight 1149 hrs to 1150 hrs	Water Level low - mean - bankfull - <u>overbank</u> <u>falling</u> - steady - rising
Segment/Reach ID: A28 Left Bank / <u>Right Bank</u> / Island				
Operations Division: A				
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>29.4</u> deg C

2 SURVEY TEAM # 2 & 4	name	organization	contact phone number
Andrew Milanes		Polaris	
Tom Freeman		Polaris	
Andrew Johnson		USCG	
Travis Olson		USCG	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 147 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 _____ Mixed S _____ Pebble/Cobble S _____ Boulder _____ Peat/Organic _____ Vegetated Bank: P 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: mixed

Sloped: _____ (>5°)(15°)(30°) straight φ 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 110m 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 1 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

92

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		147	1	95			X	X		X									Grass, trees, 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					NO

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

Zone A Oiled Band Height: 15cm

Due to survey platform (jet-drive boat) oil band width and heights are estimates. Unable to verify by foot.

Cleanup Recommendations: Trim oiled vegetation; wipe large oiled debris; remove small oiled debris; wipe oiled trees

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

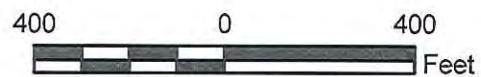
Sketch (Yes/No) Photos (Yes/No) (Roll # _____ Frames _____) Video Tape Yes/No (tape# _____)



SCAT Teams 2 & 4 Survey

Segment A28 Right Bank

11-Jul-2011



Legend

←→ Oil Zones

— Segment Boundaries

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 15-Jul-2011	Time (24h): std / daylight 0927 hrs to 0929 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: A28 Left Bank / <u>Right Bank</u> / Island				
Operations Division: A				

Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____ Sun / Clouds / Fog / Rain / Snow / Windy / Calm Air Temp +/- 32 deg C

2 SURVEY TEAM # 1 & 2	name	organization	contact phone number
Andrew Milanes <u>ANM</u>		Polaris	
Tom Freeman <u>TF</u>		Polaris	
Bruce Kvam <u>EBK</u>		Polaris	
Pete Lee <u>PBL</u>		Polaris	
Travis Olson		USCG	
Aaron Anderson <u>A</u>		MTDEQ	406-841-5049
Darrick Turner		MTDEQ	406-444-1504

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 870 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 _____ Mixed S _____ Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: P 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: mixed
 Sloped: (>5°)(15°)(30°) straight P braided S oxbow _____ flood plain valley _____ Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 117m 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 _____ 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	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC			SR	AP	NO
	m	m	%																			
<u>226</u> <u>227</u> A			X		786	1	75			X	X		X									Grass, trees
B			X		84	1	75			X	X		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	OILED ZONE	SUBSURFACE OIL CHARACTER								WATER TABLE	SHEEN COLOUR	CLEAN BELOW	SUBST. TYPE(S)					
	MS	LB	UB	OB			cm	cm-cm	SAP	OP	PP	OR	OF	TR					NO	cm	B, R, S, N	Yes / No	

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

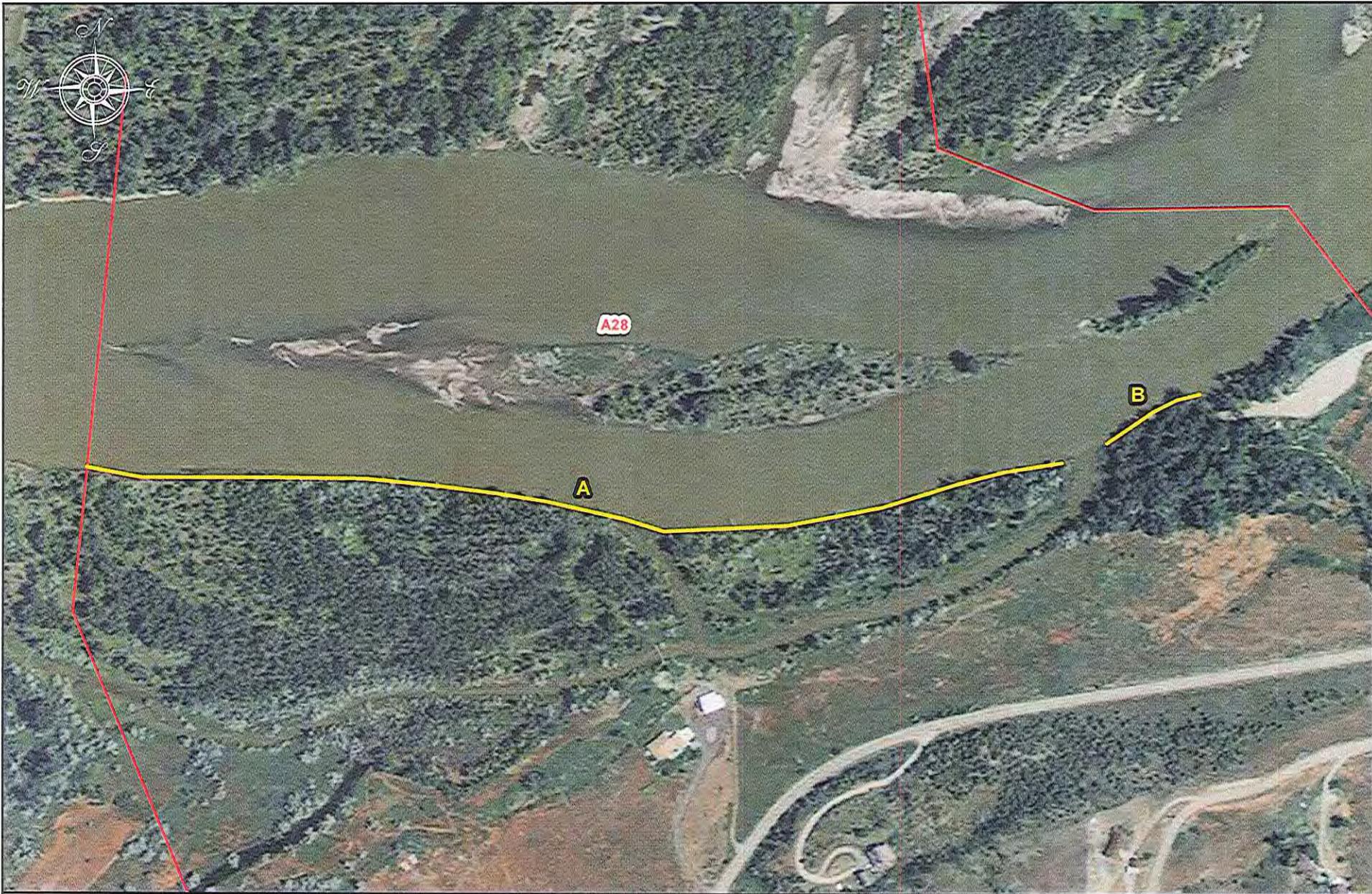
Oil band heights: Zones A & B - 30cm

Survey of the main channel shoreline performed by jet boat. Additional surveys of the overbank will be required.

Treatment Recommendations:
 Zones A, B: Cut & remove oil coated vegetation smaller than 1" diameter. Wipe larger oil coated vegetation.

*Refer to current approved treatment methods #1 (Cutting of Vegetation).

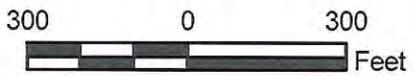
Sketch Yes / No Photos Yes / No Photo Numbers 4111-4127 (Milanes)



SCAT Teams 1 & 2 Survey

Segment A28 - Right Bank

15 July 2011



Legend

- Segment Boundaries
- ▭ Oiling Zones

DB / G

CRM 7/13/11

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>A28</u> Left Bank / <u>Right Bank</u> / Island		<u>17/07/11</u>	<u>1045</u> hrs to <u>1559</u> hrs	low - mean <u>bankfull</u> - overbank
Operations Division: <u>A</u>				falling - steady - rising
Survey by: <u>(Foot) / ATV / Boat / Helicopter / Overlook /</u>		<u>(Sun)</u> Clouds / Fog / Rain / Snow / <u>(Windy)</u> / Calm		Air Temp + / - <u>30</u> deg C

2 SURVEY TEAM #	name	organization	contact phone number
<u>1</u>	<u>Chelsea Murphy</u>	<u>Cardno ENTRIX</u>	<u>775-313-3976</u>
<u>2</u>	<u>Joe Boyle</u>	<u>Cardno ENTRIX</u>	<u>386-214-6858</u>
<u>3</u>	<u>Bob Reil</u>	<u>MT DEP</u>	<u>208-871-8274</u>
<u>4</u>	<u>John Beach</u>	<u>EPA</u>	<u>707-304-0491</u>
<u>5</u>	<u>Gary Riley</u>	<u>EPA</u>	<u>415-215-0690</u>

3 SEGMENT Total Segment/Reach Length 1100 m Segment/Reach Length Surveyed 3900 m ^{CRM 7/13/11} 2500

Start GPS: LATITUDE 45.6860 deg. min. LONGITUDE 108.4544 deg. min. Datum: WGS 84

End GPS: LATITUDE 45.6857 deg. min. LONGITUDE 108.6495 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 Mixed Pebble/Cobble Boulder Peal/Organic Vegetated Bank: (P) Wooded Upland:

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 5 m canyon manmade meander S confined or leveed Substrate Type: MUD

Sloped: (S) (>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) 240 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 trucks access restrictions Private Property - Not suitable access

Oiled trees/shrubs Y/N River Current strong Y/N Other Features: for heavy equipment - OK for hand crew

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

296
297
298
299
300
301

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			S	P	<u>200</u>	<u>20</u>	<u>5</u>			P			P									veg/mud
B			S	P	<u>150</u>	<u>20</u>	<u>15</u>		P	S			P									"
C			S	P	<u>190</u>	<u>20</u>	<u>5</u>			P			P									"
D			S	P	<u>580</u>	<u>170</u>	<u>3</u>		S	P			P									"
E			S	P	<u>780</u>	<u>30</u>	<u>1</u>		S	P	S		P									"
F			S	P	<u>175</u>	<u>45</u>	<u>0</u>														P	"

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 Treatment - handcrew removal of small debris and cut + removal of grasses that are oiled to a thickness of at least a coat. Hotspots should be focused on 1st.

Zone B Same Recommendations as Zone A. Hotspot ① 45.68644, 108.65320 - covered debris + grass - more dense than rest of zone.

Zone C Same recommendations as zone A - Hotspot ① 45.68623, 108.65115 oiled small debris + veg ~20'x20' area.

Zone D Focus on hot spots 1st - Same as zone A - Hotspot ① 45.68552, 108.65209 debris w/oil Hotspot ② - 45.68610, 108.65336 - ditch, ~2m x 40m - oiled debris + sediment

Zone E Same as zone A - No removal of bank stabilizing veg. Zone F - NFT

(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 # _____)

Pic #'s: 59-77

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>17/07/11</u>	Time (24h): std / daylight <u>1045</u> hrs to <u>1559</u> hrs	Water Level low - mean <u>(bankfull)</u> overbank <u>(falling)</u> - steady - rising
Segment/Reach ID: <u>A2B</u> Left Bank/ <u>(Right Bank)</u> / Island				
Operations Division: <u>A</u>				Air Temp +/- <u>30</u> deg C
Survey by: <u>(Foot)</u> / ATV / Boat / Helicopter / Overlook /		<u>(Sun)</u> / Clouds / Fog / Rain / Snow / <u>(Windy)</u> / Calm		

2 SURVEY TEAM #	name	organization	contact phone number
<u>Chelsea Murphy</u>	<u>Chelsea Murphy</u>	<u>Cardno ENTRIX</u>	<u>775-313-3976</u>
<u>Joe Boyle</u>	<u>Joe Boyle</u>	<u>Cardno ENTRIX</u>	<u>386-214-6858</u>
<u>Bob Roll</u>	<u>Bob Roll</u>	<u>MT DEP</u>	<u>208-871-8274</u>
<u>John Beach</u>	<u>John Beach</u>	<u>EPA</u>	<u>207-364-0491</u>
<u>Gary Riley</u>	<u>Gary Riley</u>	<u>EPA</u>	<u>415-215-0690</u>

3 SEGMENT Total Segment/Reach Length 1100 m Segment/Reach Length Surveyed 3900 m

Start GPS: LATITUDE 45.68600 deg. min. LONGITUDE 108.65664 deg. min. Datum: WGS 84

End GPS: LATITUDE 45.68517 deg. min. LONGITUDE 108.64933 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 ___ Mixed ___ Pebble/Cobble ___ Boulder ___ Peat/Organic ___ Vegetated Bank: (P) Wooded Upland: ___

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 (S) confined or leveed ___ Substrate Type: (MUD)

Sloped (S) (>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) 240 m 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 / mean / bank full / overbank flow est. change over next 7 days: (falling) - same - rising

5 OPERATIONAL FEATURES

Suitable backshore staging (N) Access: Direct from backshore (N) Alongshore from next segment (N)

Debris: (N) oiled (N) amount ___ bags or ___ trucks access restrictions Private Property - dense veg.

