

ExxonMobil Pipeline Company

**SCAT Area Transition Report
for A02**

Silvertip Pipeline Incident
Laurel, Montana

October 18, 2011



SCAT Area Transition Report for A02

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Laurel, Montana

Prepared for:
ExxonMobil Pipeline Company

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

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1. Executive Summary of Oil Removal Activities

This Shoreline Cleanup Assessment Technique (SCAT) Area Transition Report provides a summary of the SCAT surveys conducted to determine the extent of oiling along the riverbanks and floodplain within SCAT Area A02, 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 A02. This report is intended to be read and used in conjunction with the Summary of Assessment and Oil Removal Activities report.

1.1 Land Ownership and Access Issues

Figure 1 provides an aerial map of SCAT Area A02, 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 A02 is 12.8. There were no access issues for this area.

1.2 Cultural, Historic, and Natural Resource Constraints

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

Figure 2 summarizes the natural resources identified in this segment. International Bird Rescue and Resource Advisors from U.S. Fish and Wildlife Service conducted regular inspections of Area A02. Seven oiled Woodhouse's toads (*Bufo woodhousii*) were captured, cleaned, and released. Two lightly oiled spotted sandpipers (*Actitis macularius*) were located on the A02 portion of the 'A03-Island' and their condition was monitored; it was determined that the birds did not need to be captured and cleaned. One oiled painted turtle (*Chrysemys picta*) was observed at the 'turtle pond'; however, it could not be captured despite repeated efforts. Three deceased animals with no visible oiling were recovered; one grey catbird (*Dumetella carolinensis*), one Woodhouse's toad, and one black bullhead (*Ameiurus melas*). Two Wildlife Priority Cleanup Areas were identified. The 'turtle pond' was identified as a Wildlife Priority Area due to persistent sheen. Water and sediment was removed from the turtle pond, which diminished the amount of sheen. Sheen has not been noted recently in the turtle pond; however, water levels have fallen and water may no longer be in contact with oil-impacted soils in the upper bank. The turtle pond is scheduled to be checked for sheen after the next substantial rain event. Prior to and during cleanup, the turtle pond was regularly monitored for oiled wildlife, and Mylar streamers were installed to

haze birds from the area and prevent oiling. The second Wildlife Priority Cleanup Area was a debris pile on the tip of the 'A03- Island' that had a pool of oiled water associated with it. The debris pile and associated oiled water was a wildlife attractant that resulted in several oiled toads and two lightly oiled spotted sandpipers. The debris pile and underlying depression were treated to reduce the potential for wildlife oiling and are no longer considered a hazard. No active migratory bird nests were identified in Area A02.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area A02. The analytical results for the samples collected can be accessed through a publicly accessible database on the United States Environmental Protection Agency's (USEPA's) website. The approximate locations of samples collected within Area A02 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	LAMT08245E404	8/24/2011	Sediment	A02	45.655102	-108.749878
CTEH	LAMT081550516*	8/15/2011	Soil_River	50-A02L	45.656610	-108.752181
CTEH	LAMT081550515*	8/15/2011	Soil_River	50-A02L	45.656610	-108.752181
CTEH	LAMT081550514*	8/15/2011	Soil_River	50-A02L	45.656610	-108.752181
CTEH	LAMT081550513*	8/15/2011	Soil_River	50-A02L	45.656610	-108.752181
CTEH	LAMT081550512	8/15/2011	Soil_River	50-A02L	45.656610	-108.752181
CTEH	LAMT081550511*	8/15/2011	Soil_River	50-A02R	45.654951	-108.752236
CTEH	LAMT081550510*	8/15/2011	Soil_River	50-A02R	45.654951	-108.752236
CTEH	LAMT081550509*	8/15/2011	Soil_River	50-A02R	45.654951	-108.752236
CTEH	LAMT081550508*	8/15/2011	Soil_River	50-A02R	45.654951	-108.752236
CTEH	LAMT081550507	8/15/2011	Soil_River	50-A02R	45.654951	-108.752236
CTEH	LAMT0715IW102	7/15/2011	Water_Irrigation	LAMT_368_IW102	45.654047	-108.749533

Appendix A contains a summary of sample results with detections for this sample set. Detections with a result above the screening level are highlighted; for this set, there were 12 exceedances: 2 for vanadium, 2 for cadmium, 2 for benzo(a)anthracene, 2 for benzo(a)pyrene, 2 for benzo(b)fluoranthene, 1 for indeno(1,2,3-cd)pyrene, and 1 for arsenic.

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 A02 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area A02.

1.5 Applicable Compiled Treatment Recommendations

The SCAT team developed compiled treatment recommendations (CTRs) providing approved treatment methods (ATMs) for each oiling zone identified during the initial SCAT surveys ([CTR No. 3](#) and [CTR No. 17](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area A02 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 A02 and developed a Pre-Inspection Survey Transmittal (PIST) associated with the right bank within Area A02, which is presented in Appendix C.

1.8 Post-Inspection Survey Transmittal

A Post-Inspection Survey Transmittal (POST) was not conducted for this area.

1.9 Summary of Final SCAT Surveys

Figure 5 shows the oiling conditions within Area A02 following completion of oil removal activities. The SCAT team performed final surveys of the left and right banks within SCAT Area A02 to confirm the agreed-upon cleanup endpoints identified in the

applicable CTRs had been achieved. The final SCAT survey documentation is presented in Appendix E.

1.10 SCAT Area Conclusions

Based on the final SCAT surveys performed on the left and right banks within Area A02, no further treatment is recommended for these segments. SCAT Segment Sign-Off Forms are included as Appendix F.

Two Wildlife Priority Cleanup Areas were identified and remediated in A02. To mitigate the persistent sheen found in the 'turtle pond,' water and sediment were removed from the pond. The turtle pond was subsequently checked after a rain event and no evidence of sheen was noted on the water. The debris pile on the tip of 'A-3 Island' was taken apart by heavy machinery, oily material was removed and disposed of offsite, sand and gravel material from adjacent areas was used to fill in the depressed area beneath the pile, and the pile was reconstructed with the remaining clean debris. 'Sign-off ' on the debris pile is found in Appendix G; the exception memo, which was written and signed on August 30, 2011, was signed again on September 23, 2011 upon completion of the work. Appendix G includes an email from the MDEQ that documents the work was completed to their satisfaction.



**SCAT Area Transition
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Silvertip Pipeline Incident
Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for A02

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
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Laurel, Montana

SCAT Area Transition Report for A02

Prepared for:

Unified Command

Date

Unified Command – FOSC



**SCAT Area Transition
Report for A02**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for A02

Prepared for:

Unified Command

Date

Unified Command – MDEQ

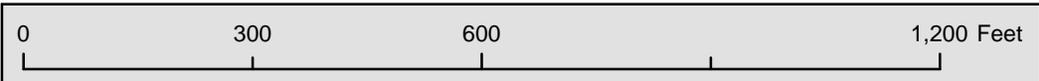
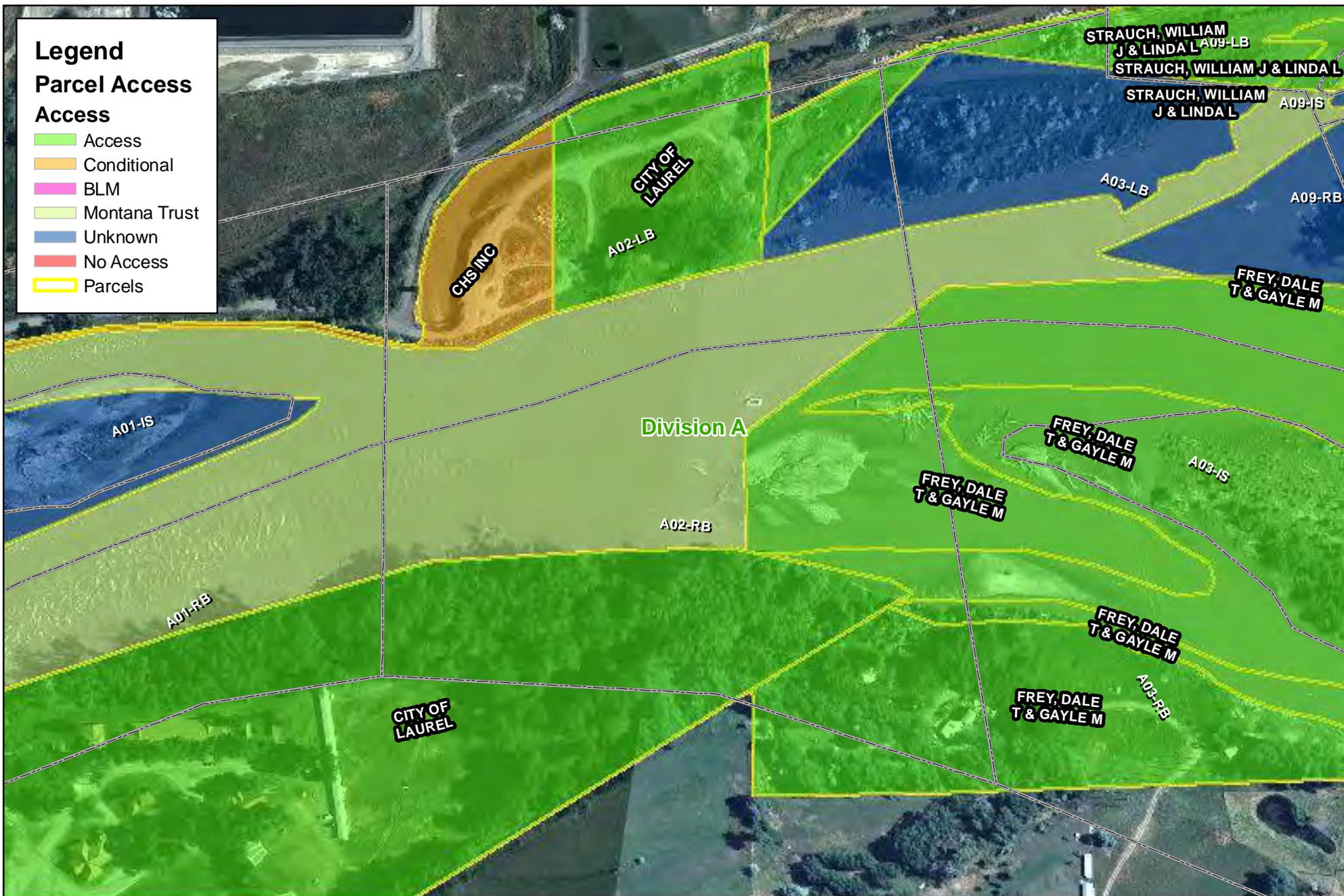


