

ExxonMobil Pipeline Company

**SCAT Area Transition Report
for B25**

Silvertip Pipeline Incident
Laurel, Montana

October 27, 2011



SCAT Area Transition Report for B25

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Laurel, Montana

Prepared for:
ExxonMobil Pipeline Company

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Our Ref.:
B0085883.1103

Date:
October 27, 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.

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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 B25, 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 B25. 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 B25, 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 B25 is 46.3. There were partial access restrictions for 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 B25. Six potentially oiled mallards (*Anas platyrhynchos*), mother and brood, and an oiled Canada goose (*Branta canadensis*) were observed but not captured for cleaning. No Wildlife Priority Cleanup Areas were identified. No active migratory bird nests were identified in Area B25.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area B25. 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 B25 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	07082011-GF-1	08-Jul-11	Water_Surface	Goat Farm Pond 1	45.73111	-108.53878
CTEH	07082011-GF-2	08-Jul-11	Water_Surface	Goat Farm Pond 2	45.73138	-108.53871
CTEH	07082011-GF-3	08-Jul-11	Soil_Surface	Goat Farm Field 1	45.7306	-108.5392
CTEH	BIMT0710SW201	10-Jul-11	Water_Surface	BIMT_296_SW201	45.731526	-108.540319
CTEH	LAMT0710IW301	10-Jul-11	Water_Irrigation	LAMT_296_IW301	45.730537	-108.537434
CTEH	LAMT0710IW301DUP	10-Jul-11	Water_Irrigation	LAMT_296_IW301	45.730537	-108.537434
EPA	SPGW02_071011	10-Jul-11	Water_Irrigation	SPGW02	45.730509	-108.537344
EPA	SPGW03_071011	10-Jul-11	Water_Irrigation	SPGW03	45.730509	-108.537344
EPA	SPSO139D01_071611	16-Jul-11	Soil_Surface	SPSO139	45.7325135	-108.541777

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 no exceedances in this area.

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 B25 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area B25.

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. 22](#) and [CTR No. 35](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area B25 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 B25 and developed a Pre-Inspection Survey Transmittal (PIST) associated with the left bank within Area B25, which is presented in Appendix C.

1.8 Post-Inspection Survey Transmittal

SCAT Operations liaisons performed an inspection of the remediated areas of SCAT Area B25 and developed a Post-Inspection Survey Transmittal (POST) associated with the right bank within Area B25, which is presented in Appendix D. The sign-off forms in Appendix D serve as the completed SCAT Segment Sign-Off Forms for the right bank of Area B25.

1.9 Summary of Final SCAT Surveys

Figure 5 shows the oiling conditions within Area B25 following completion of oil removal activities. The SCAT team performed final surveys of the left bank within SCAT Area B25 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 initial SCAT surveys performed on the right bank within Area B25, a combination of moderate, light, and very light oiling was observed. The signed SCAT sign-off forms in Appendix F indicate that the right bank of Area B25 conditionally passes final SCAT. In conjunction with the signed POST, SCAT endpoints on the right bank have been achieved and no further treatment is recommended. Based on the final SCAT surveys performed on the left bank within Area B25, no further treatment is recommended for this segment. SCAT Segment Sign-Off Forms are included as Appendix F.



**SCAT Area Transition
Report for B25**

Silvertip Pipeline Incident
Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for B25

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
Report for B25**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for B25

Prepared for:

Unified Command

Date

Unified Command – FOSC



**SCAT Area Transition
Report for B25**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for B25

Prepared for:

Unified Command

Date

Unified Command – MDEQ

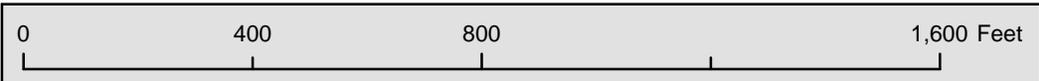
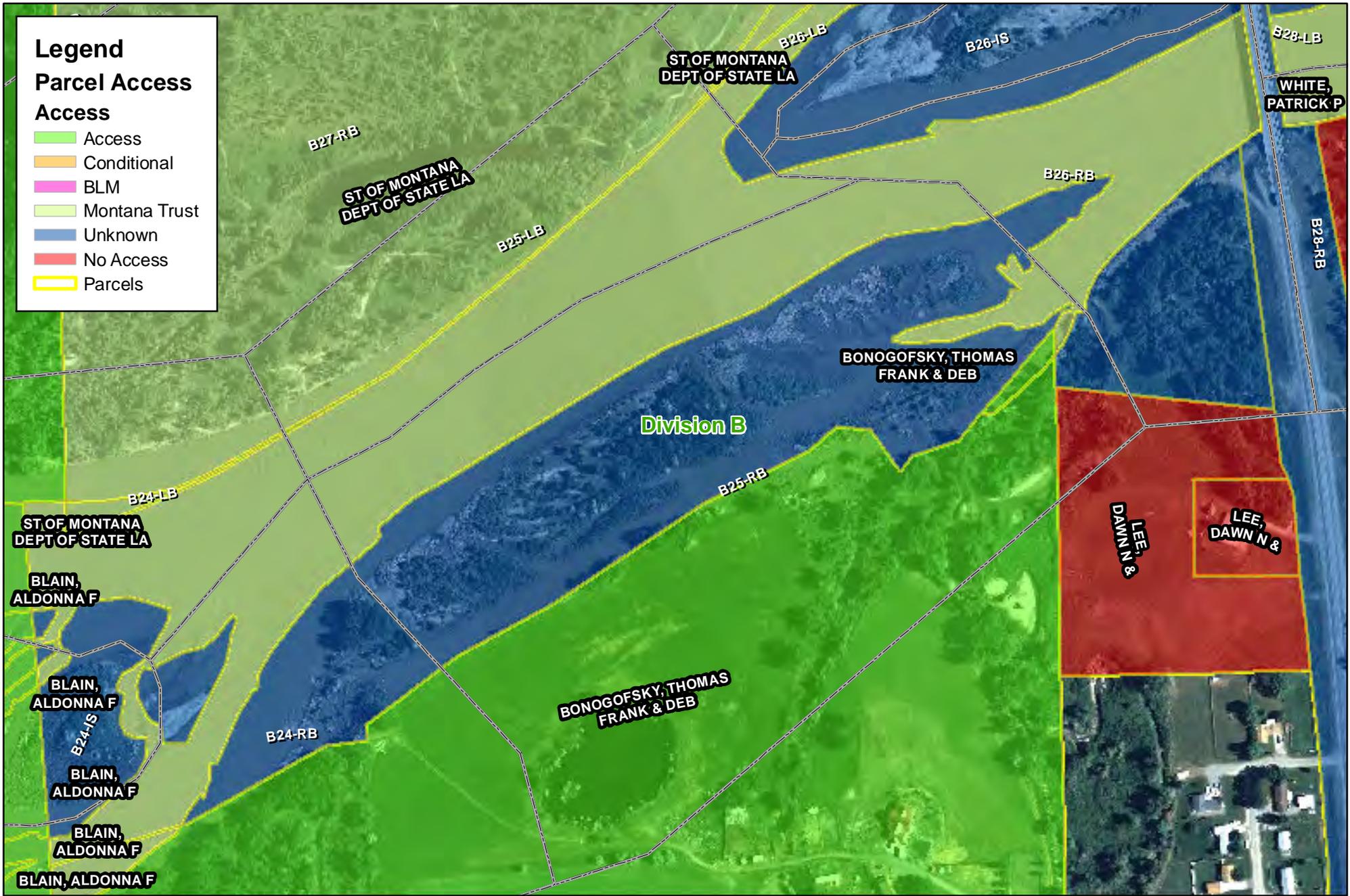