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS										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	
<u>A</u>								<u>CR</u>	<u>17/07/11</u>													
<u>G</u>				<u>P</u>	<u>35</u>	<u>35</u>	<u>1</u>			<u>P</u>												<u>mud/veg</u>
<u>H</u>		<u>P</u>	<u>S</u>	<u>S</u>	<u>600</u>	<u>20</u>	<u>1</u>			<u>S</u>	<u>P</u>	<u>S</u>	<u>P</u>									<u>"</u>

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

Zone G | Hand Removal + cutting of veg - recommended

Zone H | NFT recommended - most oil observed on lower bank on channel (side channel) - workers would cause more harm by removing stabilizing 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 # ___)

PIC # 59-77

DB/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>A28</u> Left Bank / <u>Right Bank</u> / Island		<u>21/07/11</u>	<u>1248</u> hrs to <u>1314</u> hrs	low - mean - <u>bankfull</u> - overbank
Operations Division: <u>A</u>				<u>falling</u> - steady - rising
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		<u>Sun</u> Clouds / Fog / Rain / Snow / <u>Windy</u> / Calm		Air Temp +/- <u>24</u> deg C
2 SURVEY TEAM # <u>10</u>	name	organization	contact phone number	
	<u>Chelsea Murphy</u>	<u>Cardno ENTRIX</u>	<u>775-313-3976</u>	
	<u>Josh Rodgers</u>	<u>USCG PAC STRIKE</u>	<u>727 244-8292</u>	
	<u>Steve Kennedy</u>	<u>Cardno ENTRIX</u>	<u>281 723-1259</u>	
	<u>Derrick Turner</u>	<u>MIT DEC</u>	<u>402 424-1529</u>	

3 SEGMENT	Total Segment/Reach Length <u>1050</u> m	Segment/Reach Length Surveyed <u>1050</u> m
Start GPS: LATITUDE <u>45.0825</u> deg. _____ min.	LONGITUDE <u>108.6550</u> deg. _____ min.	Datum: <u>WGS 84</u>
End GPS: LATITUDE <u>45.08692</u> deg. _____ min.	LONGITUDE <u>108.6428</u> 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 <u>S</u> Sand _____ Mixed _____	Pebble/Cobble _____ Boulder _____ Peat/Organic _____	Vegetated Bank: <u>P</u> _____	Wooded Upland: _____
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 <u>S</u> confined or leveed _____	Substrate Type: <u>mud</u>		
Sloped: <u><5°</u> (>5°) (15°) (30°)	straight _____ braided <u>P</u> oxbow _____ flood plain valley _____	Forested/ <u>Vegetated</u> / Bare		

4C RIVER CHANNEL CHARACTER		circle or select as appropriate
est. width: <1m 1-10m 10-100m <u>>100m</u> <u>200</u> m	est. water depth: <1m 1-3m <u>8-10</u> m >10m _____ m	
shoal(s) present <u>Y</u> <u>N</u> point bar present <u>Y</u> <u>N</u>	bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris	
seasonal water level: low / mean / <u>bank full</u> / <u>overbank flow</u>	est. change over next 7 days: <u>falling</u> - same - rising	

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

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
<u>A</u>				<u>P</u>	<u>1050</u>	<u>10</u>	<u>Ø</u>													<u>P</u>	<u>veg</u>

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

Recommendation Zone A - NOO, NFT

(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 # _____)

22 August 2011

Team # 4

A28 (part) RESCAT

Yvels GAOURESA, Polaris

A28

NFT

Albrecht, E

A

CLARKE, P

River Rd

Lara Dr

Image © 2011 DigitalGlobe

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8/2011
0/8/2011
8/2011

20 August A28
Team #5

A28

A - NFT

B - Continue
GTR

113
20-AUG-11 15:02:03
ACTIVE LOG 003

111 111
20-AUG-11 12:36:23
ACTIVE LOG 003

C
N00

112 112
043

© 2011 Google

Image © 2011 DigitalGlobe

1996

45°41'08.09"N 108°38'57.47"W elev. 977 m

Metzger Rd

D B/G

1 GENERAL INFORMATION		Date (09/01/11)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A28	Left Bank / Right Bank / Island			low - mean - bankfull - overbank
Operations Division: A			115 hrs to 1515 hrs	falling - steady - rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- 6.5 F deg C	

2 SURVEY TEAM # 2	Name	Organization	Signature
David Eric Harlow		Cardno ENTRIX	<i>David Eric Harlow</i>
Pete Lee		Polaris	<i>Pete Lee</i>
Stephen Ball		EPA	<i>Stephen Ball</i>
Larry Alheim		DEQ	<i>Larry Alheim</i>
Daryl Reed		DEQ	<i>Daryl Reed</i>

3 SEGMENT Total Segment/Reach Length 1100 m Segment/Reach Length Surveyed 1100 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 x Mixed Pebble/Cobble x 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 x braided oxbow flood plain valley x 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 / 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 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	208	180	1-5			S	P						X				Debris piles, shrubs, trees
B				x	820	120	<1				P						X				Debris piles, shrubs, and trees
C			x		390	30	5			S	P						X				Grass, shrubs
D			x		318	30	<1			S	P						X				Grass, shrubs

2008
2009
2010
2011

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				

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

RESCAT on property with claim issues on upstream portion. Remainder of segment treated by Ops. Upstream end of unit is Duck Creek Ops center.

Zone A: Williams property. 1-5% Stain and coat, tar. Slightly transferable. Two areas (3m x 3m) with heavier coat in debris piles located at points 6 and 7. ATM #1 and ATM #2.

Zone B: Area treated by Ops. Trace distribution of stains on down wood and trunks. One small area near Duck Creek Boat Launch needs treatment-area flagged with pink flagging. Otherwise NFT. ATM #1 and ATM #2.

Zone C: Inland side of canal not treated by Ops. 5% Stain and coat, tar, located along upper bank. Cut oiled vegetation up to 1 inch in diameter. Remove oiled debris less than 4 inches. ATM #1 and ATM #2.

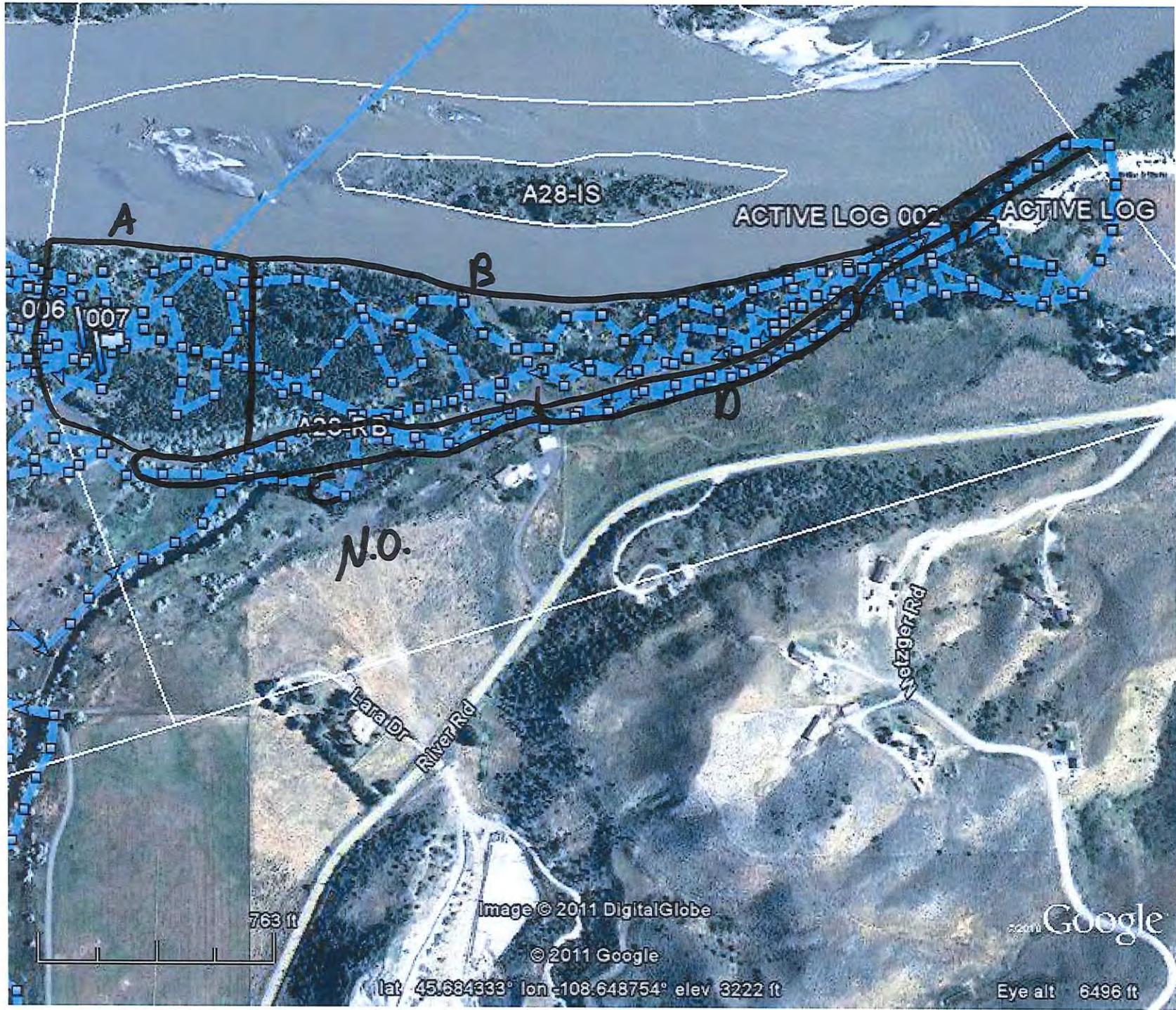
Zone D: Inland side of canal treated by Ops. 1% stain and coat, tar, located along upper bank. NFT.

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

A28 RB

9/11/11

Team Z



DB/G/Sc

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 09-Jul-2011	Time (24h): std / daylight 1019 hrs to 1030 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: A28 <u>Left Bank</u> / Right Bank / Island		Operations Division: A		
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>29.4</u> deg C

2 SURVEY TEAM # 2 & 4	name	organization	contact phone number
Andrew Milanes		Polaris	
Tom Freeman		Polaris	
Andrew Johnson		USCG	
Travis Olson		USCG	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 747 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 _____ Mixed S _____ Pebble/Cobble S _____ Boulder _____ Peat/Organic _____ **Vegetated Bank:** P **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: mixed

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 _____ 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 N

Debris: Y/N oiled Y/N amount _____ 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	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					150																X	Grass, trees, debris
B				X	20	5	<1				X		X									trees
C					360																X	Grass, trees, debris
D			X	40	247	1	25				X		X									Grass, trees
E			X		177	1	25				X		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

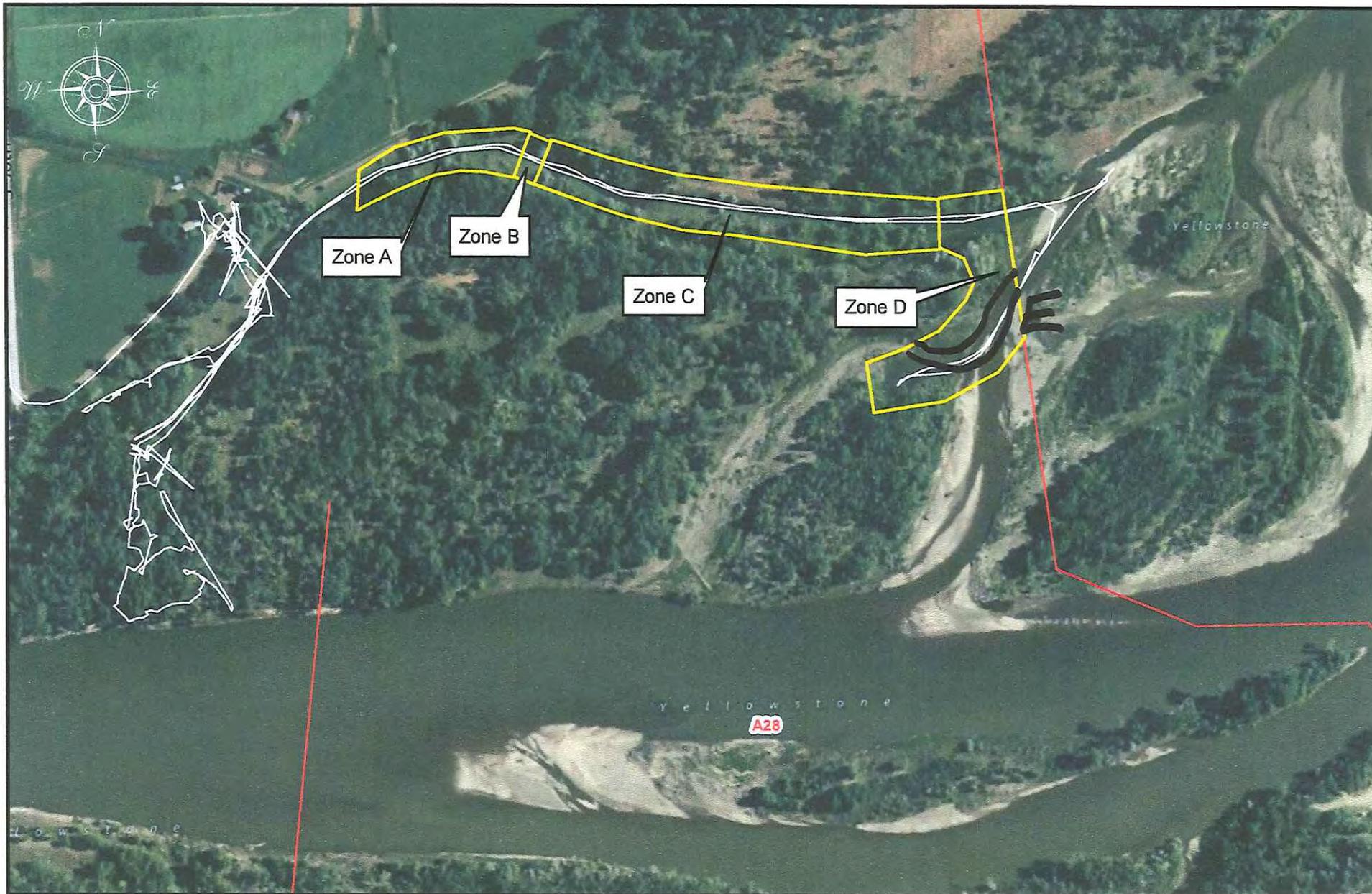
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Zone B Oiled Band Height: 10cm
 Zone D Oiled Band Height: 20cm

Cleanup Recommendations: No Further Treatment

(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 # _____)



SCAT Teams 2 & 4 Survey

Segment A28

09-Jul-2011



Legend

 GPS Track

DB/G/sc

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 11-Jul-2011	Time (24h): std / daylight 1042 hrs to 1043 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: A28 <u>Left Bank / Right Bank / Island</u>				
Operations Division: A				
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook / _____		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>29.4</u> deg C

2 SURVEY TEAM # 2 & 4	name	organization	contact phone number
Andrew Milanes		Polaris	<i>[Handwritten signatures]</i>
Tom Freeman		Polaris	
Andrew Johnson		USCG	
Travis Olson		USCG	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 603 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 _____ Mixed S Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: P 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: mixed

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 110m 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 _____ 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	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
	m	m	%																			
A			X		497	1															X	Grass, trees, debris
B			X		106	1															X	Grass, trees, debris

