

ExxonMobil Pipeline Company

**SCAT Area Transition Report
for A23**

Silvertip Pipeline Incident
Laurel, Montana

October 18, 2011



SCAT Area Transition Report for A23

Silvertip Pipeline Incident
Laurel, Montana

Prepared for:

ExxonMobil Pipeline Company

Prepared by:

ARCADIS G&M of North Carolina, Inc.

11000 Regency Parkway

West Tower, Suite 205

Cary, North Carolina 27518-8518

Tel 919.469.1952

Fax 919.469.5676

Our Ref.:

B0085883.1103

Date:

October 18, 2011

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.

1. Executive Summary of Oil Removal Activities	1
1.1 Land Ownership and Access Issues	1
1.2 Cultural, Historic, and Natural Resource Constraints	1
1.3 Summary of Environmental Sampling	1
1.4 Summary of Initial SCAT Surveys	2
1.5 Applicable Compiled Treatment Recommendations	2
1.6 Oil Removal Activities	2
1.7 Pre-Inspection Survey Transmittal	2
1.8 Post-Inspection Survey Transmittal	3
1.9 Summary of Final SCAT Surveys	3
1.10 SCAT Area Conclusions	3
2. Transition Sign-Off Form	4
Tables	
Table 1 Environmental Sampling Summary	2
Figures	
Figure 1 Aerial Map with Parcel Boundaries	
Figure 2 Wildlife Resources	
Figure 3 Sample Location Map	
Figure 4 Maximum SCAT Observations	
Figure 5 Final SCAT Observations	
Appendices	
A Sample Detection Summary	
B Initial SCAT Survey Forms and Sketches	
C Pre-Inspection Survey Transmittal	
D Post-Inspection Survey Transmittal	
E Final SCAT Survey Forms and Sketches	
F Completed SCAT Segment Sign-Off Forms	

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 A23, 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 A23. 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 A23, 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 A23 is 30.5. There were access issues for part of the right bank.

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 A23. Six oiled Woodhouse's toads (*Bufo woodhousii*) and one western terrestrial garter snake (*Thamnophis elegans*) were captured, cleaned, and released. In addition, three Woodhouse's toads were captured and taken to the Wildlife Recovery Center for an oiling evaluation, determined to be un-oiled, and released. One deceased catfish (unknown species) and fifty-four small fish (unknown species) with no visible oiling were collected and retained. No Wildlife Priority Cleanup Areas were identified. A bald eagle (*Haliaeetus leucocephalus*) nest was identified in Area A23 and the appropriate buffer zone was provided to Operations.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area A23. 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 A23 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	LAMT07245W516	7/24/11	Water_Surface	A23	45.674358	-108.67692
CTEH	LAMT081750417	8/17/11	Soil_River	50-A23-1	45.674533	-108.67486
CTEH	LAMT082550101	8/25/11	Soil_Surface	LAMT_561_50101	45.674486	-108.672885
MDEQ	5T-071611-LW1	7/16/11	Soil_Surface	5T-LW-01	45.6745	-108.67284
MDEQ	5T-071611-LW2	7/16/11	Soil_Surface	5T-LW-02	45.67471	-108.67262
EPA	5PSW516_072411	7/24/11	Water_Surface	5PSW516	45.67441241	-108.6769356

Appendix A contains a summary of sample results with detections for this sample set. Detections with a result above the screening level are highlighted; for this set, there were four exceedances: one each for vanadium, C11-C22 aromatics, C9-C18 aliphatics, and 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 A23 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area A23.

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. 13](#) and [CTR No. 14](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area A23 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, 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 A23 and developed a Pre-Inspection Survey Transmittal (PIST) associated with the left and right banks within Area A23, 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 A23 following completion of oil removal activities. The SCAT team performed final surveys of the left and right banks within SCAT Area A23 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 A23, no further treatment is recommended for these segments. SCAT Segment Sign-Off Forms are included as Appendix F.



**SCAT Area Transition
Report for A23**

Silvertip Pipeline Incident
Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for A23

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
Report for A23**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for A23

Prepared for:

Unified Command

10/10/2011
Date


Unified Command – FOSC

S. NEPHTT



**SCAT Area Transition
Report for A23**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for A23

Prepared for:

Unified Command

Date

Unified Command – MDEQ

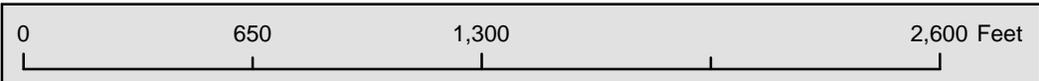
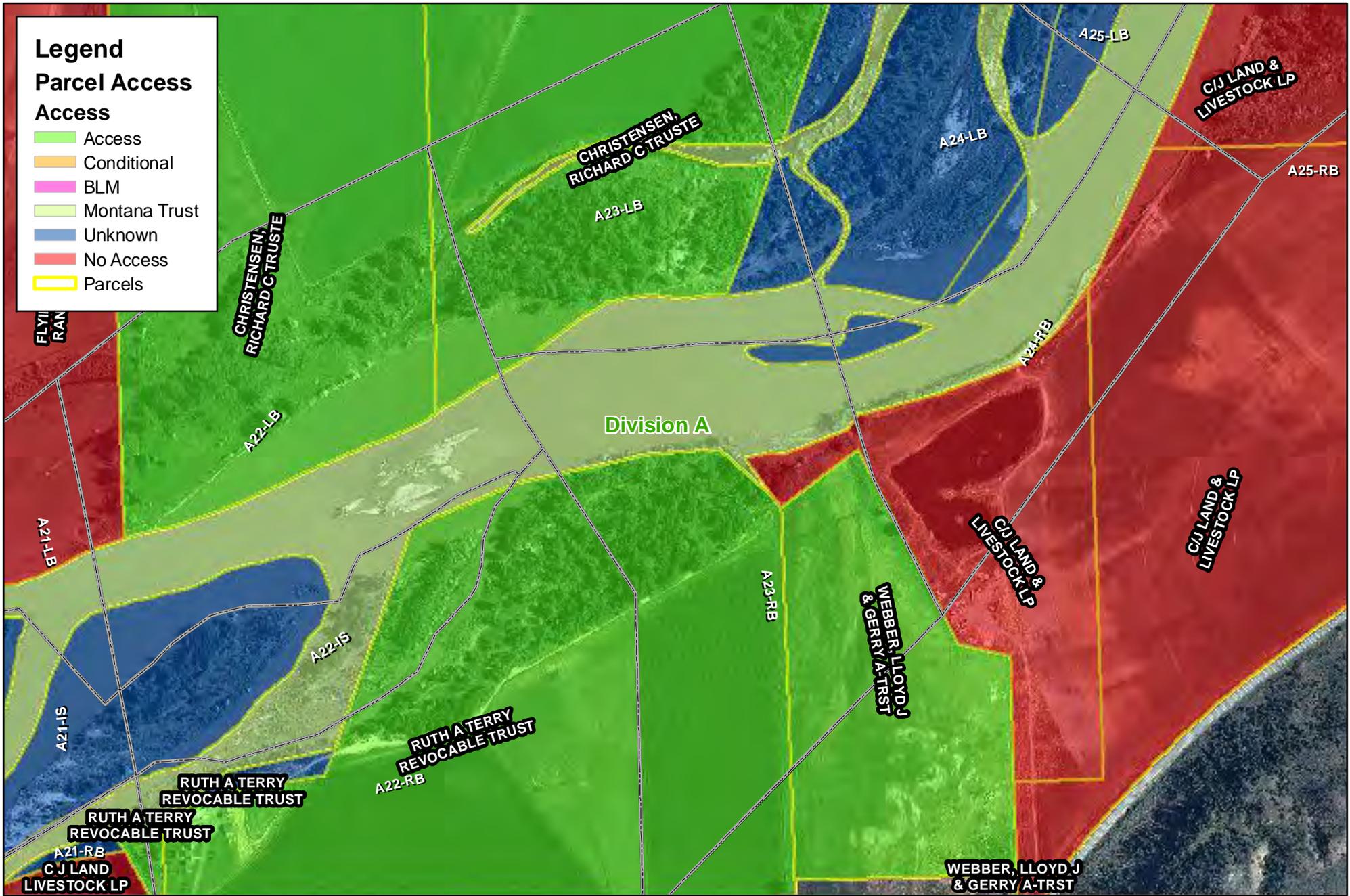