Figure 1

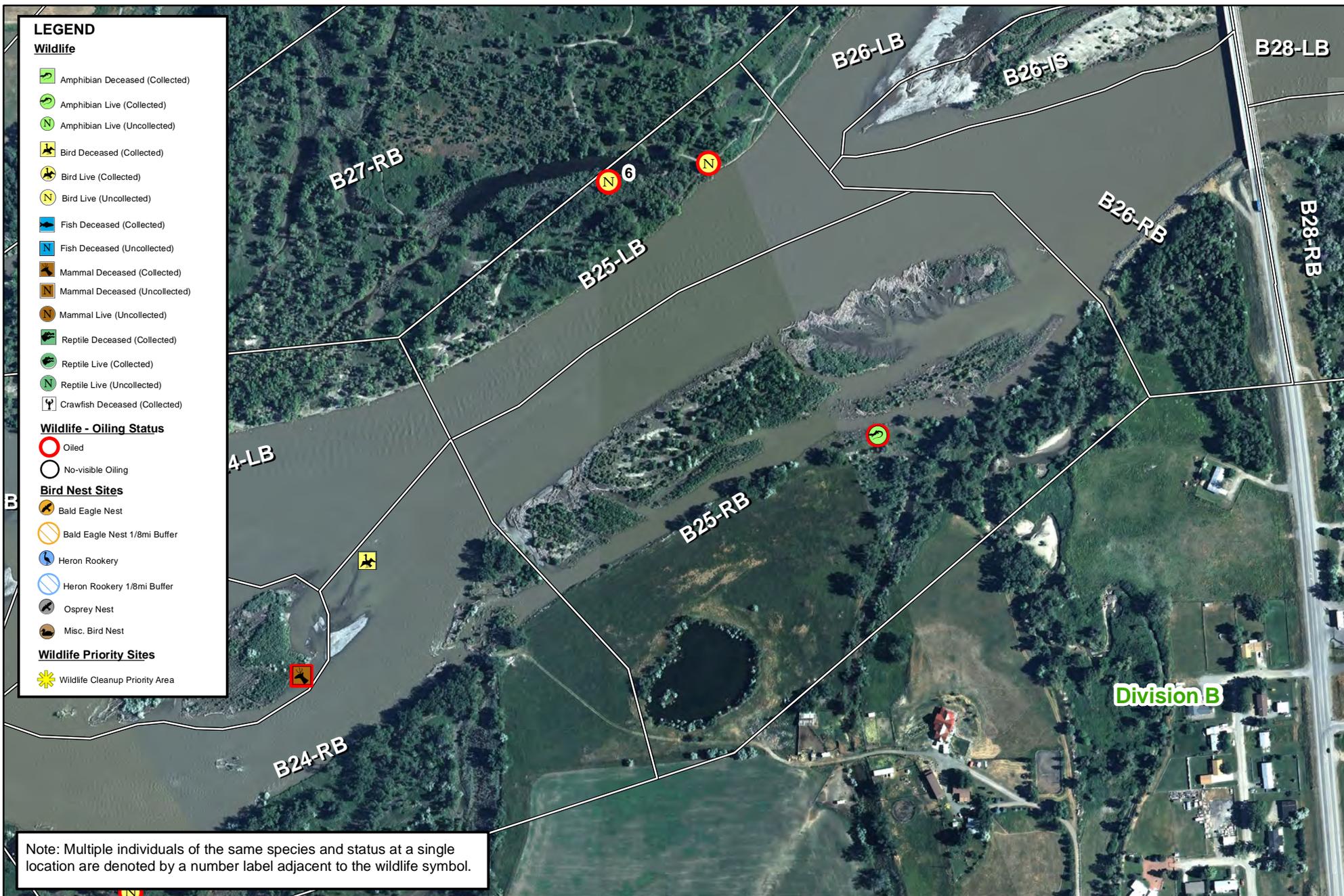