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

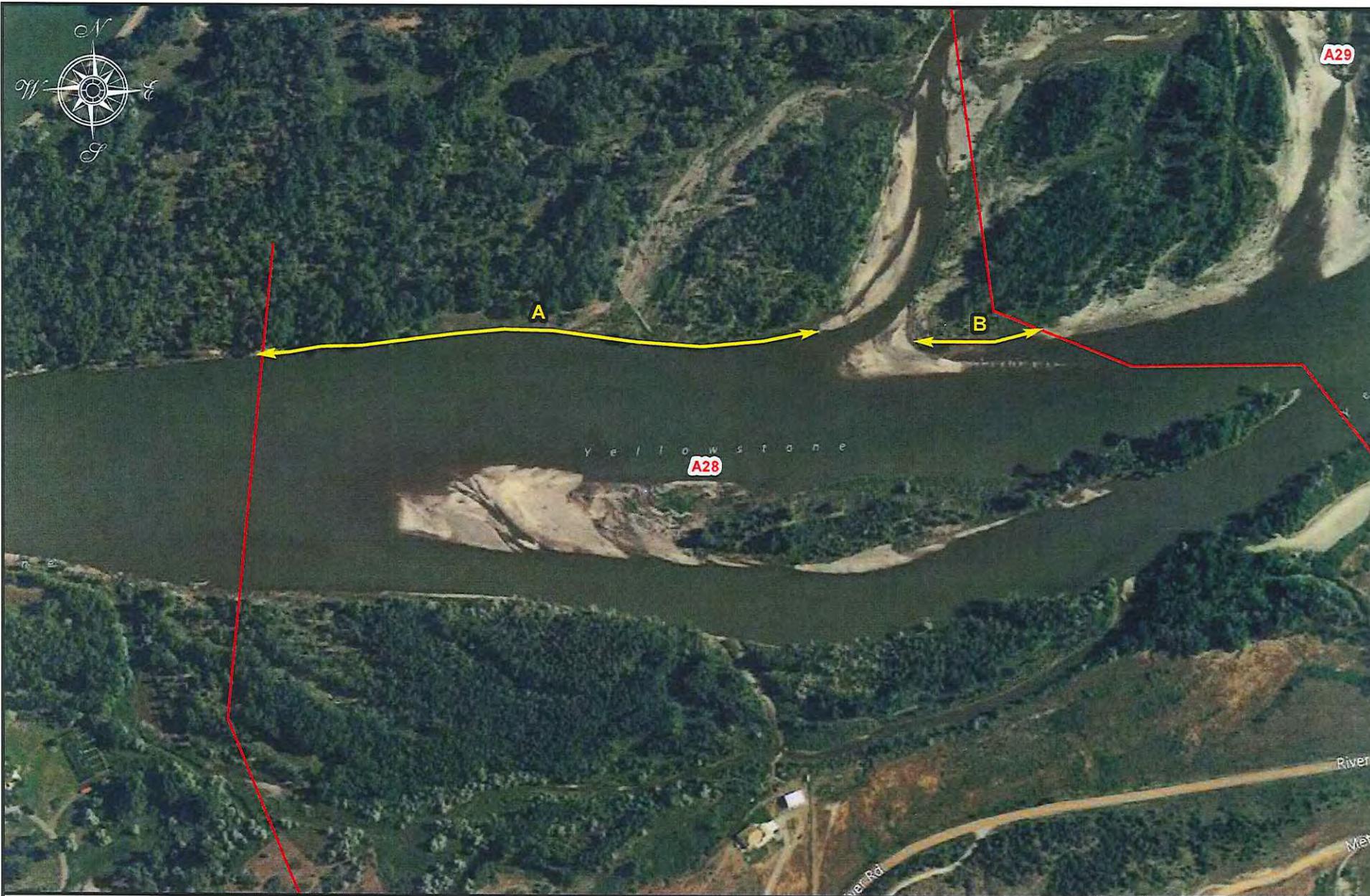
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER							WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)					
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR	NO									

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

Cleanup Recommendations: No oil observed along river channel margin

(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# _____)



SCAT Teams 2 & 4 Survey

Segment A28 Left Bank

11-Jul-2011



Legend

↔ Oil Zones

— Segment Boundaries

D/G/SE

RIVER BANK OILING SUMMARY FORM for **Silvertip Pipeline Incident**

1 GENERAL INFORMATION		Date (dd/mm/yy) 16-Jul-2011	Time (24h): std / daylight 1115 hrs to 1145 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: A28	<u>Left Bank</u> / Right Bank / Island			
Operations Division: A				
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>32</u> deg C

2 SURVEY TEAM # 1 & 2	name	organization	contact phone number
	Tom Freeman	Polaris	
	Bruce Kvam	Polaris	
	Pete Lee	Polaris	
	Travis Olson	USCG	
	Aaron Anderson	MTDEQ	406-841-5049
	Larry Alheim	MTDEQ	406-461-7516

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 40 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 _____ 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: mixed

Sloped: (>5°)(15°)(30°) straight S 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 150m 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 no vehicular access 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	40	110	20	X	X	X	X		X									Grass, trees, debris, water

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 heights: Zone A – 4cm

Treatment Recommendations:
Zone A: Cut & remove oil coated vegetation smaller than 1" diameter. Remove oil coated debris smaller than 4" diameter. Wipe larger oil coated vegetation and debris. Remove pooled oil with sorbents. Due to the size and quantity of oil coated debris in this zone, alternative methods, such as burning, could be considered.

*Refer to current approved treatment methods #1 (Cutting of Vegetation), #2 (Dead Vegetation and Small Debris), #3 (Large Woody Debris), #6 (Sorbent Use)

Sketch Yes / No Photos Yes / No Photo Numbers 63-74 (Kvam); 0885-0899 (Freeman)

SCAT 1 & 2, July 17

Zone A

A28



RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>18-Jul</u>	Time (24h): std / daylight _____ hrs to _____ hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>A28</u> Left Bank / Right Bank / Island				
Operations Division: <u>A LB</u>				
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - _____ deg C

2 SURVEY TEAM # <u>112</u>	name	organization	contact phone number

3 SEGMENT	Total Segment/Reach Length _____ m	Segment/Reach Length Surveyed _____ 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 _____ Mixed _____	Pebble/Cobble _____ Boulder _____ Peat/Organic _____	Vegetated Bank: <u>(S)</u>	Wooded Upland: <u>(P)</u>
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: _____
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 _____ 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		

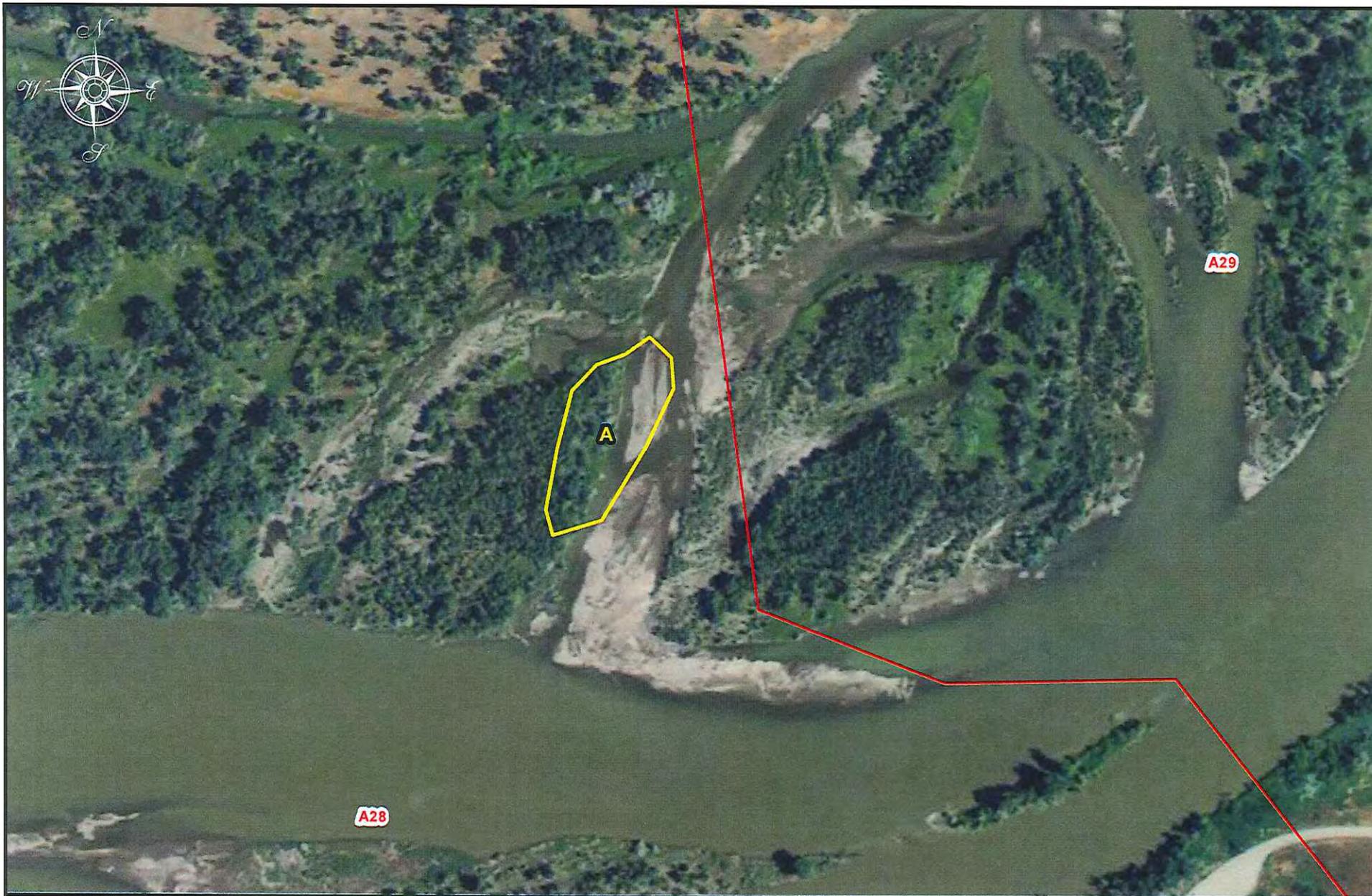
5 OPERATIONAL FEATURES		Suitable backshore staging Y/N _____ Access: Direct from backshore Y/N _____ Alongshore from next segment (Y/N) _____	
Debris (Y/N) oiled (Y/N) amount <u>S</u> bags or _____ trucks	access restrictions		
Oiled trees/shrubs (Y/N) _____ River Current strong (Y/N) _____	Other Features:		

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	CR	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO
A				X			3			X	X			X							grass, debris, 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

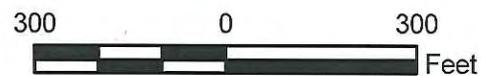
(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)
 Sketch Yes/No Photos Yes/No (Roll # _____ Frames _____) Video Tape Yes/No (tape # _____)



SCAT Teams 1 & 2 Survey

Segment A28 - Left Bank

18 July 2011



Legend

- Segment Boundaries
- Oiling Zones

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 18/07/2011	Time (24h): std / <u>daylight</u> <u>11:50</u> hrs to <u>16:45</u> hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: A28 <u>Left Bank</u> / Right Bank/Island				
Operations Division: A				
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / <u>Calm</u>		Air Temp +/- <u>34</u> deg C

2 SURVEY TEAM # 3	Name:	Organization:	Signature:
Jenni Nelson		Polaris	<i>[Signature]</i>
Mike Ruggles		Montana Fish Wildlife and Parks	<i>[Signature]</i>
Janice Witul		EPA	<i>[Signature]</i>
Rebecca Ridenour		MDEQ	<i>[Signature]</i>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 850 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 _____ Mixed _____ Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: P 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 P confined or leveed _____ Substrate Type: Mud/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 200m _____ est. water depth: <1m 1-3m 3-10m >10m _____

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 10 bags or _____ trucks access restrictions: Area is wet, and has lots of running channels.

Oiled trees/shrubs Y/N River Current strong Y/N Other Features: shoal areas have deep mud and wet unstable sand

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	60	75	<1		(X)	(X)			X										veg					
B				X	25	170	0														X		veg					
C				X	170	75	5	X	(X)	X			X										veg					
D				X	270	350	<1		(X)	X			X										veg					
E				X	325	80	3		(X)	X			X										veg					

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					
NONE																		

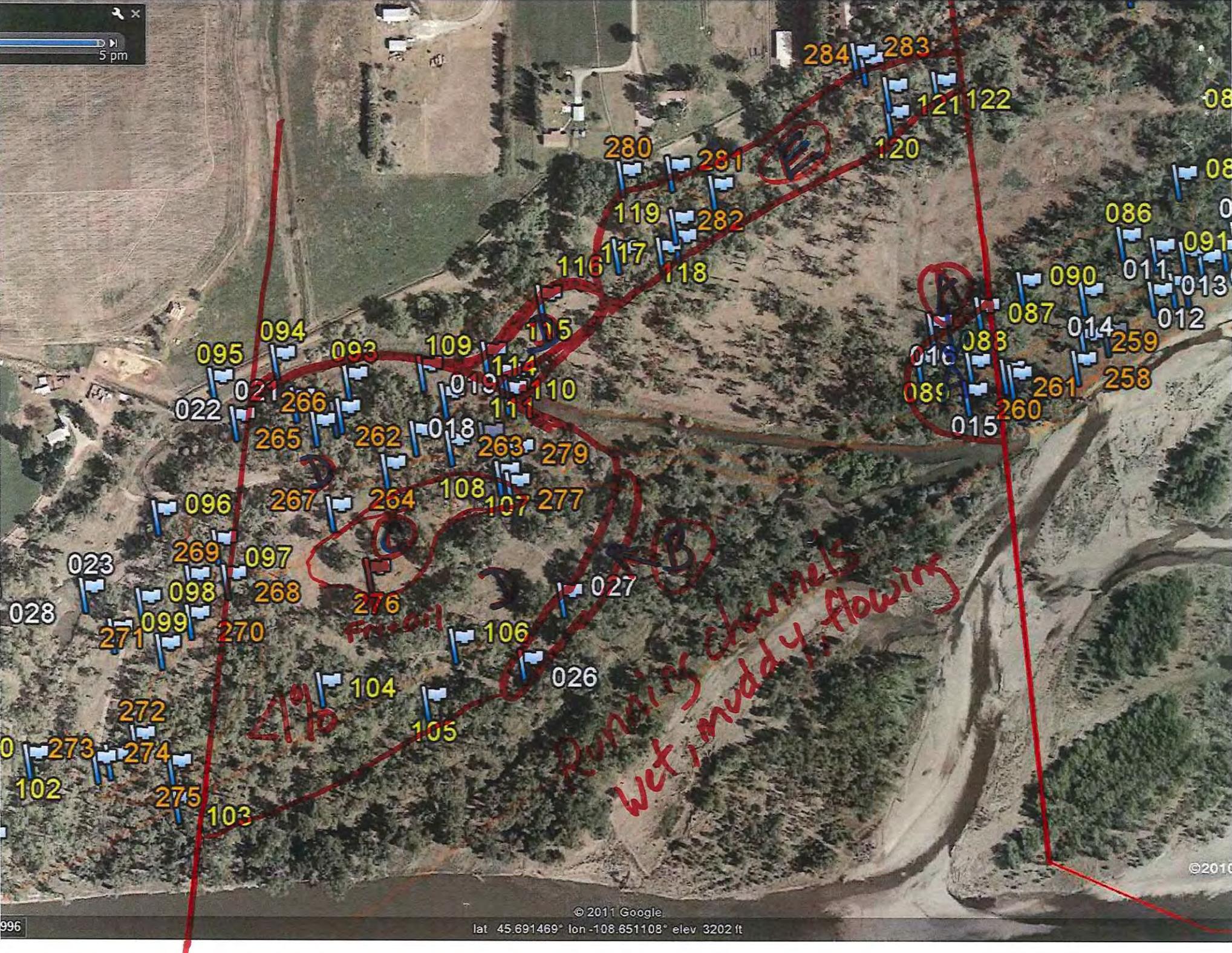
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

A - area of trace oil on grass & woody debris to fence.
 B - no oil observed, very muddy, channels still flowing through area
 C - area of sporadic piles of woody debris, primarily around edges of channels at higher elevation that caught oiled debris & oil up 3m. Hand crew should go through & collect heavier oil. Three pads placed at WP# 276 to soak up pooled oil - need to collect.
 D - trace oil in grass & woody debris & on tree branches & trunks.