Figure 1

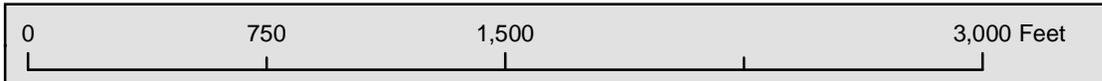
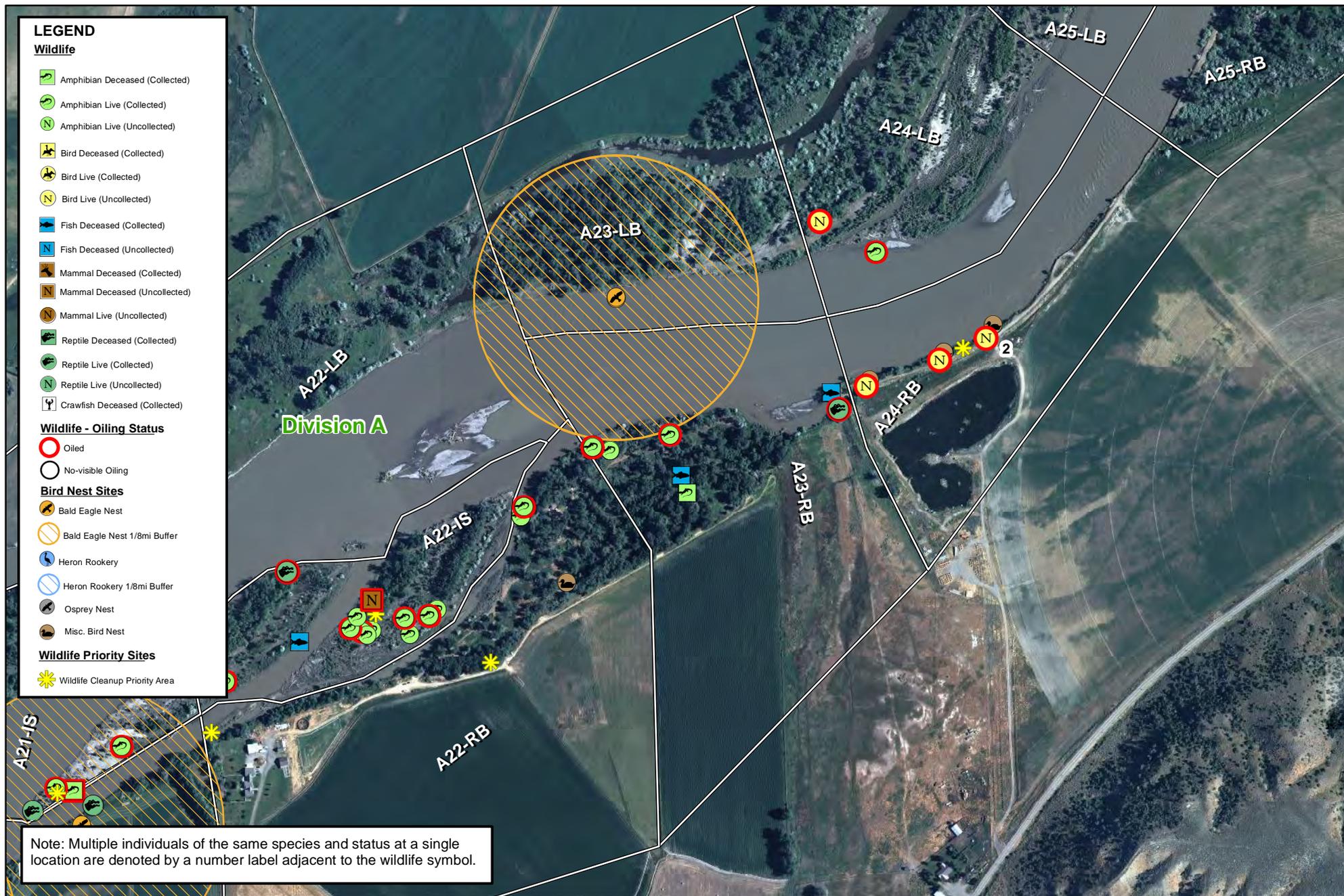
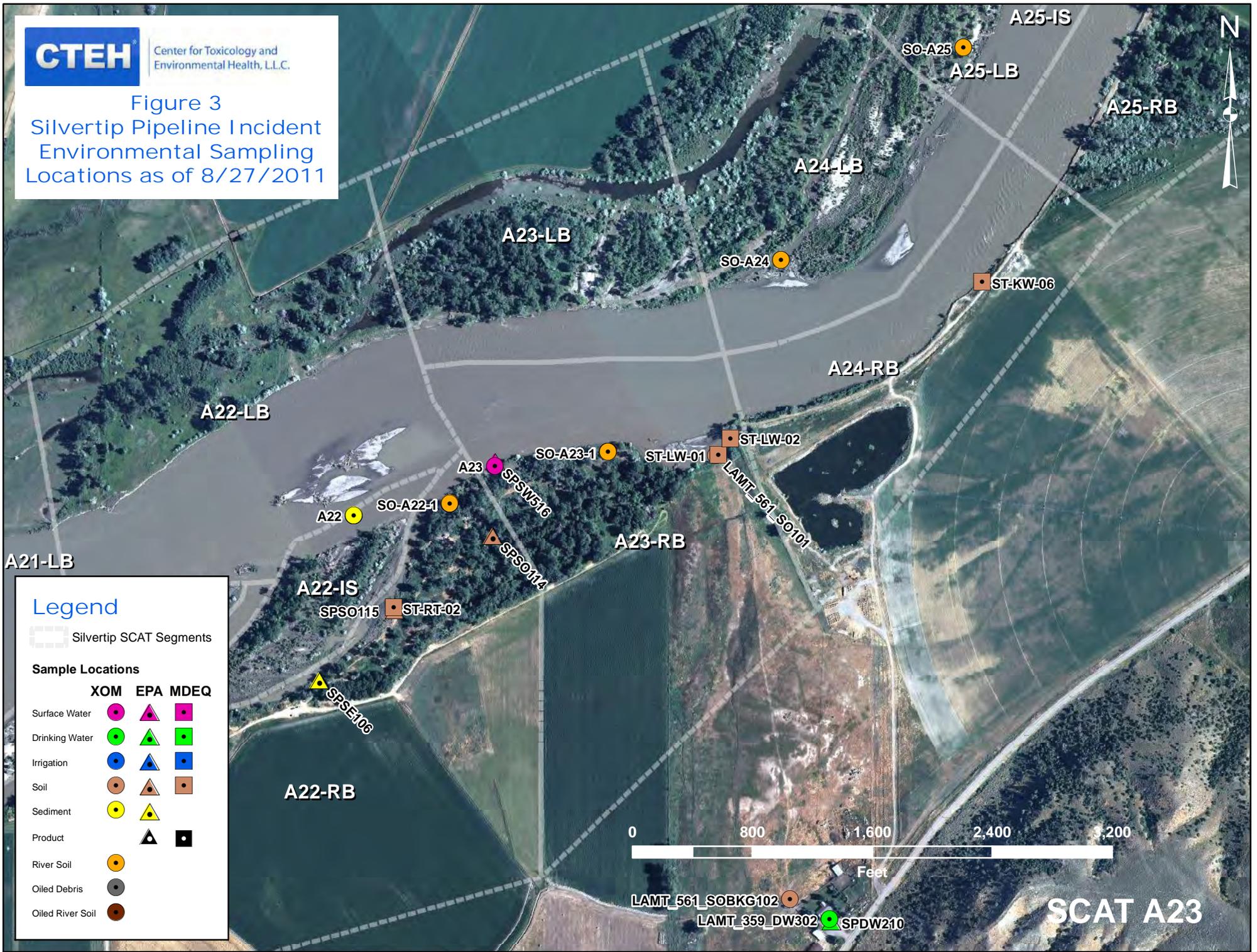