Figure 1

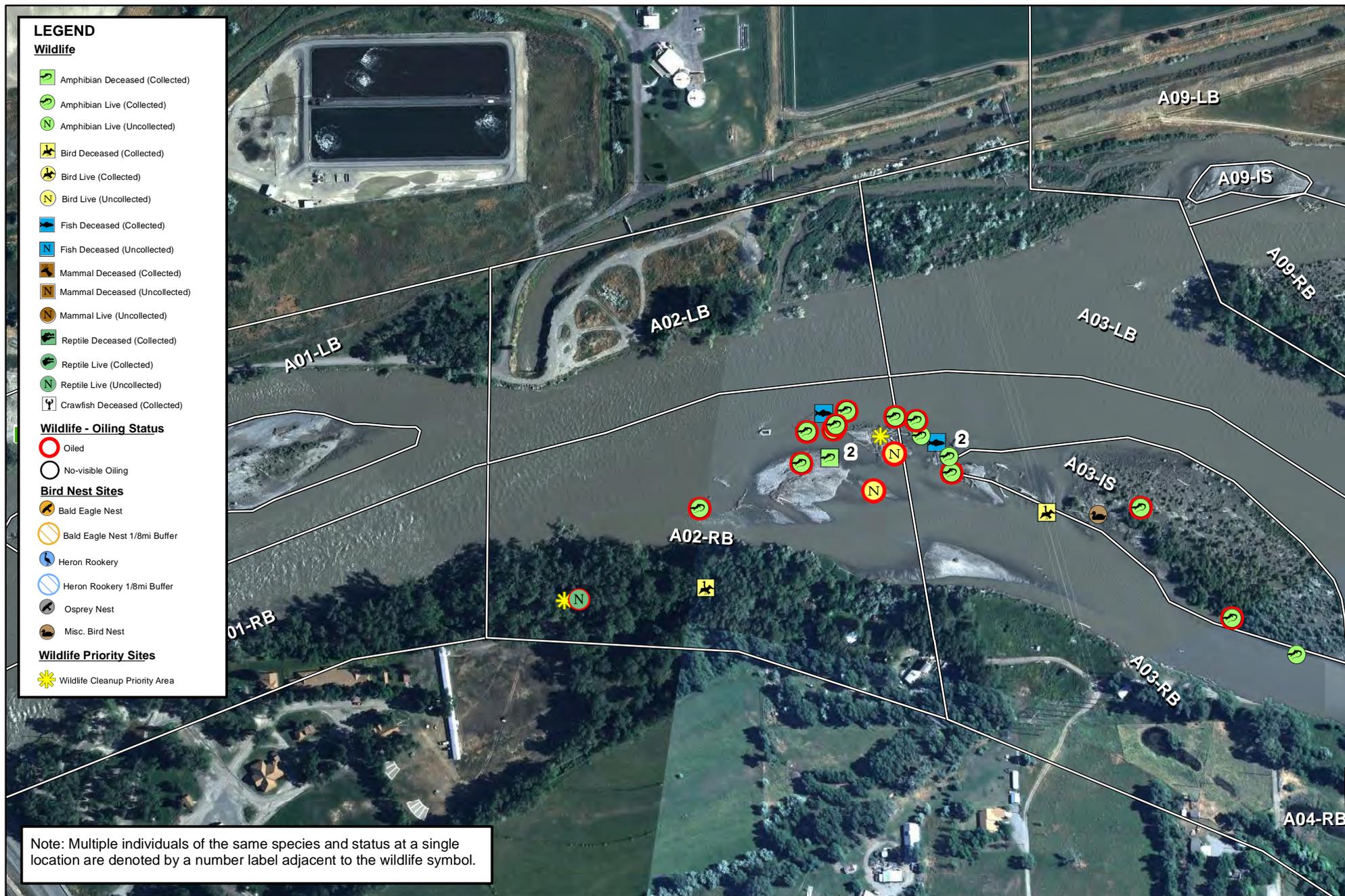
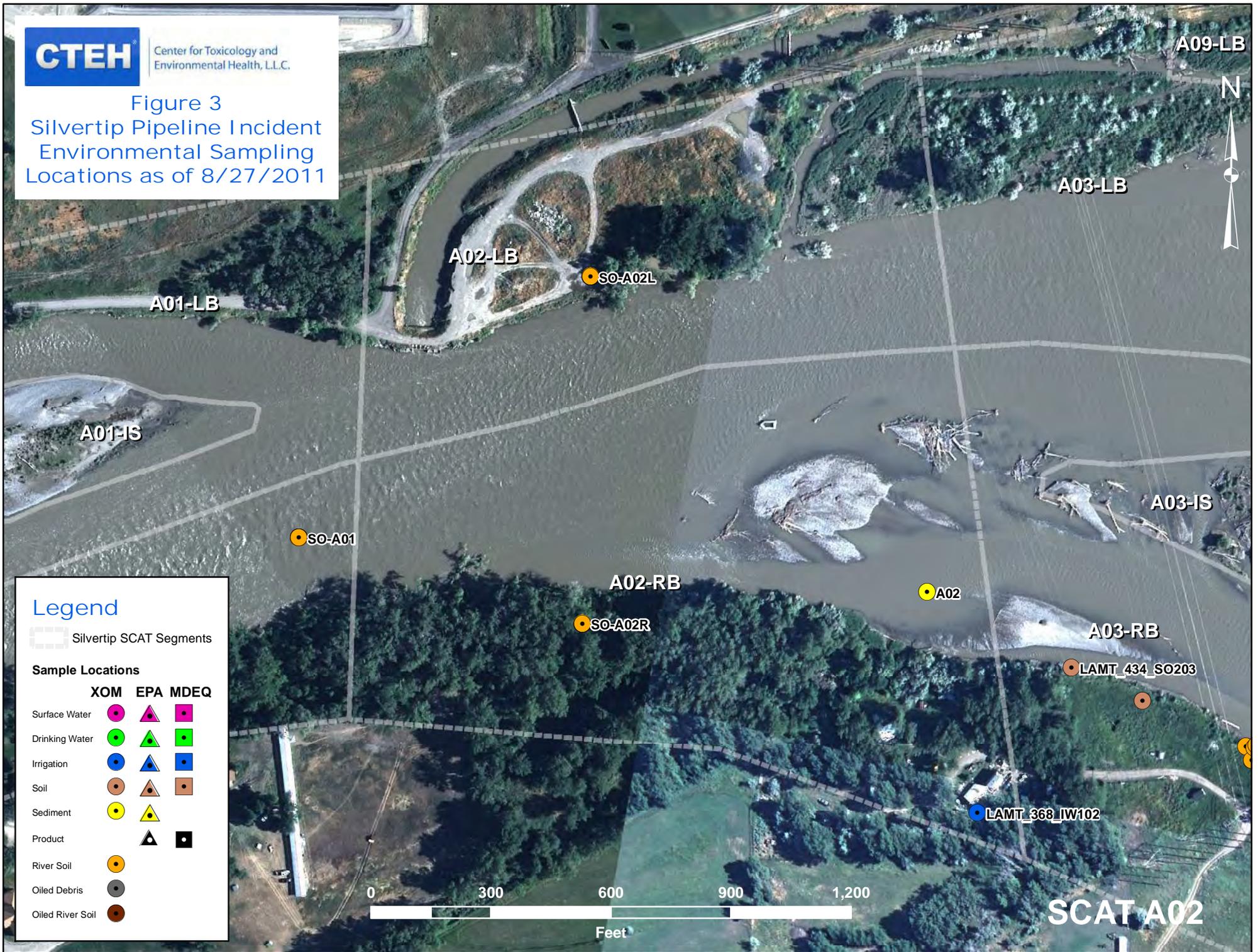


Figure 2
Wildlife Resources



Center for Toxicology and Environmental Health, L.L.C.

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



Legend

Silvertip SCAT Segments

Sample Locations

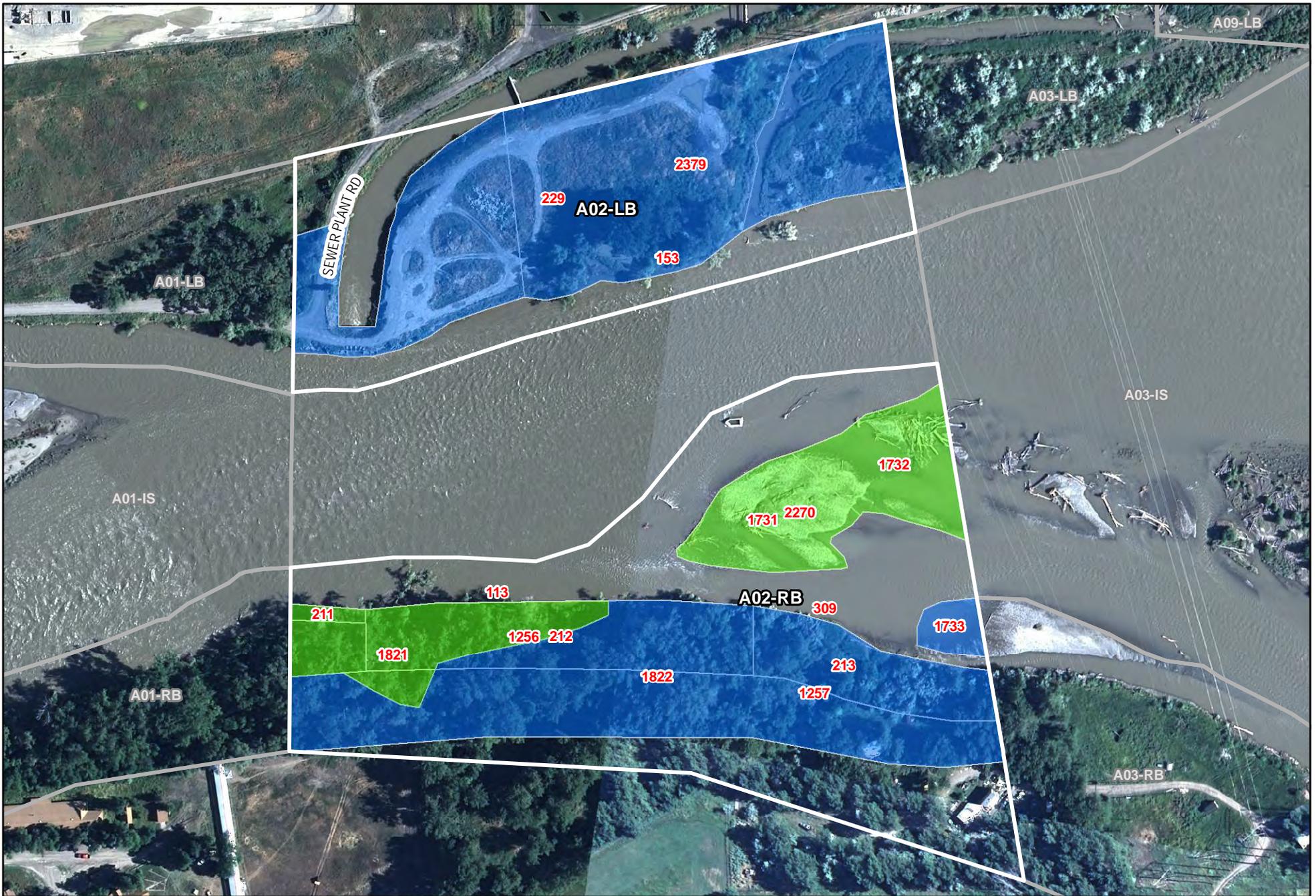
	XOM	EPA	MDEQ
Surface Water			
Drinking Water			
Irrigation			
Soil			
Sediment			
Product			
River Soil			
Oiled Debris			
Oiled River Soil			



SCAT A02



 <p>9999 Oiling Zone ID Red Heavy Oiling Orange Moderate Oiling</p>	<p>Yellow Light Oiling Green Very Light Oiling Blue No Oil Observed</p>	<p>Figure 4 - Maximum SCAT Observations For SCAT Area: A02</p> <p>160 0 160 320 Feet</p>	
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	9999 Oiling Zone ID	Light Oiling
	Heavy Oiling	Very Light Oiling
	Moderate Oiling	No Oil Observed