(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# _____)

E - Area with discreet patches of oiled woody debris up to 2m in length.



Running channels
wet, muddy, flowing

Frison

21/10

DB/G/S

1 GENERAL INFORMATION		Date (dd/mm/yy) 07/30/2011	Time (24h): std / daylight 0910 1035 hrs to _____ hrs	Water Level low - mean <u>(bankfull)</u> overbank <u>(falling)</u> - steady - rising
Segment/Reach ID: A28 <u>(Left Bank)</u> Right Bank / Island				
Operations Division: A				
Survey by: <u>(Foot)</u> / ATV / Boat / Helicopter / Overlook / _____		<u>(Sun)</u> Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>35</u> deg C

2 SURVEY TEAM # 1&2	name	organization	contact phone number
Bruce Kvam; Rich Marty	<u>Bruce Kvam</u>	Polaris Applied Sciences, LLC	(206)-953-6904; (208) 360-0733
Aaron Anderson	<u>Aaron Anderson</u>	MTDEQ	(406) 431-2583
John Beach	<u>John Beach</u>	USEPA	(707) 364-0491
Peter Reich	<u>Peter Reich</u>	USEPA	(415) 595-8352
Darcy Miller	<u>Darcy Miller</u>	Cardno ENTRIX	(206) 427-9505

3 SEGMENT Total Segment/Reach Length 654 m Segment/Reach Length Surveyed 337 m

Start GPS: LATITUDE 45 deg. 4118 min. LONGITUDE 108 deg. 3919 min. Datum: WGS 84

End GPS: LATITUDE 45 deg. 4120 min. LONGITUDE 108 deg. 3904 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 _____ 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 _____ braided P 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 256 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 2 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
1107 A				X	<u>337</u> 279	<u>372</u> 297	<1			X	(X)		X								Small woody debris, grass, trees
1108 B				X	375	75	1			X	(X)		X								Small woody debris, grass

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 on grass: 17 cm

Treatment Recommendations:

Zone A: No further treatment recommended. Sorbent pads that were previously deployed (photo 15) should be recovered and disposed.

Zone B: small discrete areas of stained vegetation and debris marked by ribbon and benchmarked by spot team. Remove using small team 2-5 people.

(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# _____)

DBK 003-015

DB/G/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION

Segment/Reach ID: A28 Left Bank / Right Bank / Island
 Date (dd/mm/yy) 07/30/2011
 Time (24h): std / daylight 0910 1035
 Water Level low - mean (bankfull) overbank
 Operations Division: A hrs to hrs
 Survey by: (Foot) / ATV / Boat / Helicopter / Overlook / _____ (Sun) / Clouds / Fog / Rain / Snow / Windy / Calm
 Air Temp +/- 35 deg C

2 SURVEY TEAM # 182

name	organization	contact phone number
Bruce Kvam; Rich Marty <i>Rich Marty</i>	Polaris Applied Sciences, LLC	(206)-953-6904; (208) 360-0733
Aaron Anderson	MTDEQ	(406) 431-2583
John Beach <i>John Beach</i>	USEPA	(707) 364-0491
Peter Reich <i>Peter Reich</i>	USEPA	(415) 595-8352
Darcy Miller <i>Darcy B. Miller</i>	Cardno ENTRIX	(206) 427-9505

3 SEGMENT

Total Segment/Reach Length 654 m Segment/Reach Length Surveyed 337 m

Start GPS: LATITUDE 45 deg. 4118 min. LONGITUDE 108 deg. 3919 min. Datum: WGS 84
 End GPS: LATITUDE 45 deg. 4120 min. LONGITUDE 108 deg. 3904 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 ___ 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 ___ braided P 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 256 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 2 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

1107
108

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)				
					Length	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO		
A				X	287 279	102 297	<1				*	(X)			X								Small woody debris, grass, trees
B				X	375	75	1				X	(X)			X								Small woody debris, grass

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	OILED DEPTH 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

Oil band height on grass: 17 cm

Treatment Recommendations:

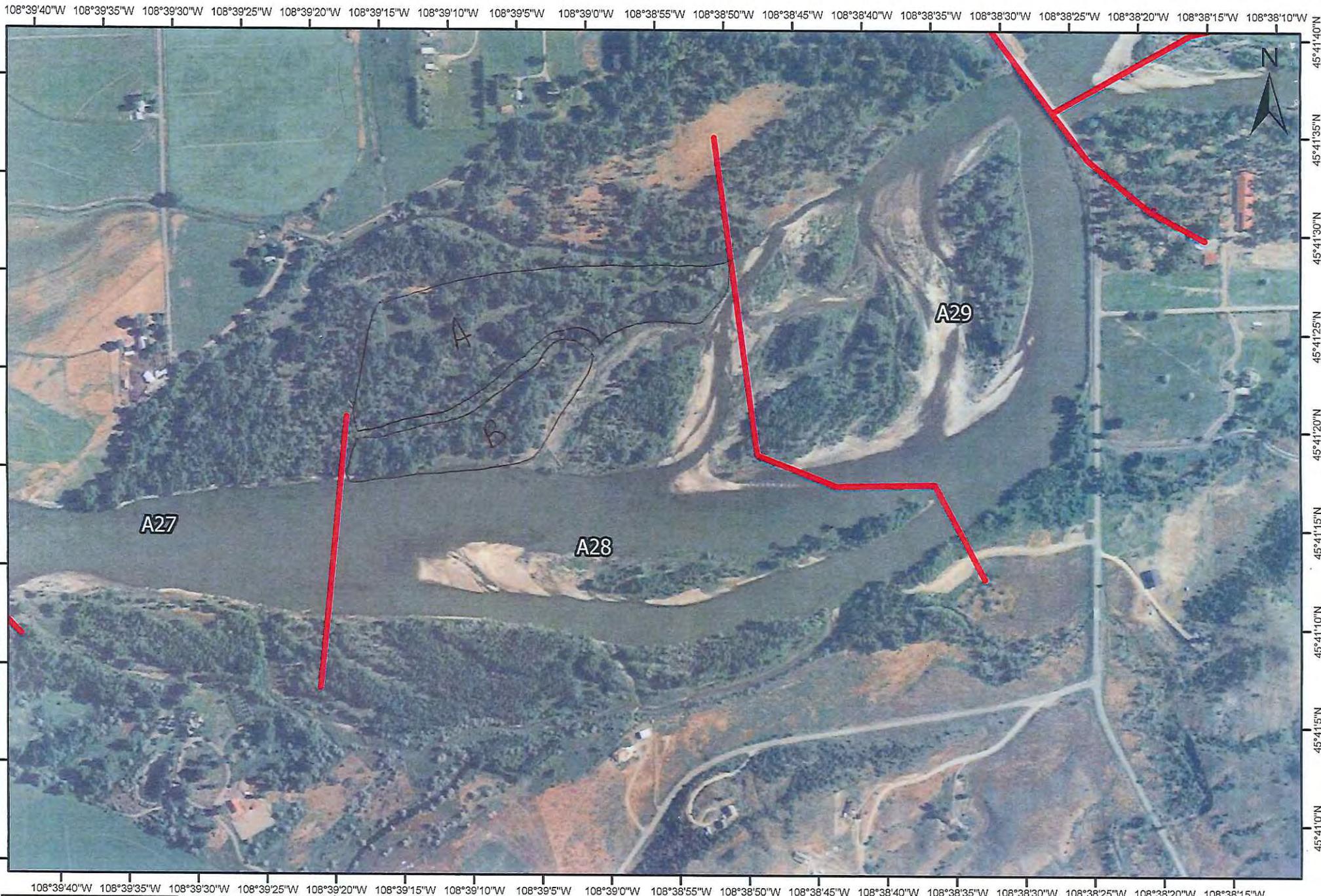
Zone A: No further treatment recommended. Sorbent pads that were previously deployed (photo 15) should be recovered and disposed.

Zone B: small discrete areas of stained vegetation and debris marked by ribbon and benchmarked by Scott team. Remove using small team 2-3 people.

(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# _____)

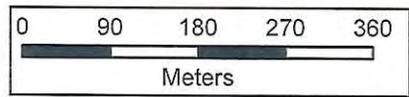
DBL-003-015



A28 -
 (R/I)??

DATE: 07/30/2011
 TEAM: 1&2

COMMENTS:



DBIASC

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 11-Jul-2011	Time (24h): std / daylight 1042 hrs to 1044 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: A28 Left Bank / Right Bank / <u>Island</u>				
Operations Division: A				
Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>29.4</u> deg C

2 SURVEY TEAM # 2 & 4	name	organization	contact phone number
Andrew Milanes		Polaris	
Tom Freeman		Polaris	
Andrew Johnson		USCG	
Travis Olson		USCG	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 361 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 _____ Mixed S _____ Pebble/Cobble S _____ Boulder _____ Peat/Organic _____ Vegetated Bank: P 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: mixed

Sloped: (>5°)(15°)(30°) straight P 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 120m 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 1 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		361	1	65			X	X		X								Grass, trees, 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					NO

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

Zone A Oiled Band Height: 30cm

Due to survey platform (jet-drive boat) oil band width and heights are estimates. Unable to verify by foot.

Cleanup Recommendations: Trim oiled vegetation; wipe large oiled debris; remove small oiled debris; wipe oiled trees

(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# _____)



SCAT Teams 2 & 4 Survey

Segment A28 Island

11-Jul-2011



Legend

- Oil Zones
- Segment Boundaries

DB/G/SL

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 15-Jul-2011	Time (24h): std / daylight 0927 hrs to 0929 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: A28 Left Bank / Right Bank / <u>Island</u>				
Operations Division: A				
Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>32</u> deg C

2 SURVEY TEAM # 1 & 2	name	organization	contact phone number
Andrew Milanes	<i>AMM</i>	Polaris	
Tom Freeman		Polaris	
Bruce Kvam	<i>THE</i>	Polaris	
Pete Lee	<i>PBL</i>	Polaris	
Travis Olson	<i>TO</i>	USCG	
Aaron Anderson	<i>AA</i>	MTDEQ	406-841-5049
Darrick Turner		MTDEQ	406-444-1504

Betsy Honda for AA DEQ
Betsy Honda for DT DEQ

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 365 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 _____ Mixed S _____ Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: P 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: mixed

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 117m 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 _____ 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		365	1	75			X	X		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

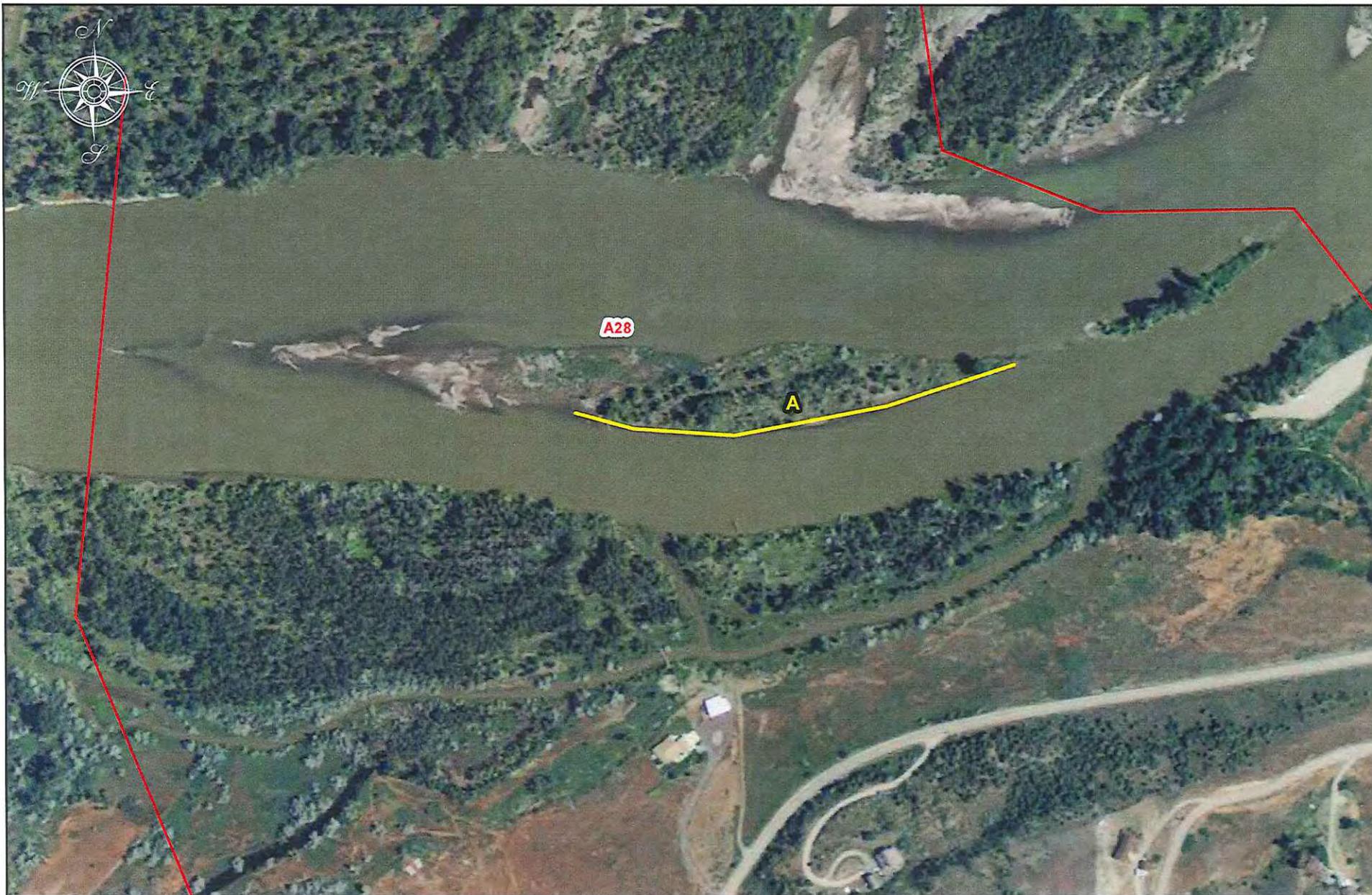
Oil band heights: Zone A - 30cm

Survey of the main channel shoreline performed by jet boat. Additional surveys of the overbank will be required.