Figure 2
Wildlife Resources



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 A23

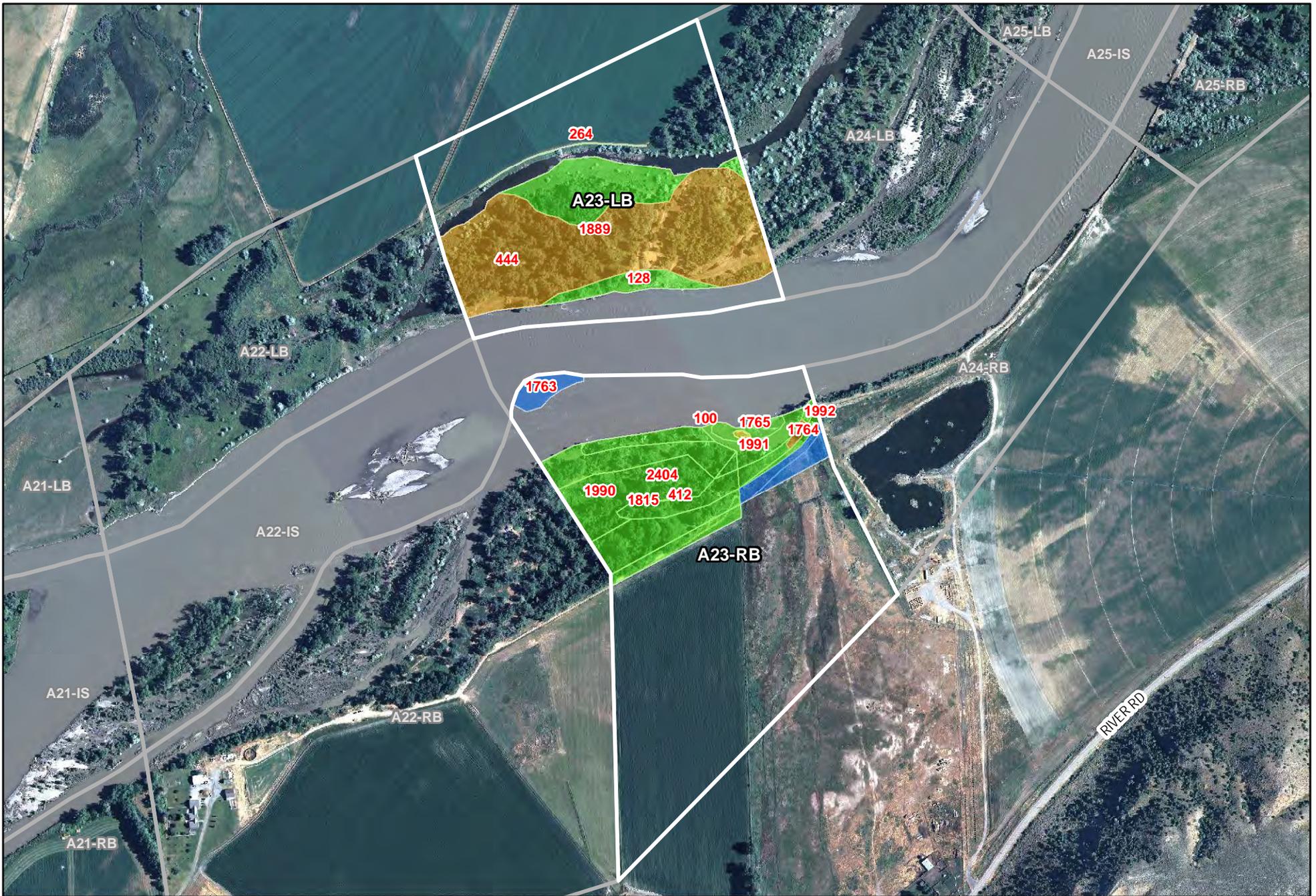


Figure 4 - Maximum SCAT Observations For SCAT Area:





 <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: A23</p> <p>0 450 900 Feet</p>	
---	---	---	---