Figure 5 - Final SCAT Observations
For SCAT Area: A02



Appendix A

Sample Detection Summary



Detections in Samples Collected in SCAT Area A02

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
LAMT0715IW102	07/15/2011	Field	Water_Irrigation	EPA 8270 by SIM	Acenaphthene	Y	0.19	670		ug/L	no
LAMT0715IW102	07/15/2011	Field	Water_Irrigation	EPA 8270 by SIM	Fluorene	Y	0.089	1100		ug/L	no
LAMT0715IW102	07/15/2011	Field	Water_Irrigation	EPA 8270 by SIM	Naphthalene	Y	0.9	100		ug/L	no
LAMT0815SO507	08/15/2011	Field	Soil_River	EPA 6010	Arsenic	Y	31.4	40		mg/kg	no
LAMT0815SO507	08/15/2011	Field	Soil_River	EPA 6010	Barium	Y	220	820		mg/kg	no
LAMT0815SO507	08/15/2011	Field	Soil_River	EPA 6010	Cadmium	Y	1.8	3.8		mg/kg	no
LAMT0815SO507	08/15/2011	Field	Soil_River	EPA 6010	Chromium	Y	34.9	280		mg/kg	no
LAMT0815SO507	08/15/2011	Field	Soil_River	EPA 6010	Lead	Y	14.2	400		mg/kg	no
LAMT0815SO507	08/15/2011	Field	Soil_River	EPA 9060	Mean Total Organic Carbon	Y	9640	NA		mg/kg	no
LAMT0815SO507	08/15/2011	Field	Soil_River	EPA 6010	Nickel	Y	26.7	150		mg/kg	no
LAMT0815SO507	08/15/2011	Field	Soil_River	EPA 9060	RSD%	Y	10	NA		%	no
LAMT0815SO507	08/15/2011	Field	Soil_River	MADEP EPH	Total Extractable Hydrocarbons	Y	39.4	200		mg/kg	no
LAMT0815SO507	08/15/2011	Field	Soil_River	EPA 9060	Total Organic Carbon	Y	10500	NA		mg/kg	no
LAMT0815SO507	08/15/2011	Field	Soil_River	EPA 6010	Vanadium	Y	60.6	39		mg/kg	YES
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270 by SIM	Anthracene	Y	148	2000000		ug/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 6010	Arsenic	Y	28.5	40		mg/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 6010	Barium	Y	291	820		mg/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270 by SIM	Benzo(a)anthracene	Y	429	200		ug/kg	YES
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270	Benzo(a)anthracene	Y	473	200		ug/kg	YES
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270	Benzo(a)pyrene	Y	430	20		ug/kg	YES
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270 by SIM	Benzo(a)pyrene	Y	364	20		ug/kg	YES
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270	Benzo(b)fluoranthene	Y	653	200		ug/kg	YES
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270 by SIM	Benzo(b)fluoranthene	Y	519	200		ug/kg	YES
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270 by SIM	Benzo(k)fluoranthene	Y	210	2000		ug/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 6010	Cadmium	Y	3.9	3.8		mg/kg	YES
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 6010	Chromium	Y	34	280		mg/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270	Chrysene	Y	529	20000		ug/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270 by SIM	Chrysene	Y	439	20000		ug/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270 by SIM	Fluoranthene	Y	913	300000		ug/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270	Fluoranthene	Y	731	300000		ug/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	Y	202	200		ug/kg	YES



Detections in Samples Collected in SCAT Area A02

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 6010	Lead	Y	380	400		mg/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 9060	Mean Total Organic Carbon	Y	29800	NA		mg/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 6010	Nickel	Y	32.2	150		mg/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270	Phenanthrene	Y	398	NA		ug/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270	Pyrene	Y	596	200000		ug/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 8270 by SIM	Pyrene	Y	756	200000		ug/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 9060	RSD%	Y	12.4	NA		%	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 6010	Silver	Y	0.57	8.9		mg/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 9060	Total Organic Carbon	Y	34200	NA		mg/kg	no
LAMT0815SO512	08/15/2011	Field	Soil_River	EPA 6010	Vanadium	Y	63	39		mg/kg	YES
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 6010	Arsenic	Y	25	9.8		mg/kg	YES
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 6010	Barium	Y	150	NA		mg/kg	no
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 6010	Cadmium	Y	1.3	0.99		mg/kg	YES
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 6010	Chromium	Y	24.3	43.4		mg/kg	no
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 6010	Lead	Y	9.6	35.8		mg/kg	no
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 9060	Mean Total Organic Carbon	Y	8900	NA		mg/kg	no
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 7471	Mercury	Y	0.037	0.18		mg/kg	no
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 6010	Nickel	Y	19.6	22.7		mg/kg	no
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 9060	RSD%	Y	3.3	NA		%	no
LAMT0824SE404	08/24/2011	Field	Sediment	MADEP EPH	Total Extractable Hydrocarbons	Y	18.5	200		mg/kg	no
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 9060	Total Organic Carbon	Y	9340	NA		mg/kg	no
LAMT0824SE404	08/24/2011	Field	Sediment	EPA 6010	Vanadium	Y	39.9	NA		mg/kg	no



Appendix B

Initial SCAT Survey Forms
and Sketches

DB/A/SC

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 11-Jul-2011	Time (24h): std / daylight 1108 hrs to 1109 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: A2 <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	<i>[Signature]</i>
Tom Freeman		Polaris	<i>[Signature]</i>
Andrew Johnson		USCG	
Travis Olson		USCG	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 272 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 160m 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

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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		272	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

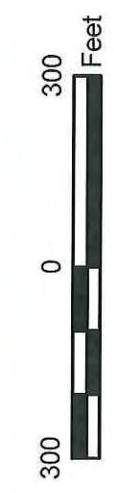
Cleanup Recommendations: No oil observed along river channel margin

(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 A2 Left Bank
 11-Jul-2011



Legend
 Oil Zones
 Segment Boundaries

DB/G/Sc

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>A2</u> (Left Bank) Right Bank / Island		<u>16/07/11</u>	<u>0813</u> hrs to <u>0845</u> hrs	low - mean - <u>(bankfull)</u> overbank
Operations Division: <u>A</u>				falling - <u>steady</u> - rising
Survey by: <u>(Foot) / ATV / Boat / Helicopter / Overlook /</u>		<u>(Sun)</u> Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u> </u> deg C

2 SURVEY TEAM #	name	organization	contact phone number
	<u>Chelsea Murphy</u>	<u>Cardno ENTRIX</u>	<u>775-313-3976</u>
	<u>Joe Boyle</u>	<u>Cardno ENTRIX</u>	<u>386-204-6858</u>
	<u>Bob Roll</u>	<u>MT DEP</u>	<u>208-971-8274</u>
	<u>Juan Patino</u>	<u>USCG</u>	<u>251-680-9215</u>

3 SEGMENT Total Segment/Reach Length 300 m Segment/Reach Length Surveyed ~220 m

Start GPS: LATITUDE 45.651032 deg. min. LONGITUDE 100.75329 deg. min. Datum:

End GPS: LATITUDE 45.65159 deg. min. LONGITUDE 100.75088 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 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

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 160 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 None - to get back into seg. from A1

Oiled trees/shrubs Y/N River Current strong Y/N Other Features: @ end of A3 = private property

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		S	P	S	220	50	Ø														P	veg/mixed

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

- only 1 zone (A) - NOD
 - In adjacent segment (A1) Exxon crews working on pipeline.

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

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

PIC # 50-53

DB/Cr

1. GENERAL INFORMATION		Date (dd/mm/yyyy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>A2</u> (Left Bank/Right Bank / Island)		<u>16/01/11</u>	<u>0813</u> hrs to <u>0845</u> hrs	low - mean <u>bank full</u> overbank falling - steady - rising
Permit/Division: <u>A</u>		Survey by: <u>Foot/ATV/Boat/Helicopter/Overlook/</u>	(Sun) Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- <u> </u> deg C
2. SURVEY TEAM		name organization contact phone number		
<u>Chelsea Murphy</u>		<u>Cardno ENTRIX</u>	<u>775-313-3976</u> <u>CLW</u>	
<u>De Byle</u>		<u>Cardno ENTRIX</u>	<u>386-204-1888</u>	
<u>Rob Roll</u>		<u>MT DECP</u>	<u>208-971-8274</u> <u>Rob S. All</u>	
<u>Juan Pablo</u>		<u>USCG</u>	<u>251-680-9215</u>	

3. SEGMENT Total Segment/Reach Length 300 m Segment/Reach Length Surveyed ~200 m

Start GPS: LATITUDE 45.152289 min. LONGITUDE 108.752289 min. Datum:

End GPS: LATITUDE 45.152289 min. LONGITUDE 108.750000 min.

4A. RIVER BANK TYPE SELECT only one primary (P) shoreline type and any number of secondary (S) types. CIRCLE in case of OIL UP.

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

Sediment Bank: Clay/Mud P Sand Mixed Pebbles/Cobble S Boulder Faal/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

Cliff or Bluff: Est Height m canyon manmade meander S confined or leveed Substrate Type: Mud

Slope: 5 (-5°) (15°) (30°) straight P braided oxbow flood plain valley Forested (Vegetated) / Bare

4C. RIVER CHANNEL CHARACTER select as appropriate

est. width: <1m 1-10m 10-100m 100m 110 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) Dotted Y (N) amount bags or trucks access restrictions None - to get back into seg. from A1

Oiled trees/shrubs Y (N) River Current strong Y (N) Other Features: @ end of A3 = private property

6. SURFACE OILING CONDITIONS begin with "A" in the lowest tidal zone - circle the zones 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	OT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
A		S	P	S	220	50	0														P	veg/mixed

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/aesthetic/cultural/economic considerations - shore zone data and wildlife observations - cleanup recommendations