Treatment Recommendations:
Zone A: Cut & remove oil coated vegetation smaller than 1" diameter. Wipe larger oil coated vegetation.

*Refer to current approved treatment methods #1 (Cutting of Vegetation).

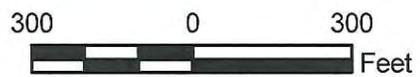
Sketch Yes / No Photos Yes / No Photo Numbers 0394-0415 (Freeman)



SCAT Teams 1 & 2 Survey

Segment A28 - Island

15 July 2011



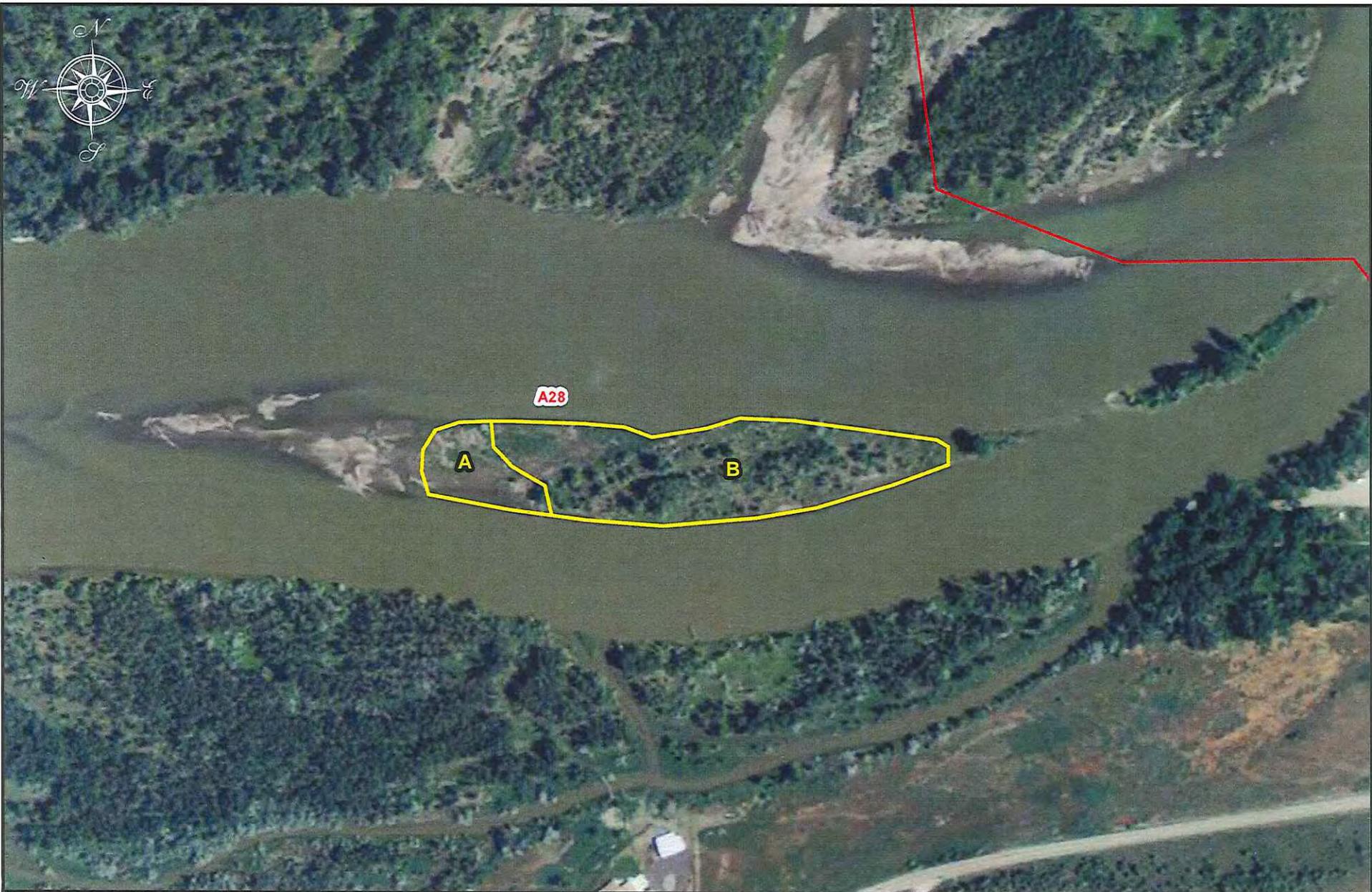
Legend

- Segment Boundaries
- Oiling Zones

EB/G

RIVER BANK OILING SUMMARY FORM for **Silvertip Pipeline Incident**

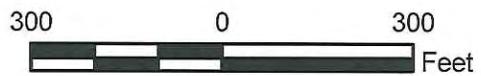
1 GENERAL INFORMATION				Date (dd/mm/yy) 18-Jul-2011	Time (24h): std / daylight 1050 hrs to 1142 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising															
Segment/Reach ID: A28 Left Bank / Right Bank / <u>Island</u>				Operations Division: A		Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____															
2 SURVEY TEAM # 1 & 2				Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>32</u> deg C															
name		organization		contact phone number																	
Andrew Milanes		Polaris		<u>484</u>																	
Bruce Kvam <u>EBL</u>		Polaris																			
Pete Lee <u>PBL</u>		Polaris																			
Andy Johnson		USCG																			
Travis Olson		USCG																			
Aaron Anderson <u>Bissett for AA</u>		MTDEQ <u>DEQ</u>																			
Larry Elheim <u>Bissett for LA</u>		MTDEQ <u>DEQ</u>																			
3 SEGMENT				Total Segment/Reach Length _____ m		Segment/Reach Length Surveyed <u>355</u> 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 _____		Mixed <u>S</u> Pebble/Cobble _____ Boulder _____		Peat/Organic _____		Vegetated Bank: <u>S</u>		Wooded Upland: <u>P</u>													
Sediment Flat: Clay/Mud _____ Sand _____		Mixed/Coarse _____		Other: _____		If snow and ice use Winter River SOS															
4B RIVER VALLEY CHARACTER select as appropriate																					
Cliff or Bluff: _____ Est Height _____ m		canyon _____ manmade _____		meander _____		confined or leveed _____		Substrate Type: <u>mixed</u>													
Sloped: <u>(>5°)</u> (15°)(30°)		straight <u>P</u>		braided <u>S</u>		oxbow _____		flood plain valley _____													
4C RIVER CHANNEL CHARACTER circle or select as appropriate																					
est. width: < 1m 1-10 m 10-100 m >100m <u>160m</u>		est. water depth: < 1 m 1-3 m <u>3-10 m</u> >10 m _____ m		shoal(s) present <u>Y/N</u> point bar present <u>Y/N</u>																	
seasonal water level: low / mean / bank full / <u>overbank flow</u>		bar-shoal substrate: silt / sand / <u>gravel</u> / <u>cobble</u> / boulder / bedrock / debris																			
est. change over next 7 days: <u>falling</u> — same — rising																					
5 OPERATIONAL FEATURES				Suitable backshore staging <u>Y/N</u>		Access: Direct from backshore <u>Y/N</u> Alongshore from next segment <u>Y/N</u>															
Debris: <u>Y/N</u> oiled <u>Y/N</u> amount _____ bags or <u>10</u> trucks		access restrictions		Other Features: _____																	
Oiled trees/shrubs <u>Y/N</u>		River Current strong <u>Y/N</u>																			
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	70	55	25	X	X	X			X								Grass, trees, debris, soil
B				X	285	55	35		X	X	X		X								Grass, trees, 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					NO				
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations																					
Oil band heights: Zone A – 30cm; Zone B – 10cm																					
Treatment Recommendations: Zone A: Remove pooled oil with sorbents. Cut & remove oil coated vegetation smaller than 1" diameter. Remove oil coated debris smaller than 4" diameter. Wipe larger oil coated vegetation and debris. Due to the size and quantity of oil coated debris in this zone, alternative methods, such as burning, could be considered. Remove oil coated sediments with hand tools. The Technical Advisory Group will need to be consulted for alternative treatment methods for oiled debris. Zones B & C: Cut & remove oil coated vegetation smaller than 1" diameter. Remove oil coated debris smaller than 4" diameter. Wipe larger oil coated vegetation and debris.																					
*Refer to current approved treatment methods #1 (Cutting of Vegetation), #2 (Dead Vegetation and Small Debris), #3 (Large Woody Debris), #6 (Sorbent Use), # (Unconsolidated Sediments)																					
Sketch Yes / No		Photos Yes / No		Frames <u>4846-4898</u> (Milanes)																	



SCAT Teams 1 & 2 Survey

Segment A28 - Island

18 July 2011



Legend

-  Segment Boundaries
-  Oiling Zones



Appendix C

Pre-Inspection Survey Transmittal

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 8/17/11

Segment: A28 RB

Team: SCAT Liaison	<u>Ray McKelvey</u>	Signed:	
Observer	<u>John Spenik</u>	Signed:	
Observer	_____	Signed:	_____
Observer	_____	Signed:	_____

Segment meets criteria? YES NO

RBOS attached? YES NO

If NO:

Location Sketch attached? YES NO

CTR continue? YES NO

Comments: Segment contains 3 separate land owners. Property to the far west of the segment is not accessible.

Note: Several bee hives have been identified in this segment and are clearly marked with caution tape. Tape has been left up for SCAT and or claims liaison.

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 8/20/11
Segment: AZ8 RB, Albeeht E., Clarke P.

Team: SCAT Liaison _____ Signed: _____
Observer Robert Nailon Signed: Robert Nailon
Observer Yello GAVURAN Signed: Yello GAVURAN
Observer Ray McKelvey Signed: Ray McKelvey
Betsy Honda Signed: Betsy Honda
Linda K Blain Signed: Linda K Blain

Segment meets criteria? YES NO

RBOS attached? YES NO

If NO:
Location Sketch attached? YES NO

CTR continue? YES NO

Comments:

- Area requiring cleanup falls between GPS coordinates
 $45^{\circ} 41' 08.69'' N$ and $45^{\circ} 41' 5.69'' N$
 $108^{\circ} 38' 47.20'' W$ and $108^{\circ} 39' 3.43'' W$
- Flagged in field - pink/black dots @ each location
- primarily CT; stems/limbs/herbaceous veg oiled
Cut; bag; haul off.

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 8/23/11

Segment: A28 LB

Team: SCAT Liaison Ray McKelvey

Signed: 

Observer Gary Reiter

Signed: 

Observer _____

Signed: _____

Observer _____

Signed: _____

Segment meets criteria? YES X NO _____

RBOS attached? YES _____ NO X

If NO:

Location Sketch attached? YES _____ NO X

CTR continue? YES _____ NO X

Comments: **Segment is ready for re-scat.**

1. Property name: Louise McKelvie
2. Property name: Rudio Ruth

Full seg



Appendix D

Post-Inspection Survey Transmittal

POST

Post Inspection Survey Transmittal

Segment AZ8 RB

Date of Survey 9/1/11

SCAT Team Member David Eric Harlow Signed: David Harlow

SCAT Team Member _____ Signed: _____

SCAT Team Member _____ Signed: _____

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.

Spot 1 - Duck Creek boat landing Lat 45.68722 Lon - 108.643427. marked w/ pink flags
- Small 2m x 2m spot along bank of oiled veg. & debris - hotshot team ~1hr.
Zone C: Inland channel bank should be treated
by cutting tree branches with oil coat and removing
oil coated debris.

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

Estimated Work Effort: Number of People _____ Hours of Work _____ 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.