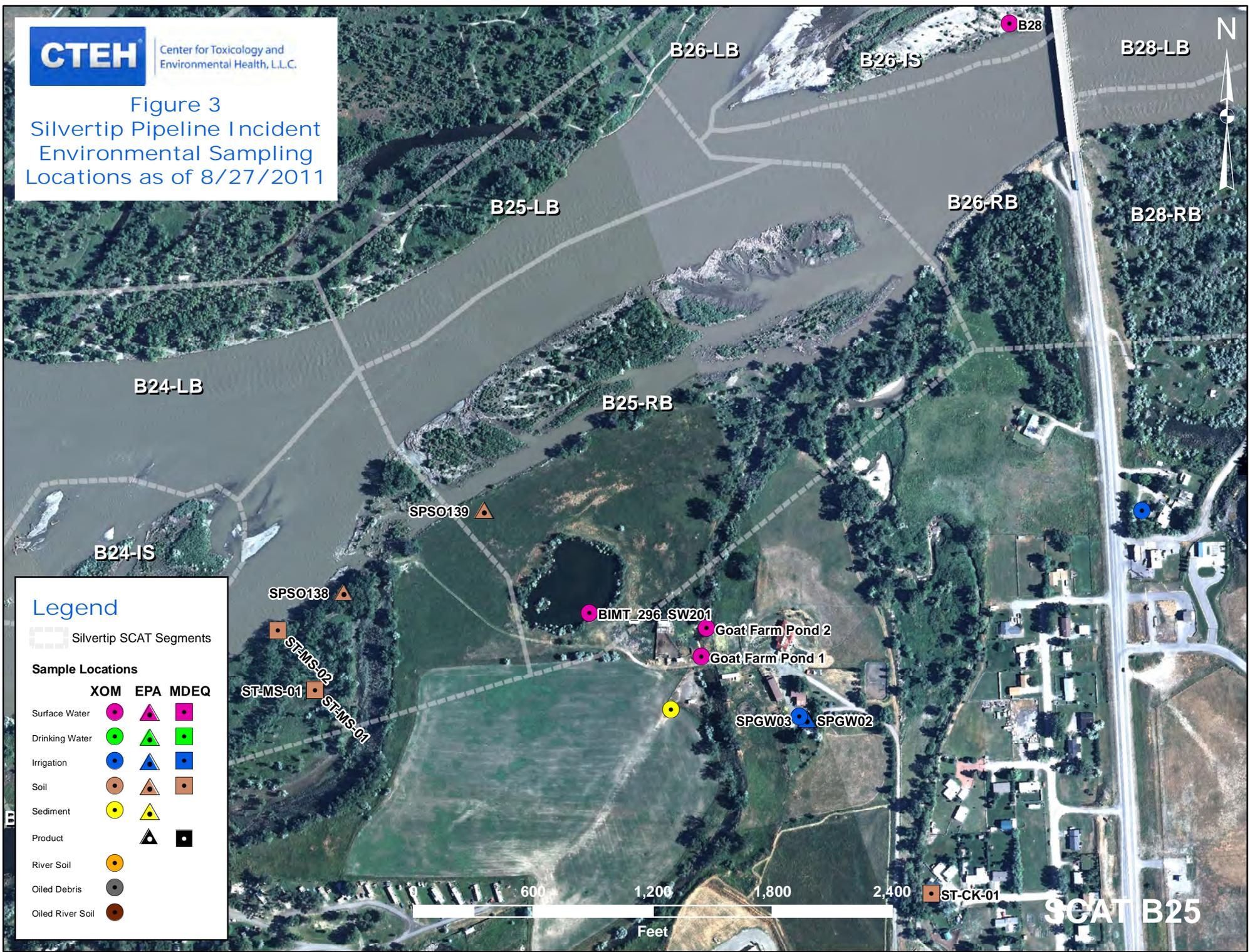