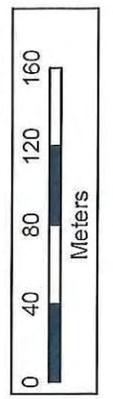
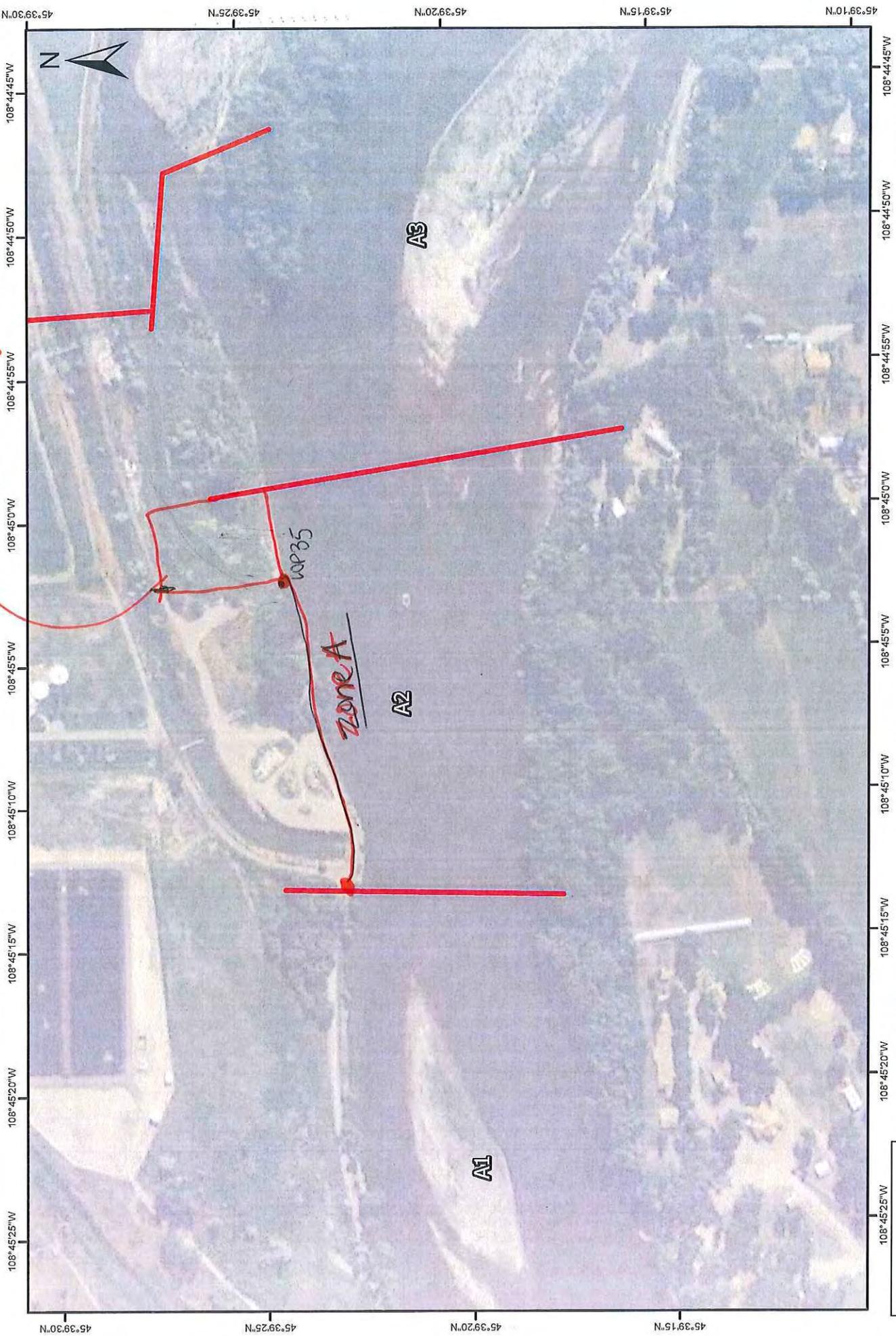
- only 1 zone (A) - NOD
 - In adjacent segment (A1) Exxon crews working on pipeline.

(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 Tapes Yes/No (Tape #)

PIC # 60-53

→ Couldn't finish segment due to
cranes w/ high water



COMMENTS:

only 1 zone - N00

DATE: 7/16/11

TEAM: Chelsea #6

A02 - (U/R/I)??

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 1108 hrs to 1109 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: A2 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	<i>[Signature]</i>
Tom Freeman		Polaris	<i>[Signature]</i>
Andrew Johnson		USCG	
Travis Olson		USCG	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 188 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 1-10 m 10-100 m >100m 135m est. water depth: < 1m 1-3 m 3-10 m >10 m _____ 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		188	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

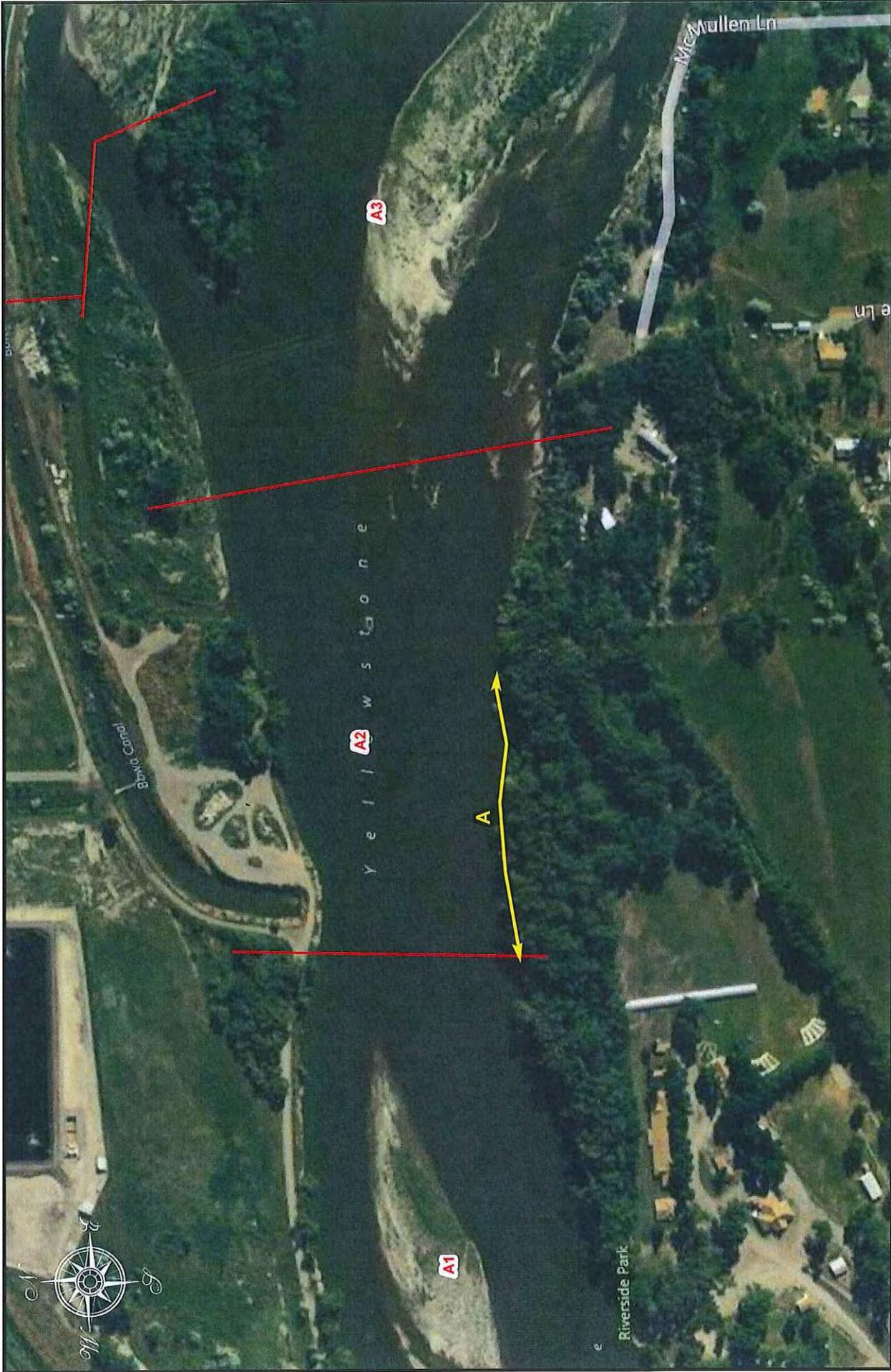
Oiled Band Heights: Zone A - 40cm

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 A2 Right Bank

11-Jul-2011

Legend

Oil Zones

Segment Boundaries



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>A2</u>	Left Bank / Right Bank / Island	<u>7/15/11</u>	<u>1315</u> hrs to <u>1420</u> hrs	low - mean <u>bankfull</u> overbank
Operations Division: <u>A</u>				falling <u>steady</u> rising
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>20</u> deg C

2 SURVEY TEAM #	name	organization	contact phone number
<u>115</u>	<u>Chelsea Murphy</u>	<u>Cardno ENTRIX</u>	<u>(775) 313 3976</u>
	<u>Joe Bayle</u>	<u>Cardno ENTRIX</u>	<u>(354) 214 6858</u>
	<u>Nick Taylor</u>	<u>MTFWP</u>	<u>(406) 657 3443</u>
	<u>Juan Patino</u>	<u>USCG</u>	<u>(251) 680 9215</u>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed ~400 m

Start GPS: LATITUDE 45.65457 deg. _____ min. LONGITUDE 108.7532 deg. _____ min. Datum: WGS84

End GPS: LATITUDE 45.65772 deg. _____ min. LONGITUDE 108.75028 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: S

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 S confined or leveed _____

Sloped <5 (>5°)(15°)(30°) straight _____ braided P oxbow _____ flood plain valley _____

Substrate Type: Mud

Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 160 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 heavy underbrush + marshland

Oiled trees/shrubs Y(N) River Current strong Y(N) Other Features: wooded and difficult to navigate

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			S	P	40	6	30	S	P	S			P									H2O/mud
B			S	P	200	30	18			P	S		P									H2O/mud
C			S	P	160	30	13	S		P	S		P									H2O/mud

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

It is recommended that clean up efforts focus on absorbing oil within stagnant water pools and hand removal of oiled debris and vegetation.

→ Zone A, B & C - all the same recommendation - hand removal of small woody debris + use of absorption pads/sharc to clean off oil off pooled H2O

~~add site oiling designation~~ 7/15/11

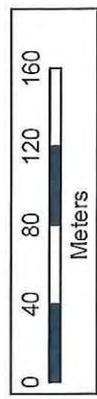
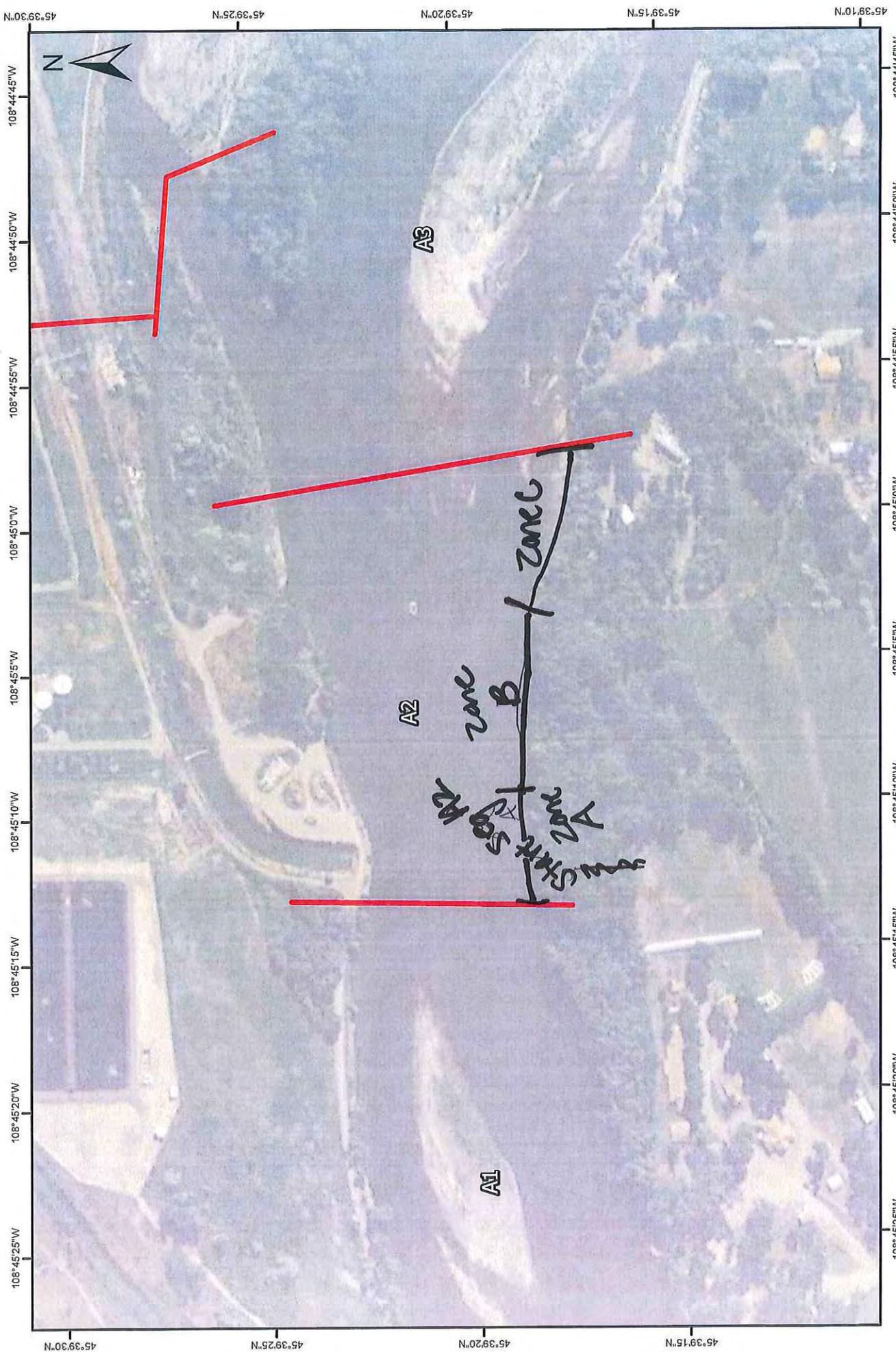
(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)

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

*

211
212
213

#40 #49



COMMENTS: Access issues w/ veg
+ getting heavy equipment in b
dense forest.