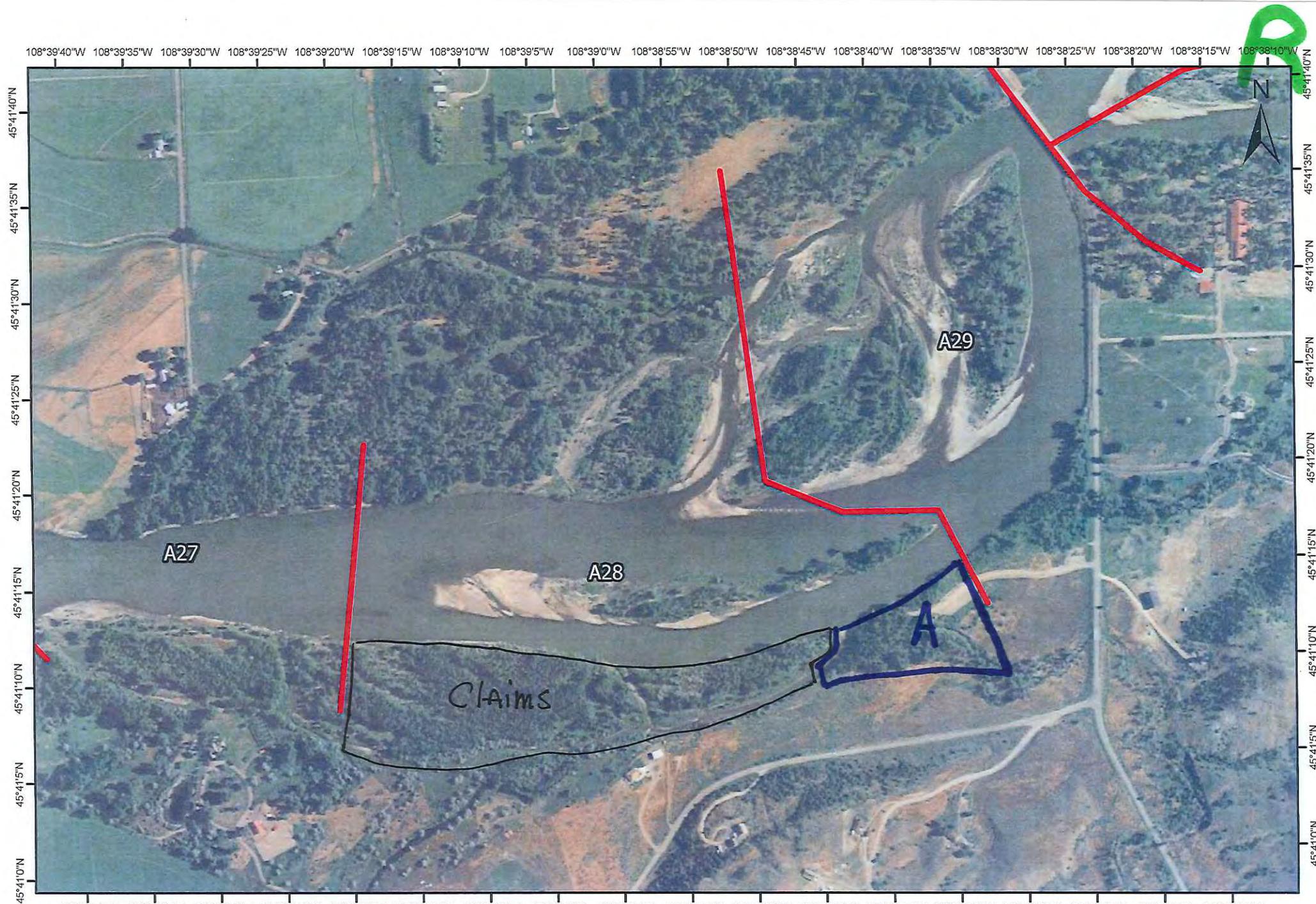
Sign Name _____ Print Name/ Affiliation _____ Date _____

Sign Name _____ Print Name/ Affiliation _____ Date _____



Appendix E

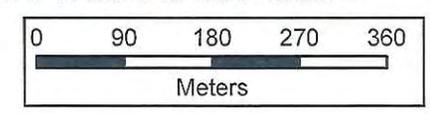
Final SCAT Survey Forms
and Sketches



A28 -
(L/R)??

DATE: 10/08/11
TEAM: 5

COMMENTS:



DBIG

R

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (22/08/11)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A28 (part) Left Bank / Right Bank / Island				low - mean - bankfull - overbank
Operations Division: A			10h30 hrs to 13h00 hrs	(falling) - steady - rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp (+) - 3.2 deg C

2 SURVEY TEAM # 4	name	organization	contact phone number
Merlo Gauvreau		Polaris	
Damien Korte		CardnoEntrix	
Cindy Santiago		EPA	
Jeffrey Frank Herrick		DEQ	
Thomas Freeman		Polaris	

3 SEGMENT Total Segment/Reach Length 1050 m Segment/Reach Length Surveyed 490 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: (P) 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 (S) confined or leveed Substrate Type: MIXED

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 (210) 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 ----- 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	490	150	<1%				(X)								X			DB, VG, LG

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

A: ReSCAT on the portion of segment A28 of owner Albrecht, E., Clarke, P.; Stain on the trees and vegetation and large debris, meet the conditions of the CTR, NFT.

(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# _____)

22 August 2011

Team # 4

A28 (part) RESCAT

Yvels GAOURESA, Polaris

A28

NFT

Albrecht, E

A

CLARKE, P

River Rd

Lara Dr

Image © 2011 DigitalGlobe

© 2011 Google

DB 16

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>03/09/11</u>	Time (24h): std / daylight <u>1340</u> hrs to <u>1425</u> hrs	Water Level low (mean) - bankfull - overbank <u>(falling)</u> - steady - rising
Segment/Reach ID: <u>A28</u> Left Bank / <u>(Right Bank)</u> / Island				
Operations Division: <u>A</u>				
Survey by: <u>(Foot)</u> ATV / Boat / Helicopter / Overlook / _____		<u>(Sun)</u> / <u>(Clouds)</u> / Fog / Rain / Snow / Windy / <u>(Calm)</u>		
		Air Temp +/- <u>22</u> deg C		
2 SURVEY TEAM # <u>6</u>	Name	Organization	Signature	
	<u>Nathan Hammond</u>	<u>Cardno Entrix</u>	<u>Nathan Hammond</u>	
	<u>Austin West</u>	<u>USCG</u>	<u>Austin West</u>	
	<u>Matthew Kent</u>	<u>DEQ</u>	<u>Matthew Kent</u>	

3 SEGMENT Total Segment/Reach Length 1055 m Segment/Reach Length Surveyed 285 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 (P) Sand (S) Mixed _____ Pebble/Cobble _____ 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: _____

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) 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 <1 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			<u>(S)</u>	<u>(P)</u>	<u>285</u>	<u>150</u>	<u><1</u>				<u>(P)</u>						<u>(X)</u>					<u>Very Debris</u>

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 - Trace Oiling Observed - No Further Treatment.

ResQAT

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

0 am 9/3/2011 4:21 pm
4 pm

ZONE A
TRACE

A28-IS

Current Track: 03 SEP 2011 09:36
A28-RB

HASSETT
PROPERTY

Team 6
A28 RB
9/3/11

River Rd

© 2011 Google

© 2010

004 1996

45°41'09.45" N 108°39'02.28" W elev 3205 ft

DB16

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 22/09/11	Time (24h): std / daylight 1100 hrs to 1500 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: A28 Left Bank / Right Bank / Island				
Operations Division: A				
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- 30 deg C	

2 SURVEY TEAM # 1	Name	Organization	Signature
Merlo Gauvreau		Polaris	<i>[Signature]</i>
Pete Lee		Polaris	<i>[Signature]</i>
Jeffrey Frank Herrick		MTDEQ	<i>[Signature]</i>

3 SEGMENT Total Segment/Reach Length 1,000 m Segment/Reach Length Surveyed 400 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 _____ Mixed X Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: P 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: _____

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m m est. water depth: <1m 1-3m >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 _____ trucks Access restrictions: Williams property

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

2366

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				<u>X</u>	400	190	<1			<u>S</u>	<u>P</u>							<u>X</u>			Grass, trees, 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				

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

Oil height: 30-90cm

Treatment recommendations:
 Zone A : Treated by Ops as per CTR 63 ; NO Further Treatment
 Zone : _____

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

10:49 22/9/2011 16:38 17

2/2

22/09/2011

A28-RB (Williams)

Team #2

A28-IS

NFT

045

A

A28-RB

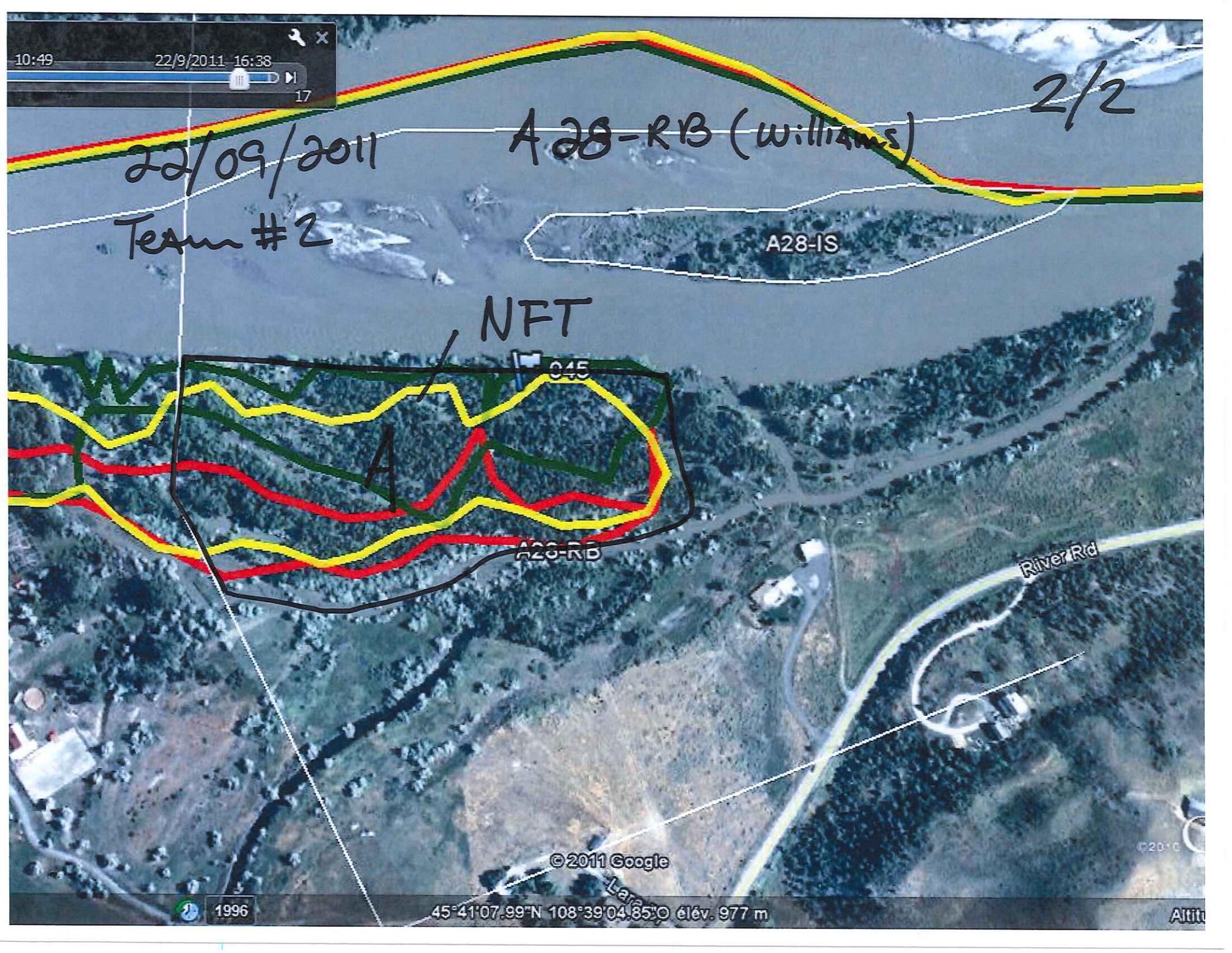
River Rd

© 2011 Google

1996

45°41'07.99"N 108°39'04.85"W élév. 977 m

Altitude



DB/6

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>A28</u> Left Bank / <u>Right Bank</u> / Island				low - <u>mean</u> bankfull - overbank
Operations Division: <u>A</u>		<u>25/09/11</u>	<u>1300</u> hrs to <u>1530</u> hrs	<u>falling</u> steady - rising
Survey by: <u>Foot</u> / ATV / <u>Boat</u> / Helicopter / Overlook / _____		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp + / - <u>28</u> deg C	

2 SURVEY TEAM # <u>1</u>	Name	Organization	Signature
	<u>Todd Farrar</u>	<u>Polaris</u>	<u>Todd Farrar</u>
	<u>Sheila McAtee</u>	<u>DNRC</u>	<u>Sheila McAtee</u>

3 SEGMENT Total Segment/Reach Length 268 m Segment/Reach Length Surveyed 268 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 _____ Mixed _____ Pebble/Cobble S Boulder _____ Peat/Organic _____ Vegetated Bank: P Wooded Upland: _____

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: Silt

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 160m 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 / mean / bank full / overbank flow est. change over next 7 days: falling - same - rising

5 OPERATIONAL FEATURES

Suitable backshore staging N Access: Direct from backshore N Alongshore from next segment N

Debris N oiled N amount 2 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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS										OIL CHARACTER	SUBST. TYPE(S)				
	MS	LB	UB	OB	Length	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC			SR	AP	NO	
	m	m	%																				
A				X	268	140	<1				S	P						P					veg

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 / N Shoreline Survey Completed N

Sporadic stains cont on vegetation and some debris.
Hot shot crew removed or treated oiled material
No further Treatment Required (NFT)