Appendix A

Sample Detection Summary



Detections in Samples Collected in SCAT Area A23

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 6020	Arsenic	Y	5.2	10		ug/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 6020	Barium	Y	57.6	1000		ug/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 6020	Calcium	Y	21500	NA		ug/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 6020	Chromium	Y	3.1	100		ug/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 6020	Lead	Y	1.9	15		ug/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 6020	Magnesium	Y	6840	NA		ug/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 1631E	Mercury	Y	0.00000639	0.00005		mg/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 6020	Nickel	Y	4.2	100		ug/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 6020	Potassium	Y	1780	NA		ug/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 6020	Sodium	Y	9080	NA		ug/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	SM 2540D	Total Suspended Solids	Y	129	NA		mg/L	no
LAMT0724SW516	07/24/2011	Field	Water_Surface	EPA 6020	Vanadium	Y	6.2	180		ug/L	no
LAMT0817SO417	08/17/2011	Field	Soil_River	EPA 6010	Arsenic	Y	15.9	40		mg/kg	no
LAMT0817SO417	08/17/2011	Field	Soil_River	EPA 6010	Barium	Y	147	820		mg/kg	no
LAMT0817SO417	08/17/2011	Field	Soil_River	EPA 6010	Cadmium	Y	0.99	3.8		mg/kg	no
LAMT0817SO417	08/17/2011	Field	Soil_River	EPA 6010	Chromium	Y	22.4	280		mg/kg	no
LAMT0817SO417	08/17/2011	Field	Soil_River	EPA 6010	Lead	Y	10.9	400		mg/kg	no
LAMT0817SO417	08/17/2011	Field	Soil_River	EPA 9060	Mean Total Organic Carbon	Y	21800	NA		mg/kg	no
LAMT0817SO417	08/17/2011	Field	Soil_River	EPA 6010	Nickel	Y	19.3	150		mg/kg	no
LAMT0817SO417	08/17/2011	Field	Soil_River	EPA 9060	RSD%	Y	17	NA		%	no
LAMT0817SO417	08/17/2011	Field	Soil_River	MADEP EPH	Total Extractable Hydrocarbons	Y	22.1	200		mg/kg	no
LAMT0817SO417	08/17/2011	Field	Soil_River	EPA 9060	Total Organic Carbon	Y	26400	NA		mg/kg	no
LAMT0817SO417	08/17/2011	Field	Soil_River	EPA 6010	Vanadium	Y	42	39		mg/kg	YES
LAMT0825SO101	08/25/2011	Field	Soil_Surface	EPA 6010	Arsenic	Y	15	40		mg/kg	no
LAMT0825SO101	08/25/2011	Field	Soil_Surface	EPA 6010	Barium	Y	139	820		mg/kg	no
LAMT0825SO101	08/25/2011	Field	Soil_Surface	EPA 6010	Cadmium	Y	1	3.8		mg/kg	no
LAMT0825SO101	08/25/2011	Field	Soil_Surface	EPA 6010	Chromium	Y	21.1	280		mg/kg	no
LAMT0825SO101	08/25/2011	Field	Soil_Surface	EPA 6010	Lead	Y	9.7	400	J-	mg/kg	no
LAMT0825SO101	08/25/2011	Field	Soil_Surface	EPA 7471	Mercury	Y	0.024	1		mg/kg	no
LAMT0825SO101	08/25/2011	Field	Soil_Surface	EPA 6010	Nickel	Y	17.6	150		mg/kg	no
LAMT0825SO101	08/25/2011	Field	Soil_Surface	MADEP EPH	Total Extractable Hydrocarbons	Y	40.3	200		mg/kg	no



Detections in Samples Collected in SCAT Area A23

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
LAMT0825SO101	08/25/2011	Field	Soil_Surface	EPA 6010	Vanadium	Y	39	39		mg/kg	no
ST-071611-LW1		Field	Soil_Surface	8260B	1,2-Dichloroethane-d4	Y	76	NA		%	no
ST-071611-LW1		Field	Soil_Surface	8270C	2,4,6-Tribromophenol	Y	91	NA	D	%	no
ST-071611-LW1		Field	Soil_Surface	8270C	2-Fluorobiphenyl	Y	76	NA	D	%	no
ST-071611-LW1		Field	Soil_Surface	8260B	Dibromofluoromethane	Y	80	NA		%	no
ST-071611-LW1		Field	Soil_Surface	8270C	Nitrobenzene-D5	Y	73	NA	D	%	no
ST-071611-LW1		Field	Soil_Surface	8270C	o-Fluorophenol	Y	74	NA	D	%	no
ST-071611-LW1		Field	Soil_Surface	8015M-MDEQ-REM	o-Terphenyl	Y	77	NA		%	no
ST-071611-LW1		Field	Soil_Surface	8260B	p-Bromofluorobenzene	Y	90	NA		%	no
ST-071611-LW1		Field	Soil_Surface	8270C	Phenol-d5	Y	74	NA	D	%	no
ST-071611-LW1		Field	Soil_Surface	8270C	Terphenyl-d14	Y	87	NA	D	%	no
ST-071611-LW1		Field	Soil_Surface	8260B	Toluene-d8	Y	84	NA		%	no
ST-071611-LW1		Field	Soil_Surface	8015M-MDEQ-REM	Total Extractable Hydrocarbons	Y	66	200		mg/kg	no
ST-071611-LW2		Field	Soil_Surface	8260B	1,2-Dichloroethane-d4	Y	72	NA		%	no
ST-071611-LW2		Field	Soil_Surface	8270C	2,4,6-Tribromophenol	Y	72	NA	D	%	no
ST-071611-LW2		Field	Soil_Surface	MA-EPH-MDEQ-REM	2-Bromonaphthalene	Y	67	NA		%	no
ST-071611-LW2		Field	Soil_Surface	8270C	2-Fluorobiphenyl	Y	74	NA	D	%	no
ST-071611-LW2		Field	Soil_Surface	MA-EPH-MDEQ-REM	2-Fluorobiphenyl	Y	66	NA		%	no
ST-071611-LW2		Field	Soil_Surface	MA-EPH-MDEQ-REM	C11-C22 Aromatics	Y	2380	400		mg/kg	YES
ST-071611-LW2		Field	Soil_Surface	MA-EPH-MDEQ-REM	C19-C36 Aliphatics	Y	2900	20000		mg/kg	no
ST-071611-LW2		Field	Soil_Surface	MA-VPH-MDEQ-REM	C9-C10 Aromatics	Y	18	100		mg/kg	no
ST-071611-LW2		Field	Soil_Surface	MA-VPH-MDEQ-REM	C9-C12 Aliphatics	Y	14	100		mg/kg	no
ST-071611-LW2		Field	Soil_Surface	MA-EPH-MDEQ-REM	C9-C18 Aliphatics	Y	1650	200		mg/kg	YES
ST-071611-LW2		Field	Soil_Surface	8260B	Dibromofluoromethane	Y	85	NA		%	no
ST-071611-LW2		Field	Soil_Surface	8270C	Nitrobenzene-D5	Y	72	NA	D	%	no
ST-071611-LW2		Field	Soil_Surface	MA-EPH-MDEQ-REM	Octadecane, 1-chloro-	Y	87	NA		%	no
ST-071611-LW2		Field	Soil_Surface	8270C	o-Fluorophenol	Y	68	NA	D	%	no
ST-071611-LW2		Field	Soil_Surface	MA-EPH-MDEQ-REM	o-Terphenyl	Y	113	NA		%	no
ST-071611-LW2		Field	Soil_Surface	8260B	p-Bromofluorobenzene	Y	86	NA		%	no
ST-071611-LW2		Field	Soil_Surface	8270C	Phenol-d5	Y	70	NA	D	%	no
ST-071611-LW2		Field	Soil_Surface	8270C	Terphenyl-d14	Y	69	NA	D	%	no