DATE: 7/15/11
TEAM: Chelsea

A02 -
RB (LR/I)??

DB/10/Sc

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 18-Jul-2011	Time (24h): std / daylight 0911 hrs to 0912 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: A02 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>32</u> deg C

2 SURVEY TEAM # 1 & 2	name	organization	contact phone number
Andrew Milanes	<i>ANM</i>	Polaris	
Bruce Kvam	<i>not approved EBK</i>	Polaris	
Pete Lee	<i>PL</i>	Polaris	
Andy Johnson	<i>AJ</i>	USCG	
Travis Olson	<i>TO</i>	USCG	
Aaron Anderson	<i>AA</i>	MTDEQ	
Darrick Turner	<i>Larry Alheim</i>	MTDEQ	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 165 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 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 160m 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	
309 A			X		165	1	45			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 - shoreline biota and wildlife observations - cleanup recommendations

Oil band heights: Zone A - 20cm

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 Frames 4668-4672 (Milanes)



SCAT Teams 1 & 2 Survey

Segment A02 - Right Bank

18 July 2011



Legend

— Segment Boundaries

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 06/08/11	Time (24h): std / daylight 0925 hrs to 1040 hrs	Water Level low - mean - <u>(bankfull)</u> - overbank (falling) - steady - rising
Segment/Reach ID: A2 Left Bank / <u>(Right Bank)</u> / Island				
Operations Division:				
Survey by: <u>(Foot)</u> / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- 30 deg C	

2 SURVEY TEAM # 4	Name	Organization	Signature
Ken Frazer		MFW&P	<i>[Signature]</i>
John Davis		USCG	<i>[Signature]</i>
Bruce Kvam		Polaris Applied Sciences, LLC	<i>[Signature]</i>

3 SEGMENT Total Segment/Reach Length 340 m Segment/Reach Length Surveyed 340 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: 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 (X) braided _____ oxbow _____ flood plain valley XS Forested/ Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10 m 10-100 m >100m 1 5 2 m est. water depth: <1 m (1-3 m) 3-10 m >10 m _____ 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 3 bags or _____ trucks access restrictions A1 (A3)

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	187	32	<1			(X)	X	X	(X)				X					Shrubs, woody debris, backwater
B				x	340	58															X	

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

Treatment Recommendations*:

Zone A: Target areas that have been flagged. Cut and remove oil coated vegetation smaller than 1" diameter. Remove oil coated debris smaller than 4" diameter. Wipe larger live oil-coated trees and debris larger than 4" diameter with sorbent.

Zone B: No further treatment required.

Dead, but unoiled bird was found and reported to Wildlife Hotline (800-259-0596). Zone A and Zone B parallel each other and thus combined lengths are longer than segment length (see sketch map).

* Refer to current (7-30-11 version) treatment recommendations.

Sketch (Yes) / No Photos (Yes) / No Frames 016-022 Photographer Bruce Kvam

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION

Segment/Reach ID: A02 Left Bank / Right Bank / Island Island Date (dd/mm/yy) 2010811 Time (24h): std / daylight 0900 hrs to 0915 hrs Water Level low - mean - bankfull - overbank

Operations Division: A Survey by: Foot / ATV / Boat / Helicopter / Overlook / Sup / Clouds / Fog / Rain / Snow / Windy / Calm Air Temp +/- deg C

2 SURVEY TEAM # 3

Name	Organization	Signature
<u>Todd Farrar</u>	<u>Polaris</u>	<u>Todd Farrar</u>
<u>Lisa Geremacher</u>	<u>Entrix</u>	<u>Lisa Geremacher</u>
<u>Jeffrey Herrick</u>	<u>DEQ</u>	<u>Jeffrey Herrick</u>
<u>Rachel Thompson</u>	<u>EPA</u>	<u>Rachel Thompson</u>
<u>Ethan Stapp</u>	<u>DNRC</u>	<u>Ethan Stapp</u>

3 SEGMENT Total Segment/Reach Length m Segment/Reach Length Surveyed 287 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 P Boulder Peat/Organic Vegetated Bank: Wooded Upland:

Sediment Flat: Clay/Mud Sand S Mixed/Coarse Other: BARE 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:

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 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 100 bags or trucks access restrictions Island

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)		
					Length	Width	Distrib.															
	MS	LB	UB	OB	m	m	%	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
<u>A</u>		<u>X</u>			<u>137</u>	<u>39</u>															<u>X</u>	
<u>B</u>		<u>X</u>			<u>69</u>	<u>68</u>	<u>1</u>			<u>P</u>	<u>S</u>						<u>P</u>				<u>X</u>	<u>Wood Det</u>
<u>C</u>		<u>X</u>			<u>31</u>	<u>21</u>															<u>X</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 - NOD - NFT

Zone B - OPERATIONAL CLEANUP CREW IN PROGRESS. ESTIMATED BAGS GENERATED 100 bags. CONTINUE CLEANUP RECCOMENDED

Zone C - NOD - NFT.

Sketch Yes / No Photos Yes / No Frames Photographer

pa 2 of 2

20/2011 9:05 am 8/20/2011 1:57 pm 1 pm

A02
SCAT3
20 Aug 2011

Sewer Plant #1

A02-LB

Zone B

Zone A

A02-RB

Zone C

A03-LB

A03-IS

A03-RB

SEGMENT
A02

GOO

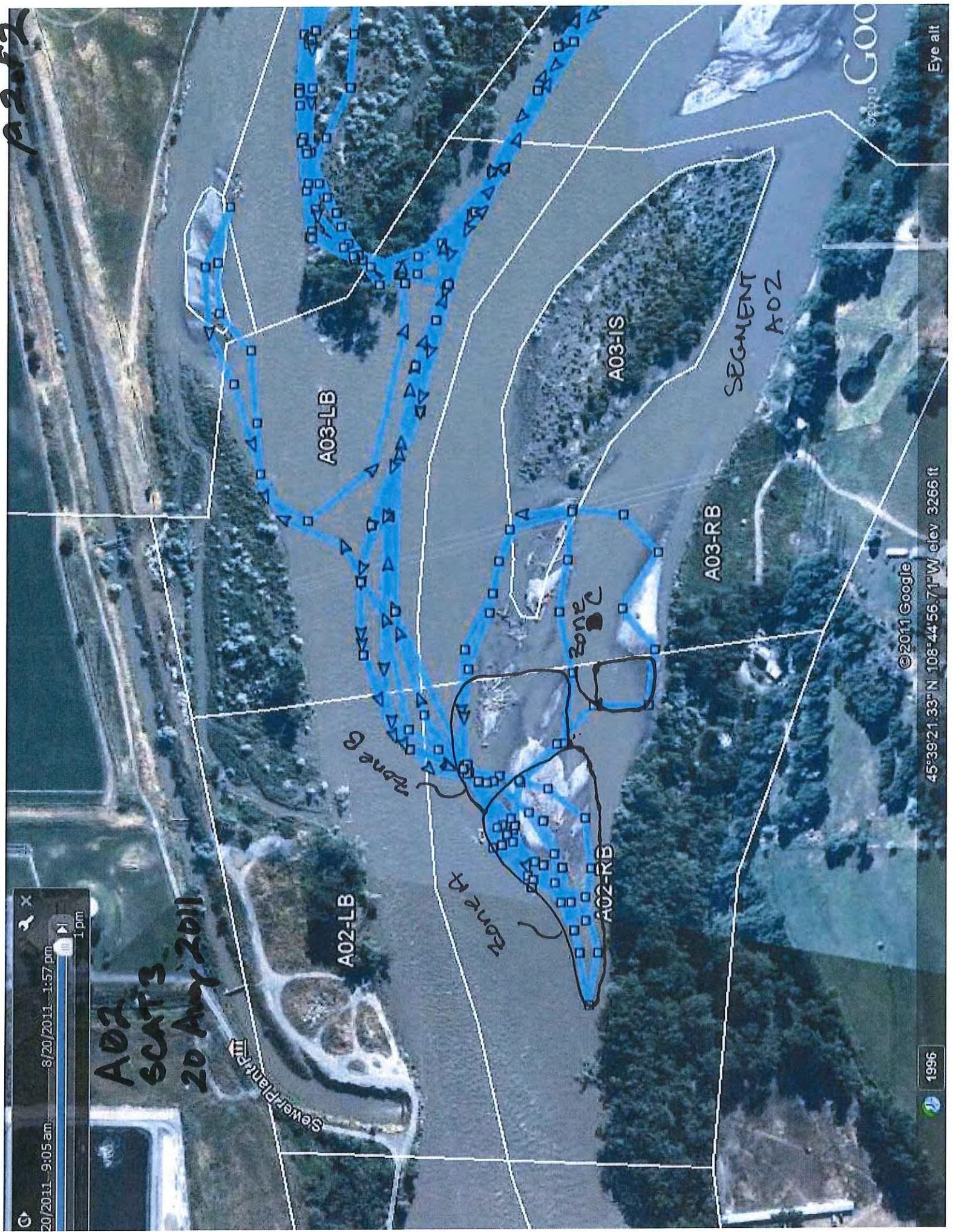


1996

©2011 Google

45°39'21.33" N 108°44'56.71" W elev 3266 ft

Eye alt





Appendix C

Pre-Inspection Survey Transmittal

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 8/15/11

Segment: A2RB

Team: SCAT Liaison Ray McKelvey

Signed: 

SCAT Liaison John Spenik

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 A2RB is ready for final re-scat inspection. This segment has a claimant: Dale and Gale Frey**



Appendix D

Post-Inspection Survey Transmittal

**A Post-Inspection Survey
was not conducted for this area**



Appendix E

Final SCAT Survey Forms
and Sketches

DB/G

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>A2</u>	Left Bank / Right Bank / Island	<u>23/09/2011</u>	<u>10:00</u> hrs to <u>10:30</u> hrs	<u>low</u> - mean - bankfull - 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 / Windy / Calm			Air Temp: <u>1-35</u> deg C