9/25/2011 4:24 pm

Team 1
Sept 25, 2011
A-28 RB

A28-LB

A29-IS

A29-RB

A28-IS

A28-RB

272

273

Zone A
NFT

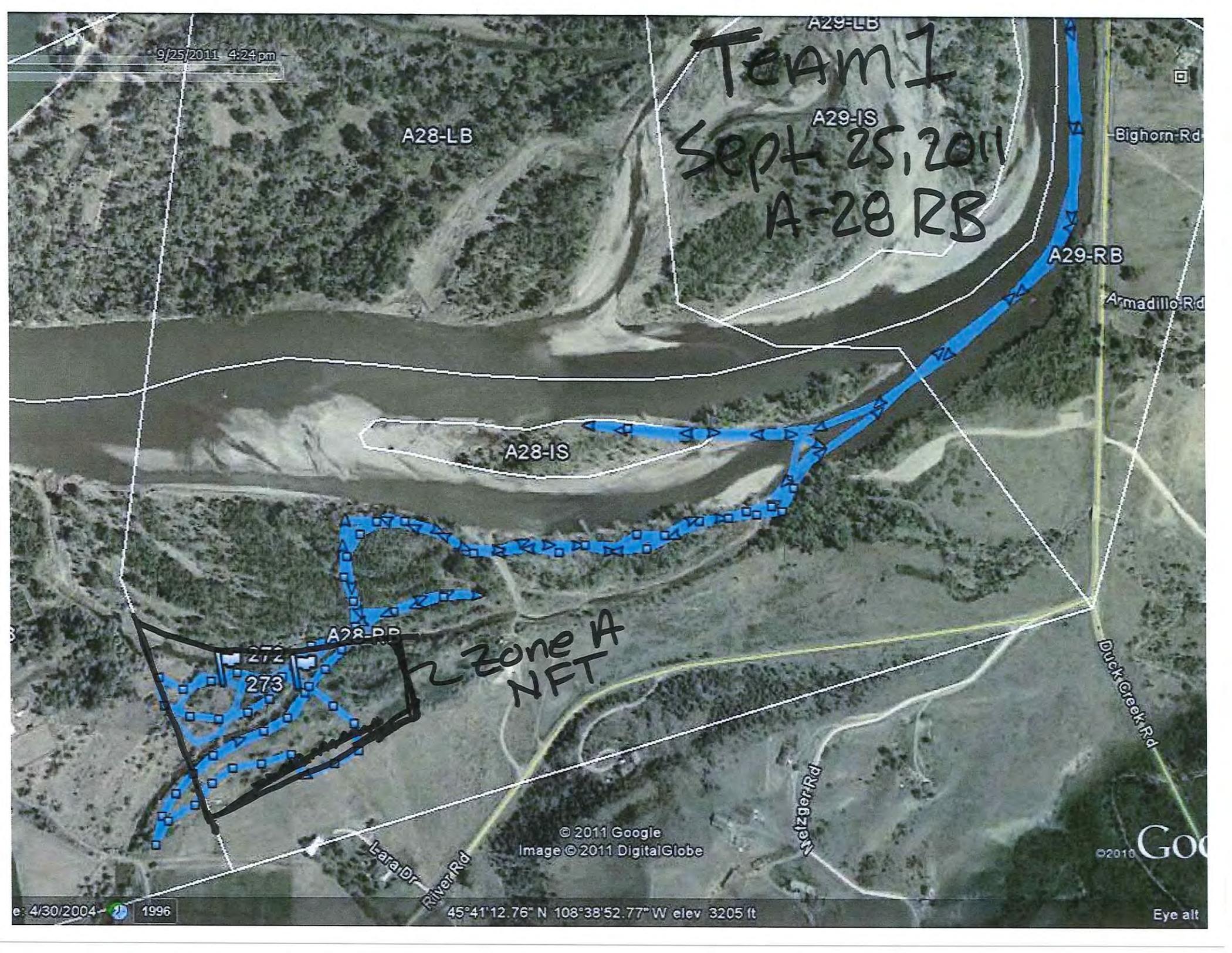
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© 2010 Google

4/30/2004 1996

45°41'12.76" N 108°38'52.77" W elev 3205 ft

Eye alt



24 August ReScat
Team #3
A 28 LB



e/e

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 2

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>A28</u> Left Bank / Right Bank / Island		<u>20/09/2011</u>	<u>10:38</u> hrs to <u>12:00</u> hrs	<u>low</u> - mean - bankfull - overbank
Operations Division: <u>A</u>		(Sun) Clouds / Fog / Rain / Snow / Windy / Calm		falling - steady - rising
Survey by: (Foot) / ATV / Boat / Helicopter / Overlook /				Air Temp +/- <u>18</u> deg C
2 SURVEY TEAM # <u>2</u>	Name	Organization	Signature	
	<u>Herb GAGNER</u>	<u>POLARIS</u>	<u>[Signature]</u>	
	<u>Jay Watson</u>	<u>FWP</u>	<u>[Signature]</u>	
	<u>Mark Peterson</u>	<u>DEQ</u>	<u>[Signature]</u>	

3 SEGMENT Total Segment/Reach Length 603 m Segment/Reach Length Surveyed 430 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 S Pebble/Cobble _____ 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: _____

Sloped: _____ (>5°)(15°)(30°) straight P braided S 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) 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 _____ 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	430	237	<1			S	P							X				Db, Vg

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	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)

A: ReSCAT Fill-in with ops Hot shots.
 oiled debris and grass, cleaned by hot shots (2 bags)
 Meet the conditions of the CTR, NFT

Sketch (Yes) / No Photos Yes / (No) Frames/Photographer:

iquer pour activer/désactiver l'animation du curseur chronologique

20/9/2011 12:04



20/9/2011

2/2 20/09/2011
Team#2 A-28LB

A
NFT

A29-LB

A29-IS

A28-LB

ACTIVE LOG
ACTIVE LOG
ACTIVE LOG

© 2011 Google

© 2010

1996

45°41'32.04"N 108°38'52.45"O élév. 977 m

Altit

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

DB 16

R.

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>8/30/2011</u>	Time (24h): std / daylight <u>1251</u> hrs to <u>1420</u> hrs	Water Level low - mean - bankfull - overbank falling - <u>steady</u> - rising
Segment/Reach ID: <u>A28</u> Left Bank / Right Bank / <u>Island</u>				Air Temp + / - <u>90</u> deg C
Operations Division:				
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		(Sun) / Clouds / Fog / Rain / Snow / Windy / <u>Calm</u>		

2 SURVEY TEAM # <u>5</u>	Name	Organization	Signature
	<u>DANIEL ELEFANT</u>	<u>CARDNO ENTRIX</u>	<u>[Signature]</u>
	<u>LEE BURROUGHS</u>	<u>MT FNP</u>	<u>[Signature]</u>
	<u>JUAN PATINO</u>	<u>VEG</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 713 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 _____ Mixed S Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: ✓ Wooded Upland: _____

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse P 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 P confined or leveed _____ Substrate Type: VEG/DEBRIS

Sloped: (>5°)(15°)(30°) _____ straight _____ braided S 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 / 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 _____ trucks access restrictions _____

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

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			<u>S</u>	<u>P</u>	713	55	<1%			<u>X</u>							<u>7</u>					DEBRIS VEG

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

ZONA: NFI, <1% CT.

RESCAT PASSES.

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

8/20/2011 A28-IS 2 of 2



8/30/2011 3:51 pm

3 pm

EN A: <1% CT DEBRIS, NFT.

A28-RB

River Rd

© 2011 Google

© 2011 Google



Appendix F

Completed SCAT Segment
Sign-Off Forms

Silvertip Pipeline Spill SCAT Segment Sign-Off Sheet

Operations Division: <u> A </u> <u> B </u> <u> C </u>
SCAT Area Number (i.e. A12): <u> A28/RB </u>
SCAT Segment Number (i.e. A12-LB/IS/RB): <u> PART ST. MONTANA LAND </u>

Partial

Check if
Complete:

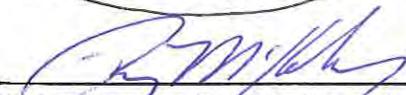
1. Completion Date for Initial SCAT Assessment: 11-15-17-21 Jul 2011

2. Combined Treatment Recommendations (CTRs) Developed/Issued:

List CTRs Applicable to SCAT Segment: 15

3. Clean-Up Operations Conducted:

4. Inspection (CTR Objectives and CTR Addendums Complete): *Non-Claimant Portion of Segment*

	<u> 8-20-11 </u>
RP Representative (SCAT/Ops Liaison Contractor)	Date

5. SCAT Reassessment:

<u> Cindy E. Santiago </u>	<u> 8/20/11 </u>
Federal Representative (EPA/USCG)	Date

<u> Betsy Honda </u>	<u> 8/20/11 </u>
State Representative (DEQ/FWP)	Date

<u> [Signature] </u>	<u> 18/08/2011 </u>
RP Representative (SCAT Contractor)	Date

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 Reassessment, the SCAT area will achieve the response endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ upon completion.

Silvertip Pipeline Spill SCAT Segment Sign-Off Sheet

Operations Division: (A) B C

SCAT Area Number (i.e. A12): 28

SCAT Segment Number (i.e. A12-LB/IS/RB): A28 RB

Owner; Albrecht, E., Clarke, P.

Check if Complete:

1. Completion Date for Initial SCAT Assessment: 11-15-17, 21 Jul. 2011

2. Combined Treatment Recommendations (CTRs) Developed/Issued:

List CTRs Applicable to SCAT Segment: 15

3. Clean-Up Operations Conducted:

4. Inspection (CTR Objectives and CTR Addendums Complete):

[Signature] 8-22-11
 RF Representative (SCAT/Ops Liaison Contractor) Date

5. SCAT Reassessment:

Cindy E. Santiago 8/22/11
 Federal Representative (EPA/USCG) Date

[Signature] 22 August 2011
 State Representative (DEQ/TWP) Date

[Signature] 22-08-11
 RF Representative (SCAT Contractor) Date

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 Reassessment, the SCAT area will achieve the response endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ upon completion.

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment A28 RB Date of Survey 9/3/11

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

CTR(s) Associated with SCAT Segment 15

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] AUSTIN HERS USEG 9/3/2011
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] DEQ 9/3/2011
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] Nathan Hammond / Cadco Enter 9/3/11
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.

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment A 28 RB Date of Survey 9/22/11

Dates of Initial SCAT Assessments 11 Jun 2011
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 63

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).

No Federal Rep Present

Sign Name _____ Print Name/ Affiliation _____ Date _____
Federal Representative (EPA/USCG)

Sign Name Jeffrey Frank Harick Print Name/ Affiliation MT DEP Date 22 Sept. 2011
State Representative (DEQ/FWR)

Sign Name PB Lee Print Name/ Affiliation Pete Lee / Polaris Date 9/22/11
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 A28 RB

Date of Survey Sept. 25, 2011

Dates of Initial SCAT Assessments

11 Jul 2011
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment

15

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).

No Federal Rep Present

Sign Name

Print Name/ Affiliation

Date

Federal Representative (EPA/USCG)

Shirley McArthur

Sheila McAtee / DVR C

9/25/2011

Sign Name

Print Name/ Affiliation

Date

State Representative (DEQ/FWP)

Todd Farrar

Todd Farrar / Polaris

9/25/11

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.

Silvertip Pipeline Spill SCAT Segment Sign-Off Sheet

COMPLETED

Operations Division: A <u>28</u> B <u> </u> C <u> </u>
SCAT Area Number (i.e. A12): <u>A 28</u>
SCAT Segment Number (i.e. A12-LB/IS/RB): <u>A 28 RB LB</u>

Complete

Check if Complete:

1. Completion Date for Initial SCAT Assessment: 11-15-17-21 July 2011

2. Combined Treatment Recommendations (CTRs) Developed/Issued: Yes/No

List CTRs Applicable to SCAT Segment: 15

3. Clean-Up Operations Conducted:

4. Inspection (CTR Objectives and CTR Addendums Complete):

RP Representative (SCAT/Ops Liaison Contractor) Date

5. SCAT Reassessment: (Yes/No)

Rachelle Thompson Richard Marty 24/08/2011
Federal Representative (EPA/USCG) Date

MARK EWING Mark Ewing 24/08/2011
State Representative (DEQ/FWP) Date

Peter GAVREAU Richard Marty 24/08/2011
RP Representative (SCAT Contractor) Date

Richard Marty Richard Marty 24/08/2011

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 Reassessment, the SCAT area will achieve the response endpoints and an Area Transition Report will be completed and submitted to EPA and DEQ upon completion.

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment A28LB Date of Survey 20/09/2011

Dates of Initial SCAT Assessments 18 Jul 2010 (15)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 15

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).

No Federal Rep Present

Sign Name _____ Print Name/ Affiliation _____ Date _____
Federal Representative (EPA/USCG)

[Signature] _____ JAY WATSON/FWP _____ 9/20/11 _____
Sign Name _____ Print Name/ Affiliation _____ Date _____
State Representative (DEQ/FWP)

[Signature] _____ Herb GAUREAU, Polaris _____ 20/09/2011 _____
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 A28-IS

Date of Survey 8/30/2011

Dates of Initial SCAT Assessments

7/18/2011
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment

CTR 40

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] JUAN PATINO, MST3 USCG C1ST 30 AUG 2011
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] MT FWP LEE BURROUGHS 8/30/11
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] DANIEL ELEFANT 8/30/2011
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.



Appendix G

Exception Memos

GENERAL MESSAGE - OPERATIONS GUIDANCE FOR A28IS DEBRIS PILES AND POOLS

TO: Jimmie James, RPIC Tom Livers, SOSC Steven Merritt, FOSC	POSITION: ExxonMobil Montana DEQ State On-Scene Coordinator EPA Federal On-Scene Coordinator
FROM: Nicholas Kautzman	POSITION: Acting Wildlife Branch Director
SUBJECT: A28IS Debris Piles and Pools	DATE: 9.07.2011 TIME: 1436

MESSAGE: International Bird Rescue and Resource Advisors from the U.S. Fish and Wildlife Service during the course of their work noted untreated oiled woody debris in approximately (6) debris piles on the western end of A08 Island. The debris piles are in close proximity to the active channel of the Yellowstone River, or situated over depressions that likely capture rain water and any oil that might be washed from the debris piles. Either situation is likely to result in sheen on surface waters, and a corresponding wildlife hazard. In the same portion of the island and generally associated with the debris piles are several small pools with sheen. These pools present an immediate risk to wildlife, especially migratory birds. A description of the area in need of treatment and general location information was provided to the Operation's Wildlife Quick Response Team to be added to their list Wildlife Priority Cleanup Areas.



per Nathan Cook
All operations - complete
completed on 9/13/11
[Signature]
J.R. Grawcek

SIGNATURE: Nicholas Kautzman	POSITION: Acting Director, Wildlife Branch
-------------------------------------	---------------------------------------------------

REPLY: SCAT and Operations

[Signature]
9/16 07:45 HET

RECEIVED

The Unified Command is aware of this area within SCAT Segments A28IS and that operations within these segments have been completed by operations and Re-SCAT efforts. We agree with the recommended treatment proposed above for this area. ExxonMobil will coordinate any future remediation activities at this site with MTDEQ. In the meantime, this segment will be flagged as a "Wildlife Exception" and excised within GIS maps from the Re-SCAT report that will be produced to close-out the segment. This document will be included as an attachment to the Area Transition Report to document the need for additional work within this segment beyond Re-SCAT and a POST should be used to re-close the segment once these wildlife concerns are addressed by operations teams.