Figure 2
Wildlife Resources

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



Legend

Silvertip SCAT Segments

Sample Locations

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

SCAT B25

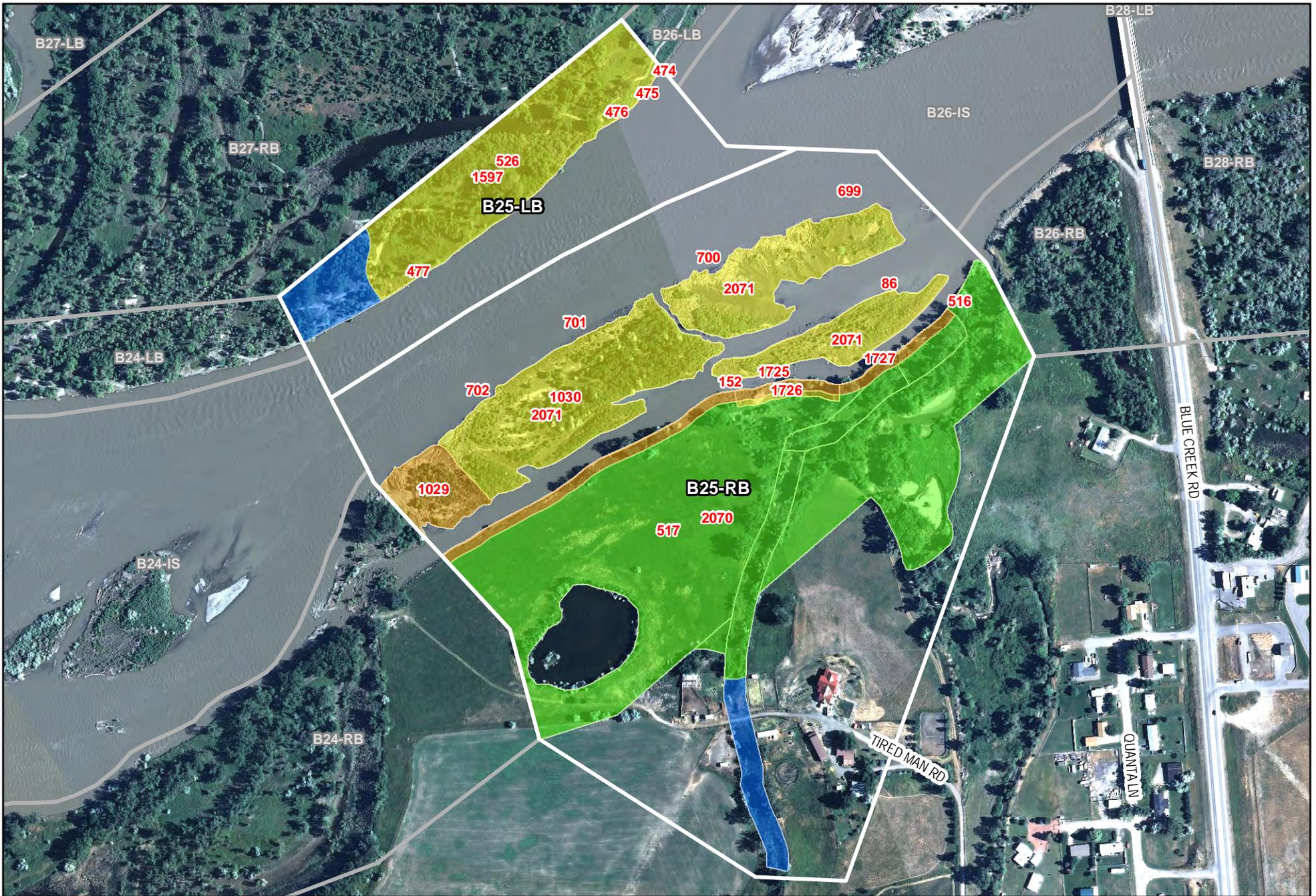


Figure 4 - Maximum SCAT Observations For SCAT Area: B25

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

310 0 310 620 Feet

B25 POLARIS APPLIED SCIENCES, INC.