Detections in Samples Collected in SCAT Area A23

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-071611-LW2		Field	Soil_Surface	8260B	Toluene-d8	Y	80	NA		%	no
ST-071611-LW2		Field	Soil_Surface	MA-EPH-MDEQ-REM	Total Extractable Hydrocarbons	Y	7910	200		mg/kg	YES
ST-071611-LW2		Field	Soil_Surface	MA-VPH-MDEQ-REM	Total Purgeable Hydrocarbons	Y	86	200		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 1047 hrs to 1048 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: A23 <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 426 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 190m 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	
126 A			X		426	1	75			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 A23 Left Bank

11-Jul-2011



Legend

 Oil Zones

 Segment Boundaries

DB/G/Sc

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 17/07/2011	Time (24h): std / daylight 10:20 hrs to 10:46 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: A23 <u>Left Bank / Right Bank / Island</u>				
Operations Division: A				
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Sun / Clouds / Fog / Rain / Snow / Windy / <u>Calm</u>	Air Temp +/- <u>33</u> deg C	

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

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 240 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

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 0 bags or _____ trucks access restrictions: Area is wet & heavily vegetated, fences around fields.

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	240	0.1	1			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 - minimal bathtub ring on overhanging branches & st on grass.

Did not survey inner (riverward) portions of segment. Lots of overwash areas we did not access.

No treatment at area surveyed

(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# _____)

7/2011 3:34 pm
4 pm

003

002
236

01
235

A23

©2011

© 2011 Google
lat 45.677017 lon -108.675695 elev 3223 ft

096

D13/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 21/07/2011	Time (24h): std / daylight 10:15 hrs to 12:15 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: A23 <u>Left Bank / Right Bank/Island</u>				
Operations Division: A				
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		<u>Sun</u> / 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 <i>(MR)</i>		Montana Fish Wildlife and Parks	<i>[Signature]</i>
Janice Witul		EPA	<i>[Signature]</i>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 425 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 150 m est. water depth: <1m 1-3m 3-10 m >10m _____ m

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

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 20 bags or _____ trucks Access restrictions: Area is wet, and has some running channels, Other Features: areas of deep mud and wet unstable sand; fences; thick veg.

Oiled trees/shrubs Y / N River Current strong Y / 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 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
444 A				X	425	180	<1		X	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 - Trace oiling throughout over wash area. Oiled debris, wood piles, tree trunk bt rings, & on grass, intermittent throughout. Several small ponds with some organic sheen - clean

No treatment Recommended - Landowner concurrence

(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# _____)



A23L SCAT#3 21 July 2011



SCAT Teams 2 & 4 Survey

Segment A23 Right Bank

11-Jul-2011



Legend

 Oil Zones

 Segment Boundaries

DB/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>21/07/11</u>	Time (24h): std / daylight <u>10:30</u> hrs to <u>09:46</u> hrs	Water Level <u>in bank</u> low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>A23</u> Left Bank / Right Bank / Island				
Operations Division: <u>A</u>				
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		(Sun / Clouds) Fog / Rain / Snow / Windy / Calm		
		Air Temp + / - <u>25</u> deg C		

2 SURVEY TEAM #	name	organization	contact phone number
<u>10</u>	<u>Chelsea Murphy</u>	<u>Cardno ENT RIX</u>	<u>775.313.3926</u>
	<u>Josh Rodgers</u>	<u>USCGR PAC STRIKE TEAM</u>	<u>727 244 8292</u>
	<u>Perical Turner</u>	<u>MT DEP</u>	<u>706-444-1504</u>
	<u>Steve Kennedy</u>	<u>Cardno City</u>	<u>281/723-1259</u>

3 SEGMENT Total Segment/Reach Length 370 m Segment/Reach Length Surveyed 370 m

Start GPS: LATITUDE 45.67366 deg. min. LONGITUDE 108.67713 deg. min. Datum: WGS84

End GPS: LATITUDE 45.67450 deg. min. LONGITUDE 108.67284 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 S Shelf S Manmade: Solid S Permeable S (type) S Wetland: Swamp S Bog/Fen S Marsh S

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

Sloped: 10 (>5°)(15°)(30°) straight P braided P oxbow S flood plain valley S Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: < 1m 1-10 m 10-100 m 100m 230m est. water depth: < 1 m 1-3 m 3-10 m > 10 m S m

shoal(s) present Y point bar present Y 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 Access: Direct from backshore Y Alongshore from next segment N

Debris: Y oiled Y amount S bags or S trucks access restrictions Road to almost end of seg

Oiled trees/shrubs Y River Current strong Y Other Features: 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				<u>P</u>	<u>370</u>	<u>70</u>	<u>70</u>														<u>P</u>	<u>veg/mud</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 A recommendations: NFT - NOD

(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 # _____)

108°40'50"W 108°40'45"W 108°40'40"W 108°40'35"W 108°40'30"W 108°40'25"W 108°40'20"W 108°40'15"W 108°40'10"W

45°40'40"N

45°40'35"N

45°40'30"N

45°40'25"N

45°40'40"N

45°40'35"N

45°40'30"N

45°40'25"N



A24

A23

A22

ZONE A

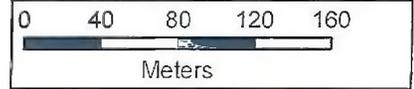
108°40'55"W 108°40'50"W 108°40'45"W 108°40'40"W 108°40'35"W 108°40'30"W 108°40'25"W 108°40'20"W 108°40'15"W 108°40'10"W

A23 - A
(LRI)??

DATE: 7/21/11
TEAM: Scat w

COMMENTS:

overbank only



DIBIG

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 01/09/11	Time (24h): std / daylight 0800 hrs to 1500 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>A23</u> Left Bank / Right Bank / Island				
Operations Division: <u>A</u>		Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u> Sun (Clouds) Fog / Rain / Snow / Windy / Calm Air Temp +/- <u>20</u> deg C		

2 SURVEY TEAM # 2 & 4	Name	Organization	Signature
Pete Lee		Polaris	<i>P. Lee</i>
Eric Harlow		Cardno ENTRIX	<i>Eric Harlow</i>
Griff Miller ^{NOV 09/25/2011}	STEPHEN BALL	USEPA	<i>Griff Miller</i>
Larry Alheim		MTDEQ	<i>Larry Alheim</i>
Michael Dirks		Cardno ENTRIX	<i>Michael P. Dirks</i>
Larisa Leonova		USEPA	<i>Larisa Leonova</i>
Brad Olszeski ^{NOV 09/25/2011}	EARL RADONSKI	MTFWP	<i>Earl Radonski</i>

3 SEGMENT Total Segment/Reach Length 380 m Segment/Reach Length Surveyed 380 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 (circled) m est. water depth: <1m (circled) 1-3m (circled) >10m _____ m

shoal(s) present (Y) N point bar present Y / N bar-shoal substrate: silt (circled) 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 Landowner

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	
	1990 A				X	225	120															
1991 B				X	280	10	41			X	X						X					"
1992 C				X	20	5	60			X	X						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

Oil height: BASES OF VEGETATION (0.05m) TO ~0.5m.