DATE: 09/08/2011	TIME: 11:40	SIGNATURE/POSITION: _____ Jimmie James, RPIC
		_____ Tom Livers, SOSC
		_____ Steven Merritt, FOSC

GENERAL MESSAGE - WILDLIFE AND OPERATIONS GUIDANCE A SMALL EMERGENT ISLAND ADJACENT TO A28 ISLAND

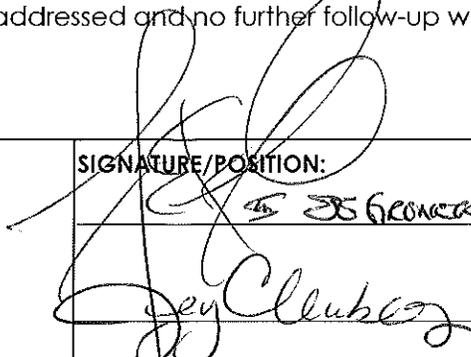
TO: Jimmie James, RPIC Jenny Chambers, SOSC	POSITION: ExxonMobil Montana DEQ State On-Scene Coordinator	
FROM: Nicholas Kautzman	POSITION: Acting Director, Wildlife Branch	
SUBJECT: A-28 Island (emergent)	DATE: 9.09.2011	TIME: 1150

MESSAGE: International Bird Rescue and Resource Advisors from the U.S. Wildlife visited a small emergent island adjacent to A28 Island and noted a debris pile containing oiled debris as well as a portion of oiled boom. The approximately 15 ft x 30ft debris pile is situated over a fast flowing section of the Yellowstone River and has oiled wood debris throughout.

*This location was noted as the EXTREMELY HAZARDOUS by the IBR personnel that identified the site.

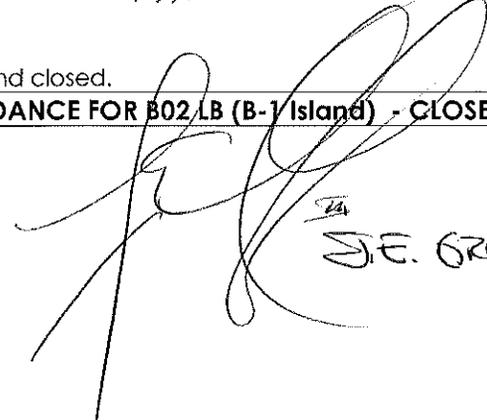
SIGNATURE: Nicholas Kautzman **POSITION:** Acting Director, Wildlife Branch

REPLY:
The Unified Command is aware of the wildlife exception on the small emergent island adjacent to A28 Island. ExxonMobil will coordinate any future remediation activities at this site with MTDEQ. In the meantime, this segment will be flagged and noted in the close-out segment report. If the work is not completed and signed off by the Wildlife Branch prior to closeout. Then this document will be included as an attachment to the Area Transition Report to document the need for additional work within this segment, and this report will be updated to document that the exception was addressed and no further follow-up will be needed.

DATE: 9/10/11	TIME: 1600	SIGNATURE/POSITION:  Jenny Chambers, SOSC
		SIGNATURE/POSITION:  ON BEHALF OF Jimmie James, RPIC


NATE Cook 1700 9/15/11

*To be used after exception has been addressed and closed.

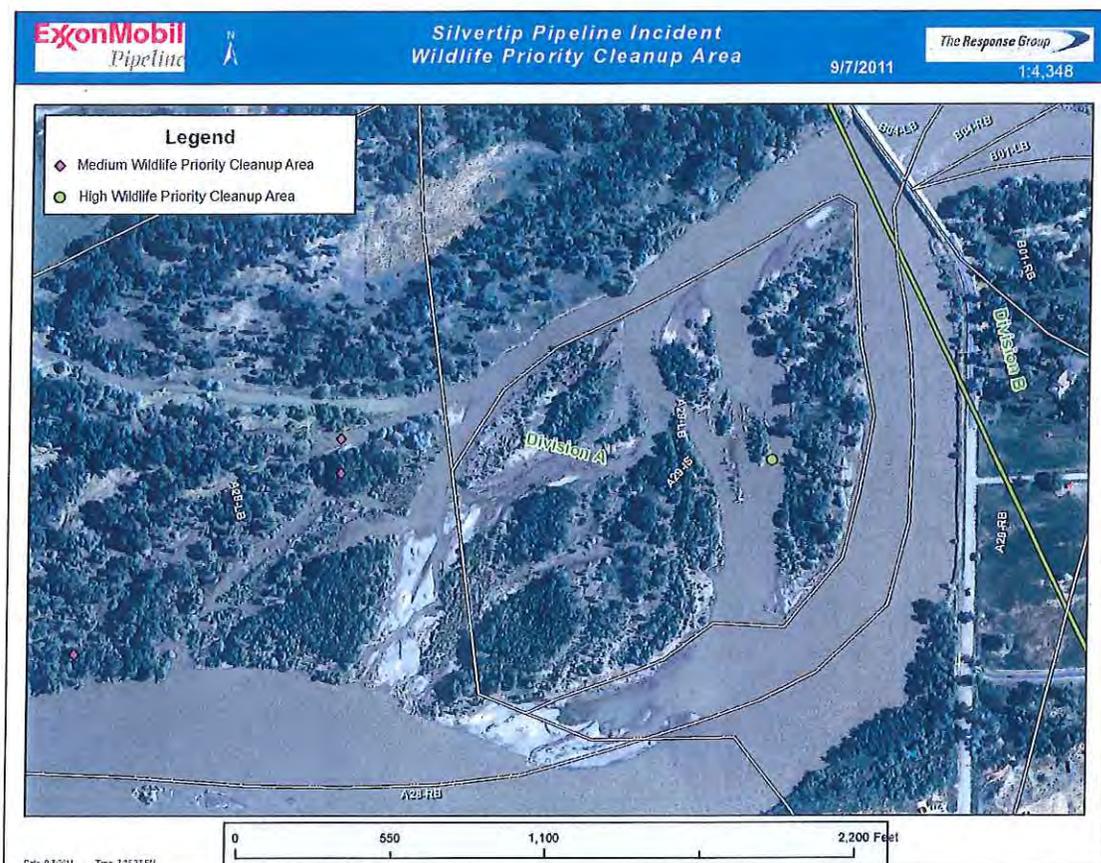
WILDLIFE AND OPERATIONS GUIDANCE FOR B02/LB (B-1 Island) - CLOSEOUT REVIEW		
COMMENT:  S.E. GRONBECK 9/15/11		
FROM:	POSITION:	DATE: 9.09.2011
SIGNATURE:	POSITION:	



GENERAL MESSAGE - SCAT AND OPERATIONS GUIDANCE FOR A28 AND A29 POOLS WITH SHEEN

TO: Jimmie James, RPIC Tom Livers, SOSC Steven Merritt, FOSC	POSITION: ExxonMobil Montana DEQ State On-Scene Coordinator EPA Federal On-Scene Coordinator
FROM: Wildlife Branch	POSITION: Wildlife Chief
SUBJECT: A28 and A29 Pools	DATE: 09.07.2011 TIME: 1008 -1330

MESSAGE: International Bird Rescue and Resource Advisors with the USFWS identified four pools with sheen in scat sector A-28 and 29. This segment has passed SCAT but requires further response to reduce wildlife exposure risks. The four pools are identified on the map below. All pools had sheen on the water, passed the "stick test," the oil was transferable to a nitrile glove, and animal tracks were present. GPS coordinates of these pools are available and are listed on the Oiled Wildlife Risk Assessment Form maintained by the Wildlife Branch. A map of these areas is attached below, with a priority ranking associated with the locations. The size of the high priority area is 30 ft by 15 ft, the moderate priority areas are 50 ft by 20 ft, 100ft by 7 ft, and 30 ft by 10 ft.



SIGNATURE: Karen Nelson, Contaminants Specialist	POSITION: USFWS – Wildlife Branch
---------------------------------------------------------	------------------------------------------

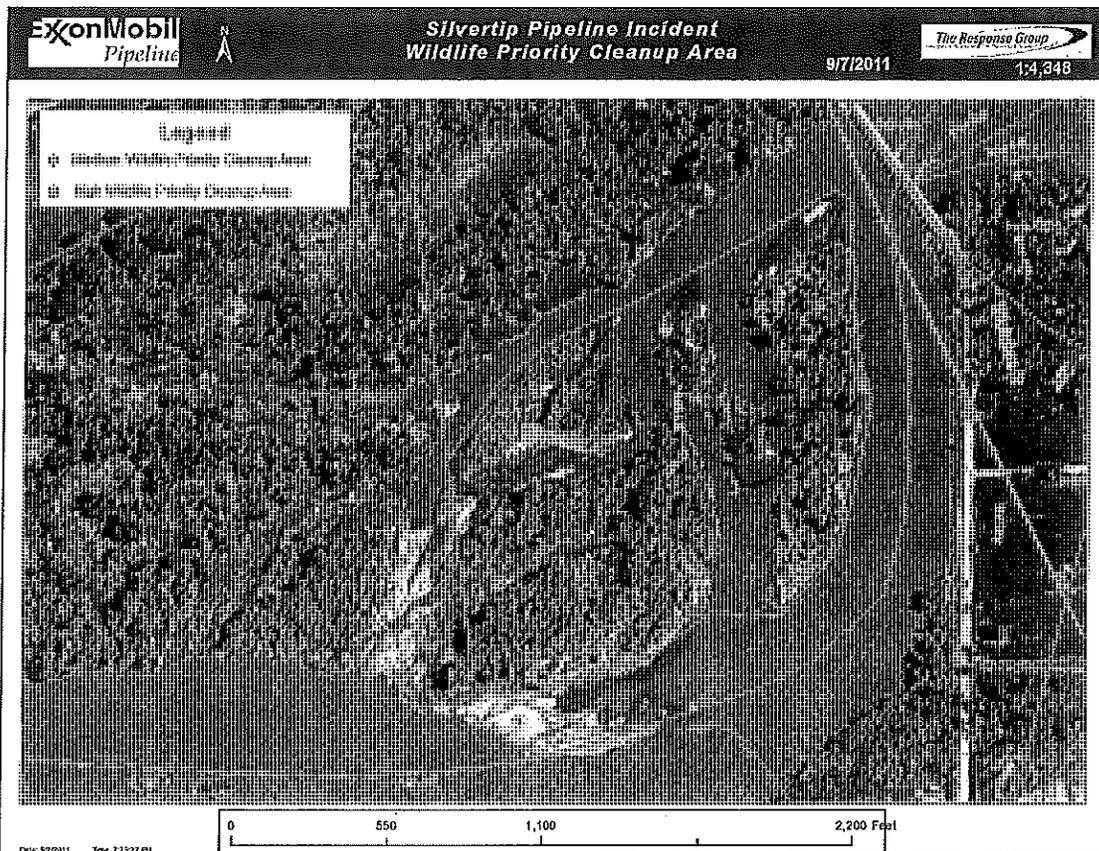
REPLY: SCAT and Operations

The Unified Command is aware of this area within SCAT Segments A28 and A29 and understands that operations within these segments have been completed by operations and passed by Re-SCAT efforts. We agree with the recommended treatment proposed above for this area. ExxonMobil will coordinate any future remediation activities at this site with MTDEQ. In the meantime, this segment will be flagged as a "Wildlife Exception" and excised within GIS maps from the Re-SCAT report that will be produced to close-out the segment. This document will be included as an attachment to the Area Transition Report to document the need for additional work within this segment beyond Re-SCAT and a POST should be used to re-close the segment once these wildlife concerns are addressed by operations teams.

GENERAL MESSAGE - SCAT AND OPERATIONS GUIDANCE FOR A28 AND A29 POOLS WITH SHEEN

TO: Jimmie James, RPIC Tom Livers, SOSC Steven Merritt, FOSS	POSITION: ExxonMobil Montano DEQ State On-Scene Coordinator EPA Federal On-Scene Coordinator
FROM: Wildlife Branch	POSITION: Wildlife Chief
SUBJECT: A28 and A29 Pools	DATE: 09.07.2011 TIME: 1008 -1330

MESSAGE: International Bird Rescue and Resource Advisors with the USFWS identified four pools with sheen in scat sector A-28 and 29. This segment has passed SCAT but requires further response to reduce wildlife exposure risks. The four pools are identified on the map below. All pools had sheen on the water, passed the "stick test," the oil was transferable to a nitrile glove, and animal tracks were present. GPS coordinates of these pools are available and are listed on the Oiled Wildlife Risk Assessment Form maintained by the Wildlife Branch. A map of these areas is attached below, with a priority ranking associated with the locations. The size of the high priority area is 30 ft by 15 ft, the moderate priority areas are 50 ft by 20 ft, 100ft by 7 ft, and 30 ft by 10 ft.

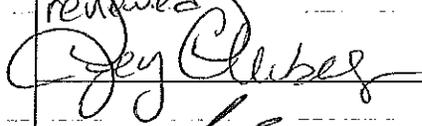
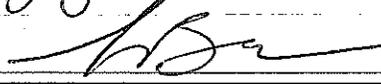


SIGNATURE: *Karen Nelson* Karen Nelson, Contaminants Specialist **POSITION:** USFWS – Wildlife Branch

REPLY: SCAT and Operations

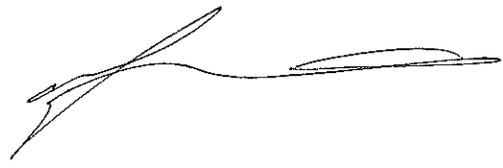
The Unified Command is aware of this area within SCAT Segments A28 and A29 and understands that operations within these segments have been completed by operations and passed by Re-SCAT efforts. We agree with the recommended treatment proposed above for this area. ExxonMobil will coordinate any future remediation activities at this site with MTDEQ. In the meantime, this segment will be flagged as a "Wildlife Exception" and excised within GIS maps from the Re-SCAT report that will be produced to close-out the segment. This document will be included as an attachment to the Area Transition Report to document the need for additional work within this segment beyond Re-SCAT and a POST should be used to re-close the segment once these wildlife concerns are addressed by operations teams.

45.6 9095
-108.64275

DATE: 09/08/2011	TIME: 11:40	SIGNATURE/POSITION:  Jimmie James, RPIC <i>renewed</i>  Tom Livers, SOSC  Steven Merritt, FOSC
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Closed by Nick Kautzman -

Pools contain sheen, after a field visit and research the sheen is likely not hydrocarbon related and does not pose a hazard to wildlife

 9/14/2011