2 SURVEY TEAM # <u>2</u>	Name	Organization	Signature
	<u>Herb Gabureku</u>	<u>Polaris</u>	<u>[Signature]</u>
	<u>Sheila McAtee</u>	<u>DNRC</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length 302 m Segment/Reach Length Surveyed 195 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 P 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: fixed

Sloped: (>5°)(15°)(30°) straight P 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 160m 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

2379

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>	<u>195</u>	<u>75</u>														<u>X</u>	<u>3</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

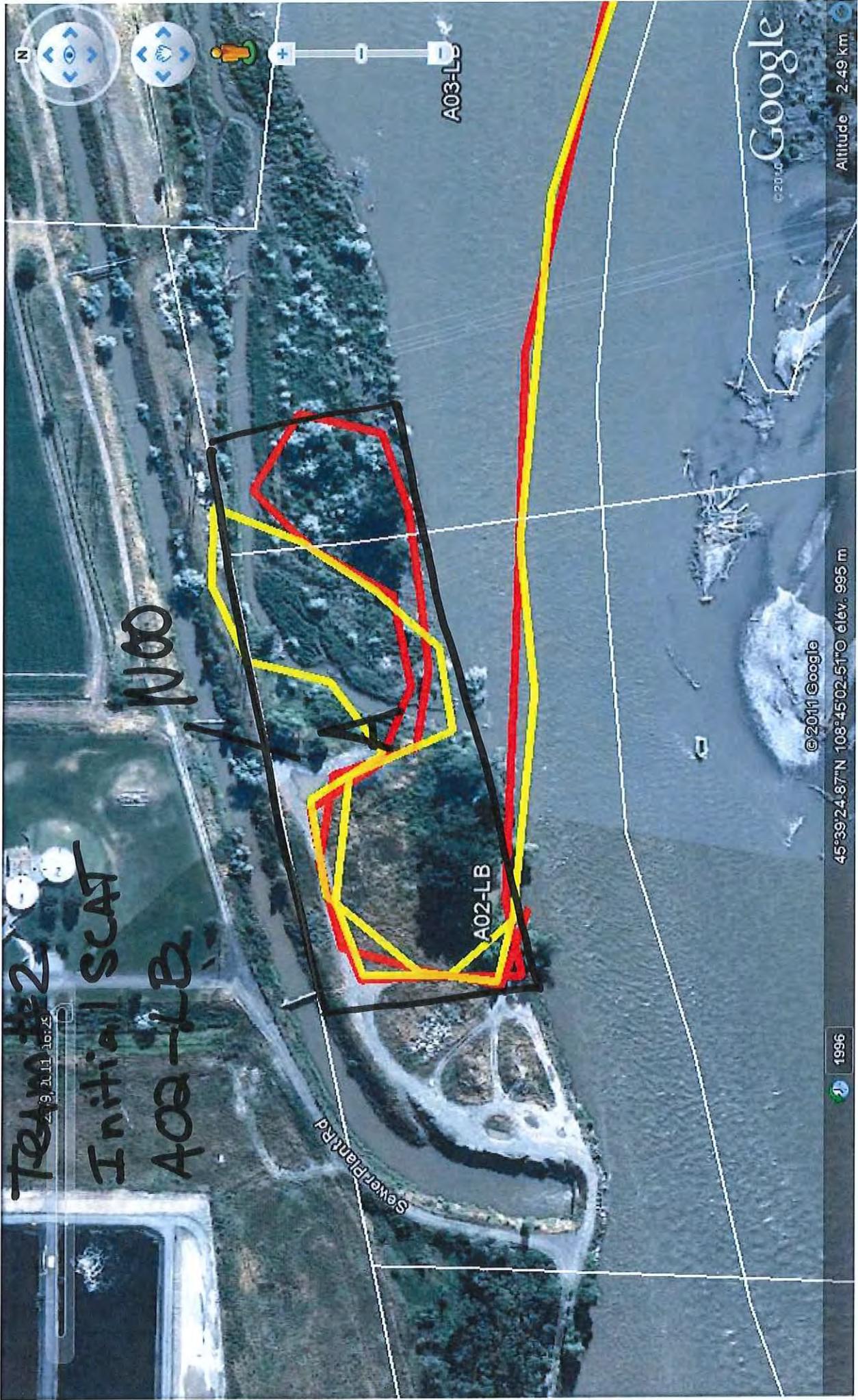
Overbank Survey Required Y N Overbank Survey Completed Y N Shoreline Survey Completed Y N

A: NOO Initial SCAT

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

23/09/2011

2/2



Team #2
Initial SCAT
A02-LB

W00

A02-LB

A03-LB

Sewerplant Rd

© 2011 Google
45°39'24.87"N 108°45'02.51"W elev. 995 m

Google

Altitude 2.49 km

1996

DB/6

A

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>A 2</u>	Left Bank / Right Bank / Island	<u>24-8-11</u>	<u>9:00</u> hrs to <u>9:45</u> hrs	low - mean bankfull - overbank
Operations Division: <u>A</u>				<u>(P)</u> falling - steady - rising
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /	<u>(S)</u> Clouds / Fog / Rain / Snow / Windy / Calm			Air Temp +/- <u>30</u> deg C

2 SURVEY TEAM # <u>1</u>	Name	Organization	Signature
	<u>Charly Pean</u>	<u>Canadian ENTRI</u>	<u>Charly Pean</u>
	<u>Robert Ashton</u>	<u>M D F O</u>	<u>Robert Ashton</u>
	<u>Nathan Hammond</u>	<u>Canadian ENTRI</u>	<u>Nathan Hammond</u>
	<u>Linda Watson</u>	<u>EPA</u>	<u>Linda Watson</u>

3 SEGMENT Total Segment/Reach Length 340 m Segment/Reach Length Surveyed 340 m

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

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

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

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

Sediment Bank: Clay/Mud _____ Sand S Mixed P Pebble/Cobble f 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 _____ 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 340m >10m _____ m

shoal(s) present (Y) / N point bar present (Y) / N bar-shoal substrate: (S) / (P) 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)			
					Length	Width	Distrib.	THICKNESS					CHARACTER									
	MS	LB	UB	OB	m	m	%	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
<u>A</u>				<u>X</u>	<u>155</u>	<u>40</u>	<u><1</u>			<u>S</u>	<u>P</u>	<u>S</u>					<u>P</u>					
<u>B</u>				<u>X</u>	<u>340</u>	<u>45</u>	<u>0</u>															<u>K</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	OILED ZONE	SUBSURFACE OIL CHARACTER					WATER TABLE	SHEEN COLOUR	CLEAN BELOW	SUBST. TYPE(S)
							SAP	OP	PP	OR	OF				
	MS	LB	UB	OB	cm	cm-cm						cm	B, R, S, N	Yes / 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

Reseat - Isolate any of steel + coal ug + debris. Hot shot + cover p. up + hoist all coal (transferable) material. No further treatment. Small area of steel in small pool of shales with