Treatment recommendations:

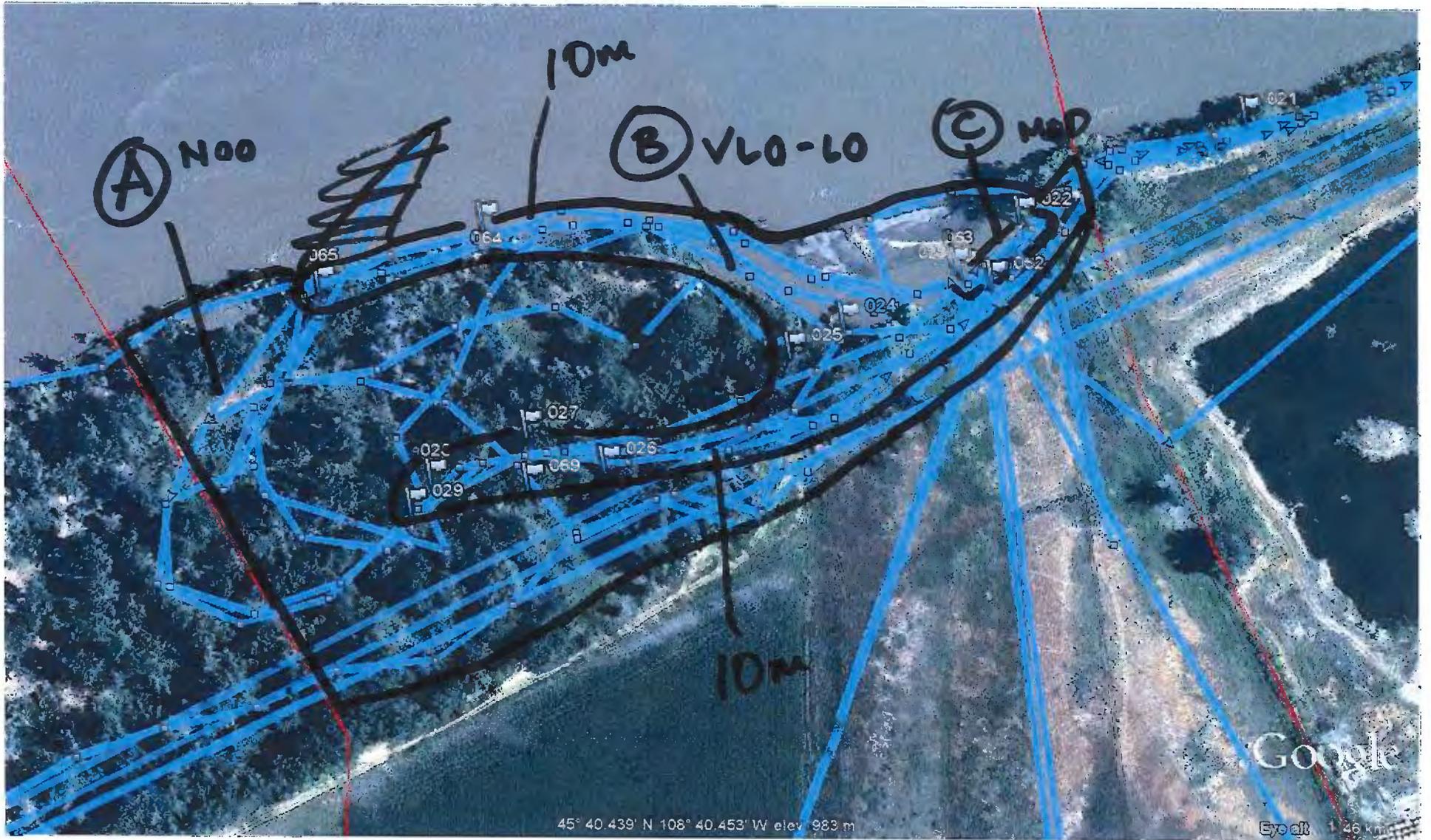
Zone B : No further treatment required.

Zone C : ATH #2 DEBRIS REMOVAL, ATH #1 CUTTING DEAD VEGETATION & BRANCHES.

Zone A: NDD - NPT

Note: Ops had treated river overbank

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



A B23 RB

8/22/2011 5:18 pm

A23-LB

Zone A

22 Aug 2011
SCAT 3
Segment
A23 Island

Zone C

Zone B

MT 16
003
239 1009 1008
035 036
238

A23-RB

© 2011 Google

8/20/11

A24



1996

45°40'32.31" N 108°40'26.90" W elev 3225 ft



Appendix C

Pre-Inspection Survey Transmittal

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 8/25/11

Segment: A23 LB

Team:

RP SCAT Liaison Ray McKelvey

Signed:



RP SCAT Liaison _____

Signed: _____

RP SCAT Liaison _____

Signed: _____

EPA SCAT Liaison _____

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.**

Land Owner 1: **Richard Christensen**

Access: Frontage Road to Christensen Road through farm.

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 8/22/11

Segment: A23 RB

Team: SCAT Liaison Ray McKelvey

Signed: 

Observer _____

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 is ready for re-scat.**

1. Property name: Ruth A Terry Revocable Trust
2. Property name: Lloyd & Gerry Webber
3. **CJ Land & Livestock NO ACCESS**

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: August 19, 2011

Segment: A-23 RB

Team: SCAT Liaison Gary Reiter Signed: *G.A. Reiter*
Observer _____ Signed: _____
Observer _____ Signed: _____
Observer _____ Signed: _____

Segment meets criteria? YES ___ NO X

RBOS attached? YES ___ NO X

If NO:

Location Sketch attached? YES X NO ___

CTR continue? YES X NO ___

Comments:

Segment is divided between two possibly three property owners all with claims. There is a disagreement between two of the owners over ownership of the river bank. One of the property owners will not allow work on their land.

- A. Found small grove of willows requiring fixation.
- B. Found small area of matted grass and bark on trail.
- C. If access issue is resolved for small area at East end of segment, then additional work will be required to address that area before it is finalized.

FLYING BOX RANCH CO.

RICHARD CHRISTENSEN

FLYING BOX RANCH CO.