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

Figure 5 - Final SCAT Observations
For SCAT Area: B25



Appendix A

Sample Detection Summary



Detections in Samples Collected in SCAT Area B25

Printed 9/13/2011

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
07082011-GF-1	08-Jul-11	Field	Water_Surface	MADEP EPH	Total Extractable	Y	906	1000		ug/L	no
07082011-GF-3	08-Jul-11	Field	Soil_Surface	MADEP EPH	Total Extractable	Y	26.1	200		mg/kg	no
SPGW02_071011	10-Jul-11	Field	Water_Irrigation	EPA 8270	Dimethylphthalate	Y	3.1	270000	J	ug/L	no
SPGW02_071011	10-Jul-11	Field	Water_Irrigation	EPA 8270	Di-n-butylphthalate	Y	0.66	2000	J	ug/L	no
SPGW03_071011	10-Jul-11	Field	Water_Irrigation	EPA 8270	Dimethylphthalate	Y	0.67	270000	J	ug/L	no
SPGW03_071011	10-Jul-11	Field	Water_Irrigation	EPA 8270	Di-n-butylphthalate	Y	0.61	2000	J	ug/L	no



Appendix B

Initial SCAT Survey Forms
and Sketches

DBIG/SC

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 11/07/2011	Time (24h): std / daylight 1357 hrs to 1429 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: B25 <u>Left Bank / Right Bank</u> <u>Island</u>				
Operations Division: B				
Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- <u>32</u> deg C	

2 SURVEY TEAM # 3	name	organization	contact phone number
Richard Marty		Polaris Corporation	208 360 0733
Kim Dickerson		US Fish and Wildlife	307 631 2031

3 SEGMENT Total Segment/Reach Length 600 m Segment/Reach Length Surveyed 600 1160 m A

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/En _____ Marsh _____

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: x Est Height 0.5 m canyon _____ manmade _____ meander _____ confined or leveed _____ S560substrate Type: Silt

Sloped: 30 (>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 _____ 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 island separated by a flowing channel.

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

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

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)		
					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>	600	0.25	50			X			X								Silt/Veg
<u>B</u>				<u>X</u>	560	0.25	90			X			X								S/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				
NONE																

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

Oiling was largely found on the leaves and stems of bushes. The oiled grass was approximately 150 cm above the substrate and approximately 130 cm above the river level at the time of the survey. The band is broader and less concentrated than on grasses of the right bank.

The oil coat on the bushes is readily transferrable and the oiled band should, therefore, be treated. Treatment should consist of cutting and collection of oiled vegetation. Logs and sticks built up on the SW end of the island were not examined thoroughly for oil.