Sketch (Y) / No Photos (Y) / No Frames _____ Photographer _____

0:14 am

5 pm

5 pm

5 pm

TEAM 1
8/24/11
A02 RB

A2

ZONE A
VERY LIGHT

ZONE B
N00

N09

N08

N04

N06

N02

N03

N05

N07

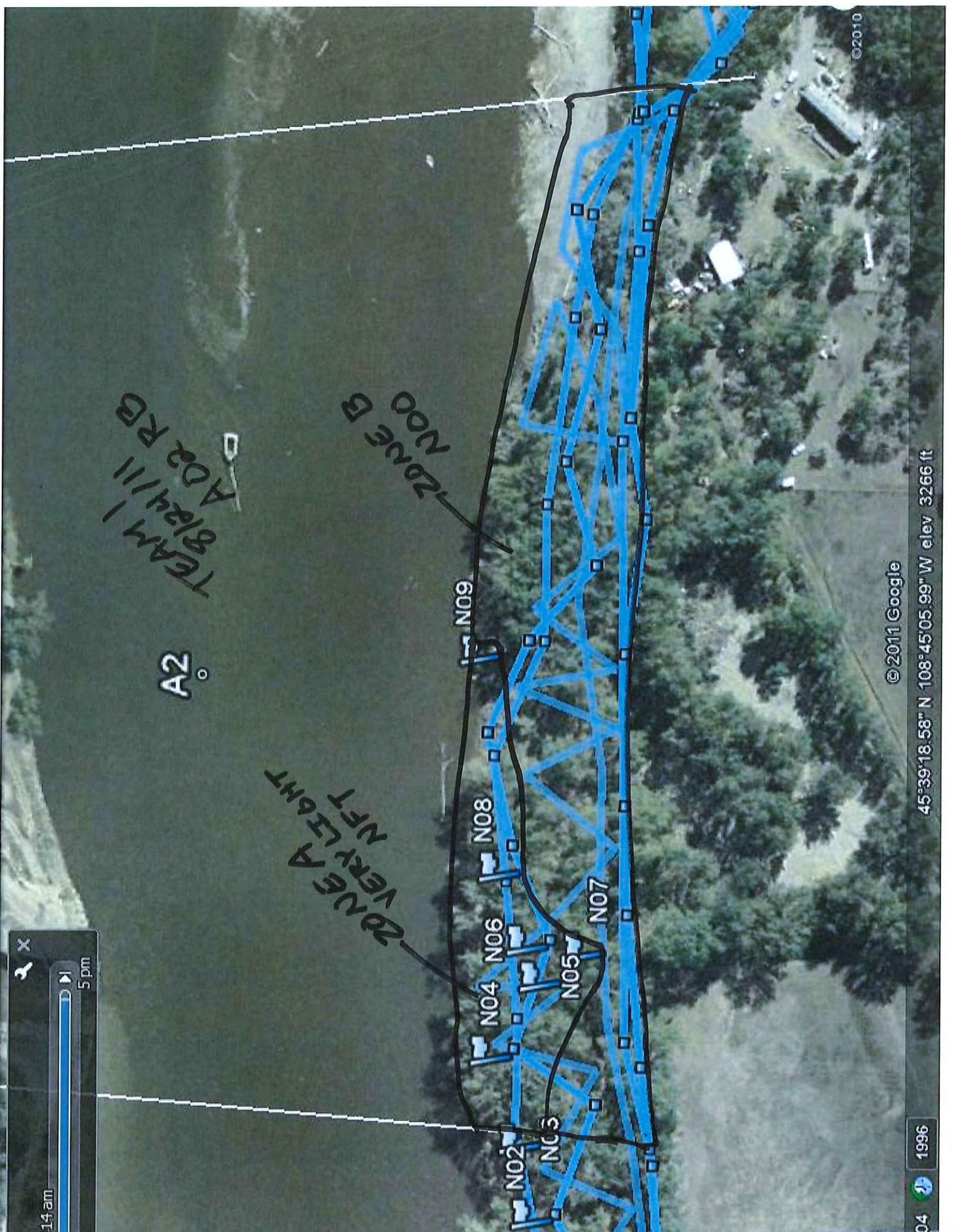
©2010

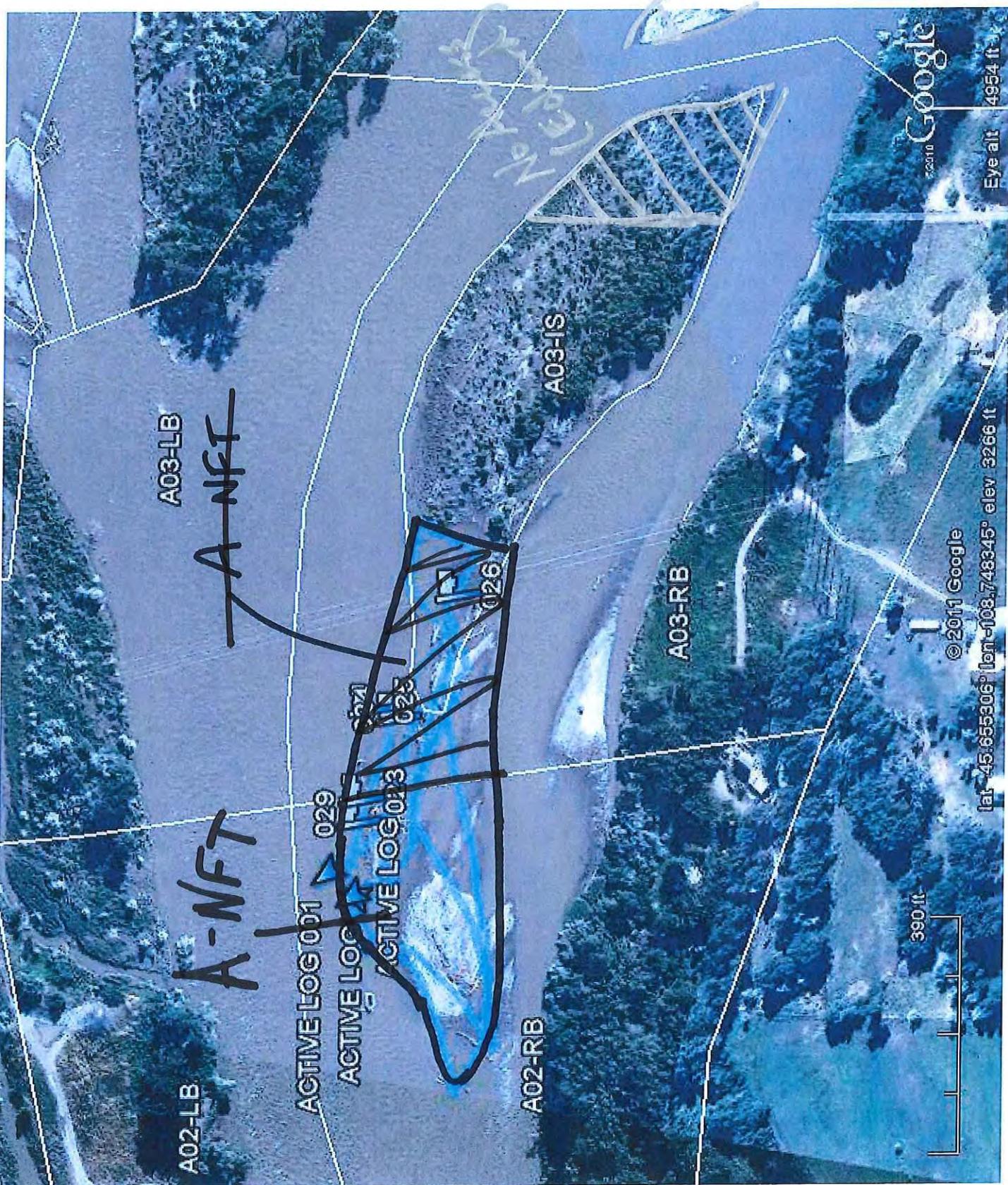
© 2011 Google

45°39'18.58" N 108°45'05.99" W elev 3266 ft

1996

004





RB
A2 IS.

8/29/11

Team 2

Partial

A02-LB

A03-LB

A-NFT

A-NFT

ACTIVE LOG 001

ACTIVE LOG 002

ACTIVE LOG 003

A02-RB

A03-IS

A03-RB

390 ft

© 2011 Google

lat: 45.655306° lon: -108.748345° elev: 3266 ft

Google

Eye alt: 4954 ft

Yellowstone

VOID- A03IS from original survey was later split to be in A02RB and A03IS

RIVER BANK OILING SUMMARY FORM for

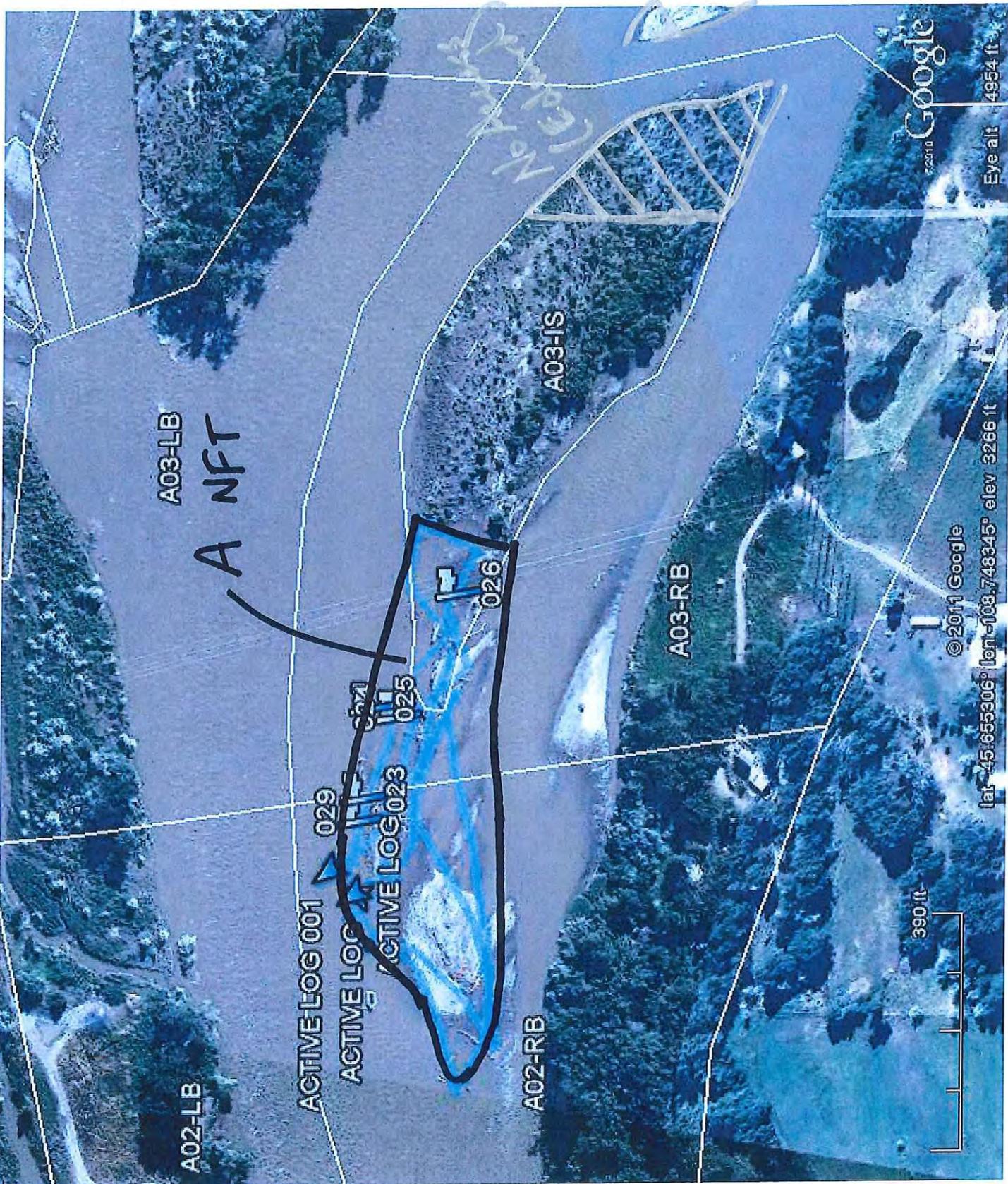
1 GENERAL INFORMATION				Date (dd/mm/yy) 29/08/11	Time (24h): std / daylight 1010 hrs to 1100 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising Air Temp + / - 30 deg C															
Segment/Reach ID: <u>A3</u> Left Bank / Right Bank / Island				Operations Division: <u>A</u>		Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 30 deg C											
2 SURVEY TEAM # 2				Name	Organization	Signature															
Pete Lee				Polaris		<i>Pete Lee</i>															
Eric Harlow				Cardno ENTRIX		<i>Eric Harlow</i>															
Griff Miller				USEPA		<i>Griff Miller</i>															
Larry Alheim				MTDEQ		<i>Larry Alheim</i>															
3 SEGMENT				Total Segment/Reach Length <u>410</u> m	Segment/Reach Length Surveyed <u>250</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>X</u> Pebble/Cobble _____ Boulder _____ Peat/Organic _____			Vegetated Bank: <u>X</u>			Wooded Upland: <u>X</u>															
Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse <u>X P</u>			Other: <u>Debris</u>			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 <u>X</u> oxbow _____ flood plain valley <u>X</u>			Forested / <u>Vegetated</u> / Bare															
4C RIVER CHANNEL CHARACTER circle or select as appropriate																					
est. width: <1m 1-10m <u>10-100m</u> >100m m			est. water depth: <1m <u>1-3m</u> >10m _____ m																		
shoal(s) present <u>Y</u> N point bar present Y / N			bar-shoal substrate: silt / <u>sand</u> / gravel / <u>cobble</u> / boulder / bedrock / debris																		
seasonal water level: low <u>mean</u> / bank full / overbank flow			est. change over next 7 days: <u>falling</u> — same — rising																		
5 OPERATIONAL FEATURES																					
Suitable backshore staging Y <u>N</u>			Access: Direct from backshore Y <u>N</u>			Alongshore from next segment Y <u>N</u>															
Debris <u>Y</u> N oiled <u>Y</u> N amount _____ bags or _____ trucks			Access restrictions: Boat only			Other Features: _____															
Oiled trees/shrubs Y <u>N</u>			River Current strong <u>Y</u> / N																		
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)			
					Length	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO
ID	MS	LB	UB	OB	m	m	%														
A				<u>X</u>	<u>135</u>	<u>70</u>	<u><1</u>				<u>X</u>							<u>X</u>			debris
					<u>250</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	OILED ZONE	SUBSURFACE OIL CHARACTER					WATER TABLE	SHEEN COLOUR	CLEAN BELOW	SUBST. TYPE(S)						
							SAP	OP	PP	OR	OF					TR	NO	cm	B, R, S, N	Yes / No	
	MS	LB	UB	OB	cm	cm-cm															
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations																					
Overbank Survey Required <u>Y</u> / N Overbank Survey Completed <u>Y</u> / N Shoreline Survey Completed <u>Y</u> / N																					
Oil height: <u>N/A</u>																					
Treatment recommendations:																					
Zone <u>A</u> : No further treatment required.																					
Zone : _____																					
Ops Hot Shot (Rich Jessup) <u>Removed 3 bags of oil-coated DB</u>																					
Note: Only shoal was ready for ReSCAT Area outside of Zone A has not been treated by ops & was not surveyed by SCAT team.																					
Sketch Yes / No Photos Yes / No Frames _____ Photographer _____																					

A3 IS.

8/29/11

Team Z

Partial





Appendix F

Completed SCAT Segment
Sign-Off Forms

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment A2 LB Date of Survey 23/09/2011

Dates of Initial SCAT Assessments 23 SEP 2011
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 17

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 Miller _____ *Sheila McAtee / DVRG* _____ *9/23/2011* _____
 Sign Name _____ Print Name/ Affiliation _____ Date _____
State Representative (DEQ/FWP)

Jeffrey Cannon _____ *Yvelo Gagnon, Polaris* _____ *23/09/2011* _____
 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.