Sauveter Rd
Allendale Rd

A19

A20

UNKNOWN

A21

UNKNOWN

A22

A23

CJ LAND & LIVESTOCK LP

2' NOT READY

RUTH A TERRY REVOCABLE TRUST

B AREA IN DISTRICT
LLOYD & GERRY WEBBER



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

hot1 GENERAL INFORMATION		Date (dd/mm/yy) 08/26/11	Time (24h): std / daylight 1300 hrs to 1405 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: A23 LB Left Bank / Right Bank / Island				
Operations Division:				
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- 9.5 F deg C	

2 SURVEY TEAM # 6	Name	Organization	Signature
Bruce Kvam	Polaris		<i>Bruce Kvam</i>
David Eric Harlow	CardnoENTRIX		<i>David Harlow</i>
Jay Watson	FWP		<i>Jay Watson</i>
Marcile Sigler	DEQ		<i>Marcile Sigler</i>
Terry Tanner	EPA		<i>Terry Tanner</i>

3 SEGMENT Total Segment/Reach Length 418 m Segment/Reach Length Surveyed 418 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 s _____ 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

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

Sloped: <5° (>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 186m 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	
1889 A			x	(x)	418	200	<1%			s	p						x				Grass and shrub	

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

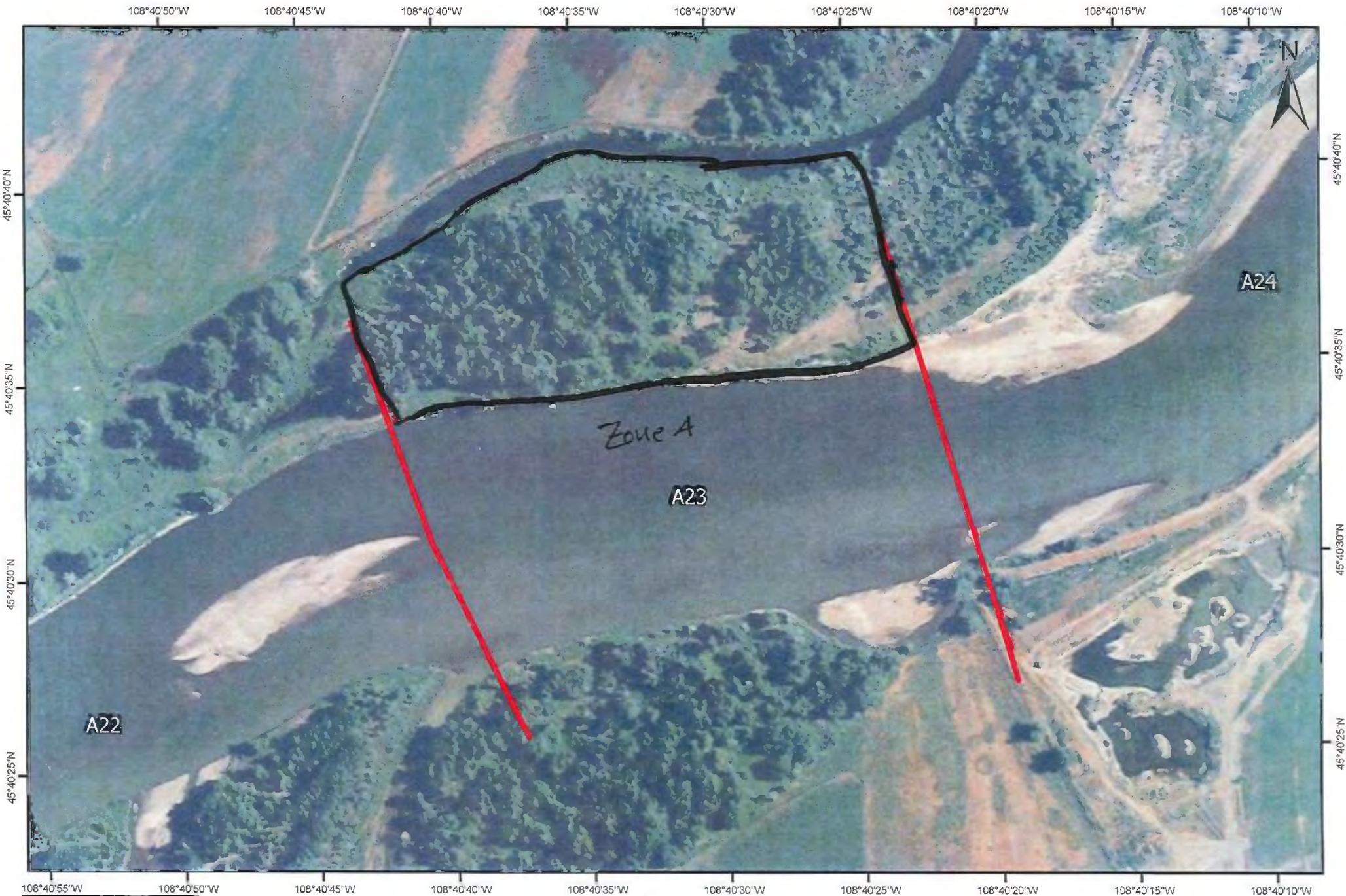
Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

RESCAT- Already treated by OPS

Operations unit set up in A22LB to treat area when visited. They indicated they had just finished A22LB and A23LB.

Zone A- Unit checked with hotshot team. Treated 10 minor spots (<1m square) with transferable stains and coatings- tar consistency. Treatments included cut and remove oiled vegetation <1 inch, remove oil coated material <4 inches, and dusted oil stained and coated material. No further treatment required.

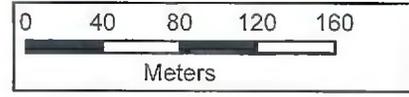
Sketch Yes / No Photos Yes / No Frames _____ Photographer _____



A23 - LB
(L/R/I)??

DATE: 8/26/11
TEAM: T-6
RESCAT

COMMENTS:



DB/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 27/09/11	Time (24h): std / daylight 1030 hrs to 1400 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: A <u>23</u> Left Bank / 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>28</u> deg C

2 SURVEY TEAM # 3	Name	Organization	Signature
Pete Lee		Polaris	<i>P. Lee</i>
Mark Ewanic		MTDEQ	<i>M. Ewanic</i>

3 SEGMENT Total Segment/Reach Length 380 m Segment/Reach Length Surveyed 380 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 P 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

2404

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	380	130	<1			S	P						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				

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

Overbank Survey Required (X) N Overbank Survey Completed (Y) N Shoreline Survey Completed (Y) N

Oil height:

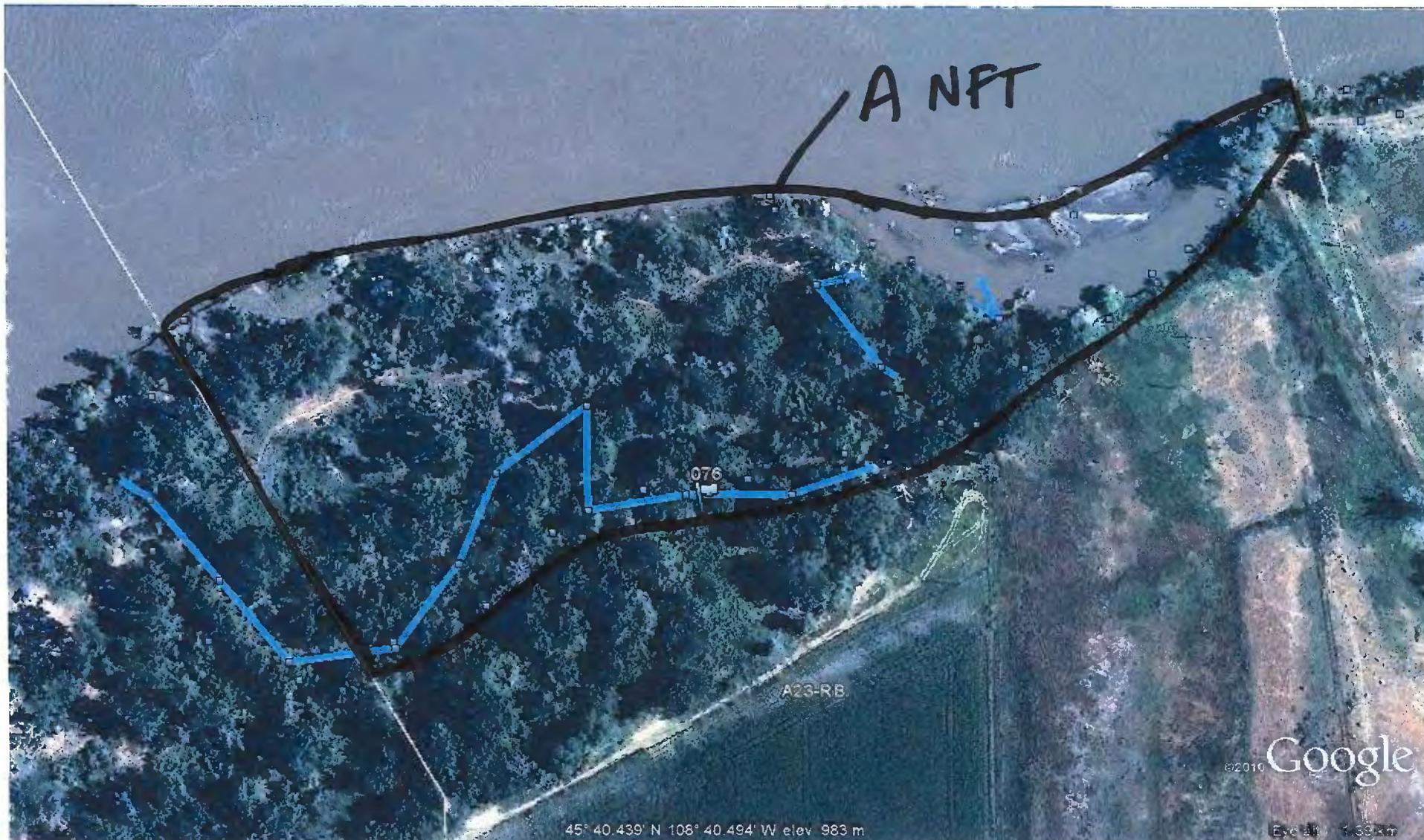
Treatment recommendations:

Zone A : Treated by Ops and Hot Shot crew ; Hot Shot crew

Zone : mainly treated inner ~~the~~ alongshore channel ;
No Further Treatment (NFT)

RESCAT

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



A23 RB
T3 9/27/11

DB/G

R

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 24/08/11	Time (24h): std / daylight 1400 hrs to 1515 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: A <u>23</u> Left Bank / <u>Right Bank</u> / Island		Operations Division:		
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- deg C	
2 SURVEY TEAM # 4	Name	Organization	Signature	
	Bob Nailon	Cardno ENTRIX	<i>[Signature]</i>	
	Pete Lee	Polaris	<i>[Signature]</i>	
	Dave Fuller	MTFWP	<i>[Signature]</i>	
	Cindy Santiago	USEPA	<i>[Signature]</i>	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 4020 223 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 ~~200~~ m est. water depth: <1m 1-3m ~~10~~ >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 Landowners

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

1815

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				X	223	171	21			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

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

Oil height: 90cm

Treatment recommendations:

Zone A : No treatment required.

Ops Hot Shot Team (Alex Barboza)
Removed 1 bag of VG/DB
Note: Stopped short of east segment boundary due to no access landowner
Previous cleanup operations (CTR 14)

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



A23-RB
24 Aug 2011
SCAT 4



Appendix F

Completed SCAT Segment Sign-Off
Forms

Silvertip Pipeline Spill SCAT Segment Sign-Off Sheet

COMPLETED

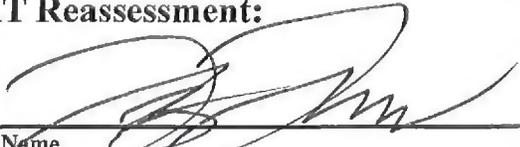
Operations Division: A B C

SCAT Area Number (i.e. A12): A23

SCAT Segment Number (i.e. A12-LB/IS/RB): A23 LB

Check if Complete:

1. Completion Date for Initial SCAT Assessment: 11 JUL 11 LL
2. Combined Treatment Recommendations (CTRs) Developed/Issued: Yes / No
 List CTRs Applicable to SCAT Segment: 13
3. Clean-Up Operations Conducted:
4. Meets Qualitative Approved Treatment Methods Target Endpoints: Yes / No
5. SCAT Reassessment:


 Sign Name _____ Print Name Terry Tanner Date 8/26/11
 Federal Representative (EPA/USCG)


 Sign Name _____ Print Name Jay Watson Date 8/26/11
 State Representative (DEQ/FWP)


 Sign Name _____ Print Name Bruce Kwam Date 8/26/11
 RP Representative (SCAT Contractor)

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 A 23 RB Date of Survey 9/27/11

Dates of Initial SCAT Assessments 11 JUL 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)

Mark Ewald MARK EWALD / MT DEQ 9/27/11
Sign Name _____ Print Name/ Affiliation _____ Date _____
State Representative (DEQ/FWP)

PB Lee Pete Lee / Polaris 9/27/11
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 X B C

SCAT Area Number (i.e. A12): A23

SCAT Segment Number (i.e. A12-LB/IS/RB): A23/RB

*Partial - See note in comments on RBOS
CR 8/21/11*

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: 14

3. Clean-Up Operations Conducted: _____

Yes

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

RP Representative (SCAT/Ops Liaison Contractor) Date

5. SCAT Reassessment: _____

Yes/No

 Cindy P. Santiago 8/24/11
Federal Representative (EPA/USCG) Date

 Dave Fuller 8-24-11
State Representative (DEQ/RWP) Date

 Pete Lee - Cardno ENTRIX 8/24/11
RP Representative (SCAT Contractor) Date

 Pete Lee 8/24/11

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.