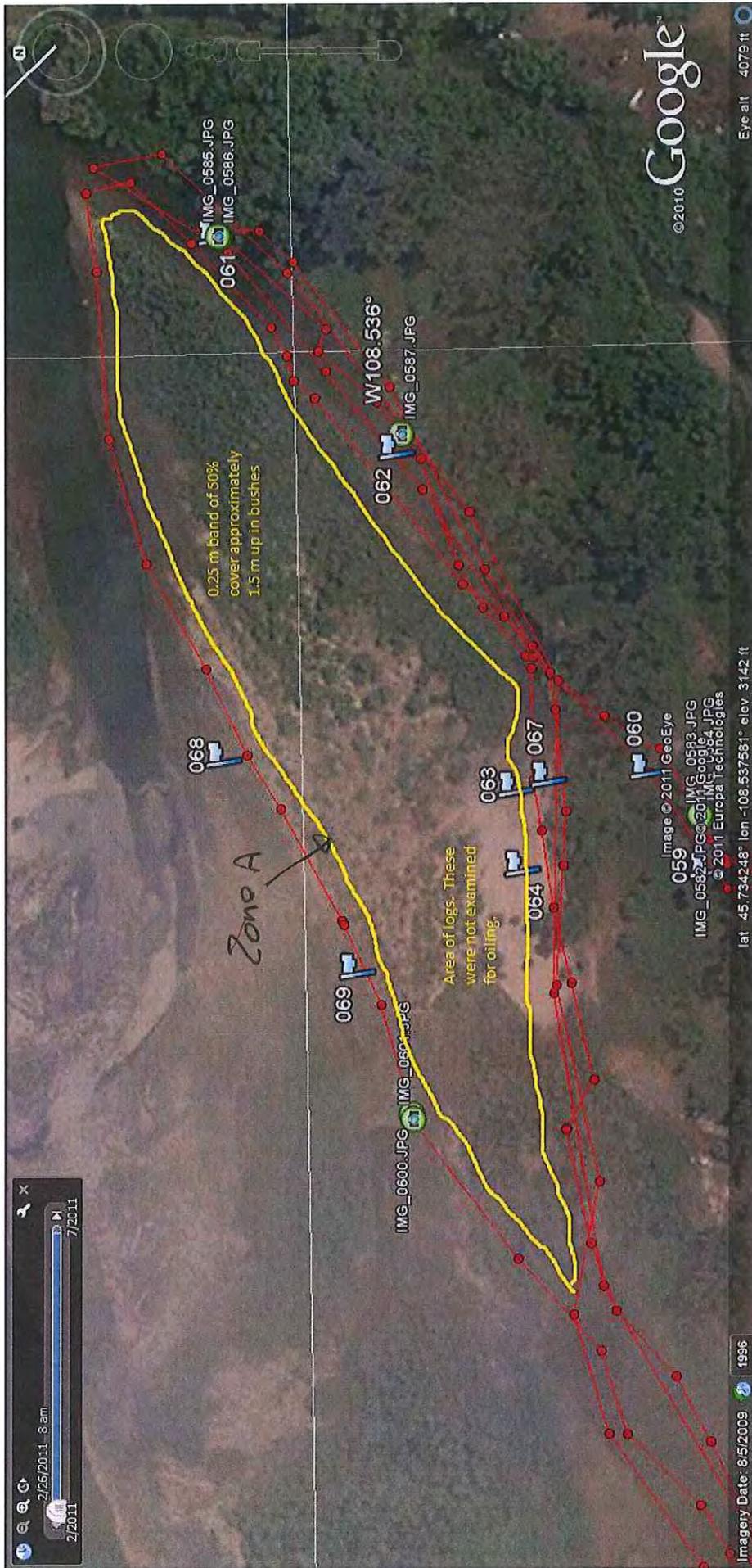
(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)

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

Img 587, Img - 600, 601
Img 585 to 601

86
152

RM
RM



b

Zone A

Sketch map B25
Island.
Zone A



Zone B.

Sketch Map
 B25 Right Bank
 11/07/2011

DB/G/S

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>B25</u>	Left Bank <input type="checkbox"/> Right Bank <input checked="" type="checkbox"/> Island	19 / 07 / 11	1028 hrs to 1029 hrs	low - mean <input checked="" type="checkbox"/> bankfull - overbank
Operations Division: B				falling <input checked="" type="checkbox"/> steady - rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun <input checked="" type="checkbox"/> Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>35</u> deg C

2 SURVEY TEAM # 5	name	organization	contact phone number
	Bob Nailon	Cardno ENTRIX	713 817 2469
	John Beach	EPA	707 364 0491
	Ken Frazer	FWP	406 247 2961

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 535 m

Start GPS: LATITUDE N deg. _____ min. LONGITUDE W deg. _____ min. Datum: WGS 84

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

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 X 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/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 360 bags or 10 trucks access restrictions

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

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

OIL ZONE	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	101		20					P			✓							veg bank
B				X	179																	veg bank
C				X	103		3					P			✓							veg bank
D				X	152																	veg bank