Silvertip Pipeline Spill SCAT Segment Sign-Off Sheet

COMPLETED

Operations Division: A X B C

SCAT Area Number (i.e. A12): A 2

SCAT Segment Number (i.e. A12-LB/IS/RB): A 2 RB

Complete

Check if
Complete:

1. Completion Date for Initial SCAT Assessment: _____

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

List CTRs Applicable to SCAT Segment: 3

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

[Signature]
Federal Representative (EPA/USCG)

8/24/11
Date

[Signature]
State Representative (DEQ/FWP)

8/24/11
Date

[Signature]
RP Representative (SCAT Contractor)

8-24-11
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 A2 ^{RB} ~~Island~~ Date of Survey 8/29/11
CK 9/24/11

Dates of Initial SCAT Assessments N/A
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 26

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] Giff Miller / EPA 8-29-11
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] Larry Alheim DEQ 8/29/11
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] Pete Lee / Polaris 8/29/11
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.



Appendix G

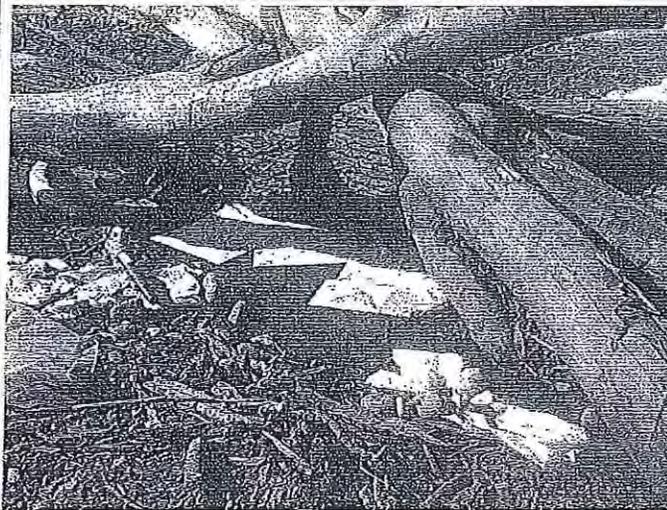
Exception Memos

GENERAL MESSAGE - SCAT AND OPERATIONS GUIDANCE FOR A3 IS EMBEDDED DEBRIS PILE SHEENING

TO: Jimmie James, RPIC Mike Trombetta, SOSC Steven Merritt, FOSC	POSITION: ExxonMobil Montana DEQ State On-Scene Coordinator EPA Federal On-Scene Coordinator
FROM: Steven Merritt	POSITION: FOSC - Unified Command
SUBJECT: A3 IS Embedded Debris Piles and Pools	DATE: 8.26.2011 TIME: 1130

Extends to A2 RB

MESSAGE: In consultation with the U.S. Fish and Wildlife Service, International Bird Rescue, and the USCG Strike Team, the EPA visited A3 Island, just downstream of the spill site. Previously, EPA and USCG had given direction to clean-up crews to continue limited high-volume, low pressure flushing for a period of time around two areas of embedded cottonwood roots and trunks that are on the west side of the island and a known source area. The flushing was insufficient to mobilize residual oil in these areas and the groundwater level is creating pools in the scoured topography beneath the trunks and oil from within the root balls has created sheen within these pools. The light excavator and skid-steer loader that have been airlifted to the island are incapable of removing this debris from the ground to get at the source of the sheen. Due to repeated wildlife oiling issues at this site and the proximity to the spill site, this area was recommended for partial burial with locally available substrate and clean debris to deter birds and other wildlife from being attracted to the pool as a source of food (small minnows) and shelter. Crews have created an earthen berm with several yards of clean sand taken from adjacent areas of the island to isolate the base of the cottonwood trunks nearest the root balls and to serve as a sand filter and absorbent for any oil released from the residual source, which should allow the sheen on the pool to dissipate and weather completely. Crews also took clean un-oiled debris and covered the pools to deter wildlife access and comply with USFWS guidance. There is still source material that may need to be monitored or removed depending upon future observations.

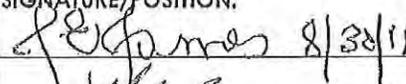
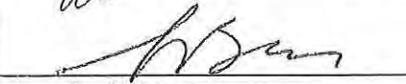


SIGNATURE: *SM* Steven Merritt, OSC

POSITION: FOSC - Unified Command

REPLY: SCAT and Operations

The Unified Command is aware of this area within SCAT Segment A3IS and that operations within these segments are nearing completion with the exception of this area by the Pre-Inspection Survey Teams and Re-SCAT efforts. We agree with the recommended treatment proposed above for this area, but request that water-based operations crews or wildlife branch personnel continue to monitor these areas from the river to ensure that sheen is not released from saturated substrates, as pictured above. ExxonMobil will coordinate any future remediation activities at this site with MTDEQ. In the meantime, this segment will be flagged 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.

DATE:	TIME:	SIGNATURE/POSITION:
8/30/2011	1030	 8/30/11 Jimmie James, RPIC
		 9/20/11 Mike Trombetta, SOSO
		 Steven Merritt, FOSC



DSC_0428(light equipment).jpg



IMG00013-20110826-1003.jpg



IMG00014-20110826-1006.jpg



20110806_Site1_Pic6.JPG

 (For Bob Habbeck)
9/23/11
 9/23/11

Mike Benedic

From: Alvey, Laura [lalvey@mt.gov]
Sent: Friday, September 23, 2011 7:49 PM
To: Mike Benedic
Cc: Habeck, Bob
Subject: FW: A3 Island Wildlife Exception Document

Mike-

Below is the email from Bob Habeck that you can print out and attach to the signature page for State sign-off of A3 Island.

Regards,

Laura Alvey
Groundwater Remediation Program
Site Response Section, MDEQ
(406) 841-5062

-----Original Message-----

From: Habeck, Bob
Sent: Thursday, September 22, 2011 2:01 PM
To: Alvey, Laura
Subject: A3 Island Wildlife Exception Document

I was not able to get a signature on the A3 Island exemption doc as requested last night. Staff could not find it and I wasn't ready to wait around more. You may be approached by the SCAT guy (bald guy) for a signature of completion. I would have signed it - it was done right. Be confident to sign it for them.

Bob Habeck
Air Program Manager
Montana Dept. of Environ. Quality
Helena, MT 59620

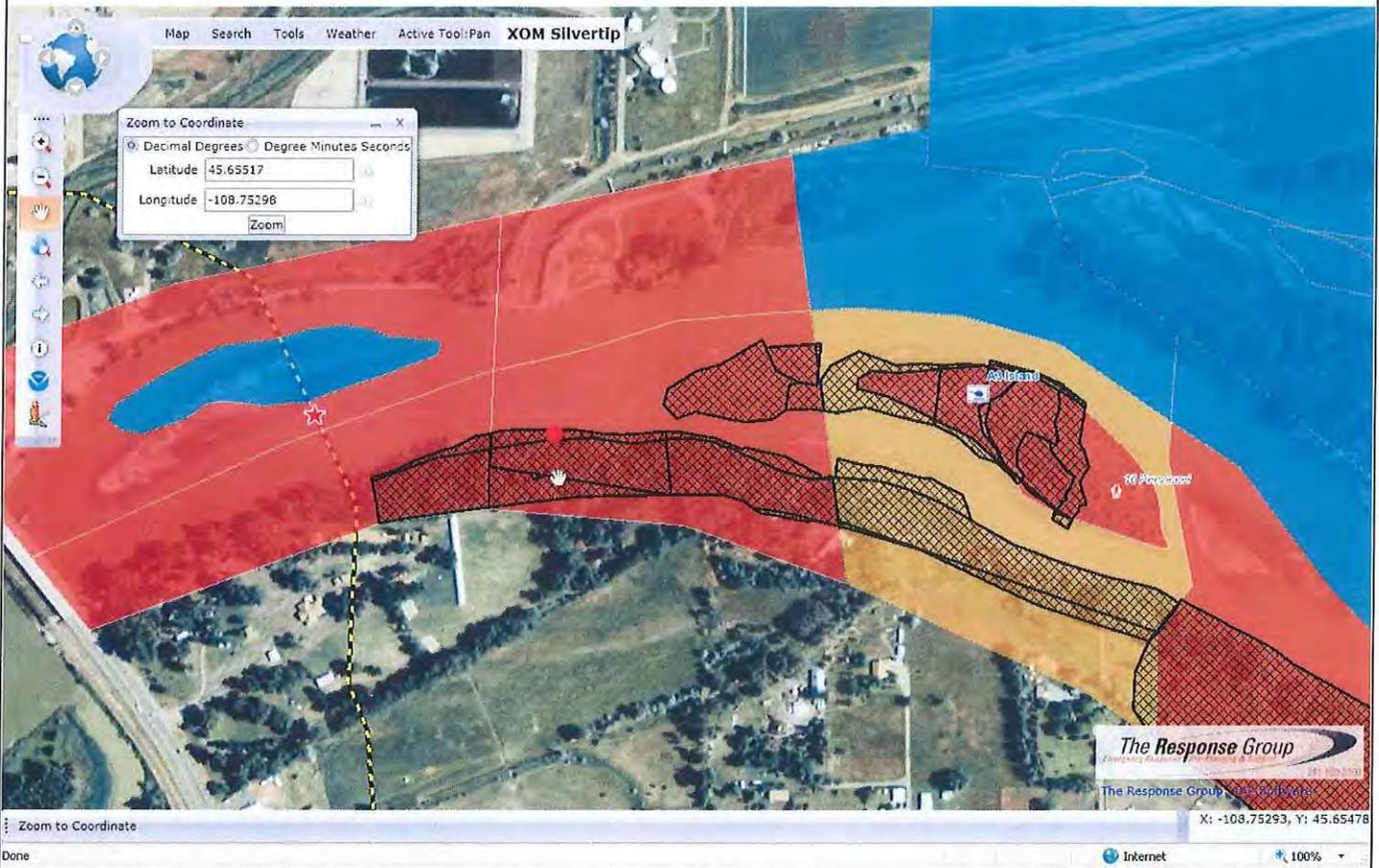
(406) 444-7305 w
(406) 431-1359 c
(406) 444-1499 f

bhabeck@mt.gov

GENERAL MESSAGE - SCAT AND OPERATIONS GUIDANCE FOR A2 POOL 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: A2RB Pool with Sheen	DATE: 09.05.2011	TIME: 1408

MESSAGE: International Bird Rescue and Resource Advisors with the USFWS identified a pool with sheen in scat sector A2. This segment has passed SCAT but requires further response to reduce wildlife exposure risks. The pool is located downstream from an oiled stump that had boom around it. It is approximately 3 ft by 9 ft in size. Spotted sandpiper tracks were seen going into the pool. Sorbent pads were placed in the pool. The area is identified on the map below.



SIGNATURE: Karen Nelson, Contaminants Specialist	POSITION: USFWS – Wildlife Branch
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REPLY: SCAT and Operations

The Unified Command is aware of this area within SCAT Segments A2 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 A2 POOL 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
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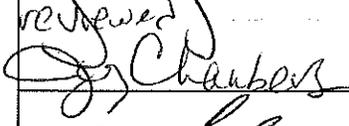


Zoom to Coordinate X: -108.75293, Y: 45.65478
Done Internet 100%

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 A2 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 MIDEQ. 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 <i>reviewed</i>  Jerry Chambers Tom Livers, SOSC  Steven Merritt, FOSC
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