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

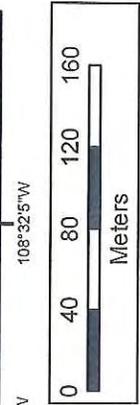
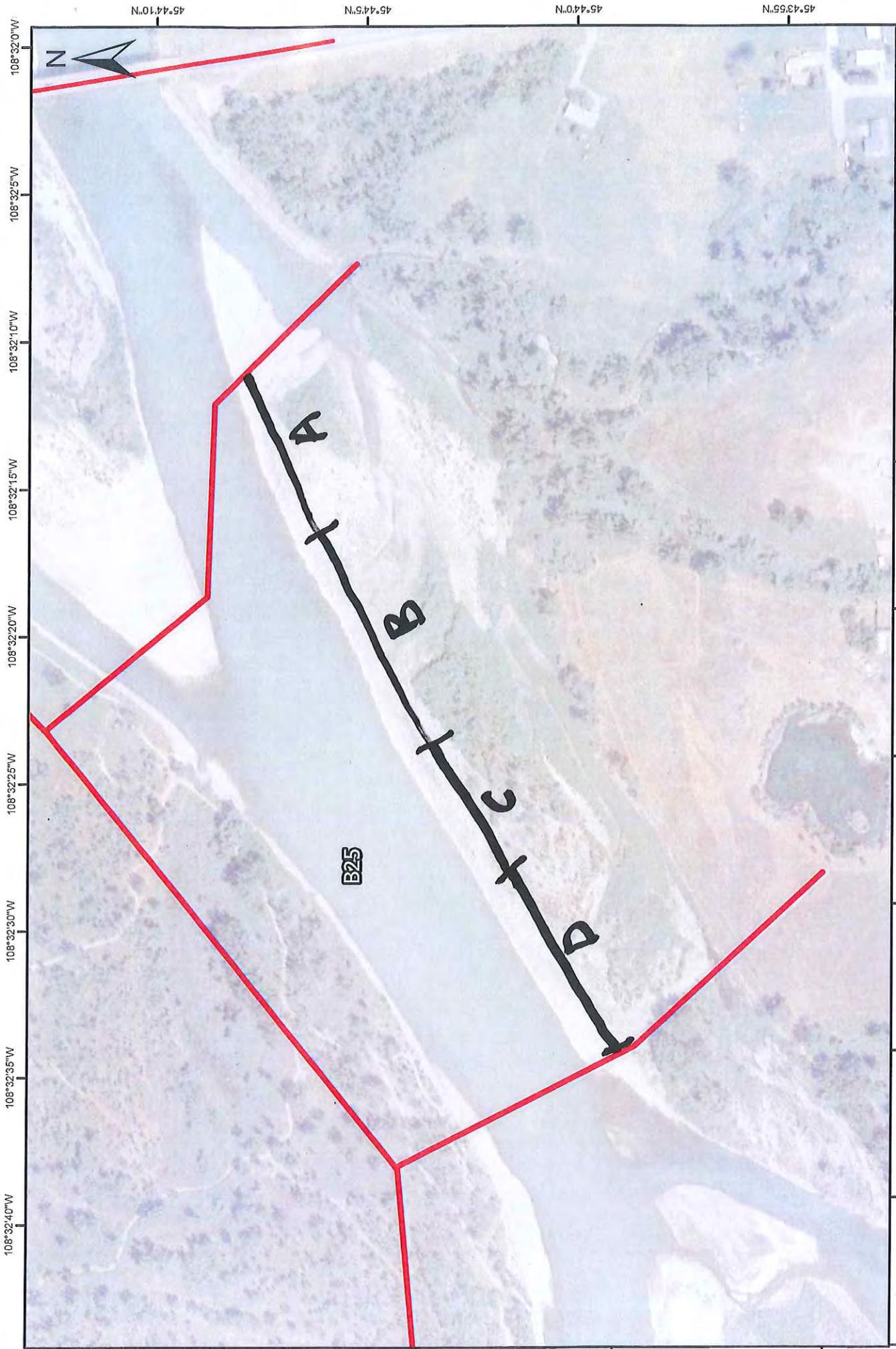
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

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

OSR = y OSC = unk SSC = unk

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

Sketch Yes/No Photos Yes/No (Roll # 5192 Frames 5199) Video Tape Yes/No (tape#)



COMMENTS:

DATE:

TEAM:

B25 -

(L/R/I)??

DB/G/S

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>9:45</u> hrs to <u>11:15</u> hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>B25</u> Left Bank / Right Bank / Island				
Operations Division:				
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>22</u> deg C
2 SURVEY TEAM # <u>4</u>	name	organization	contact phone number	
	<u>John Williams</u>	<u>Cardno ENTRIX</u>	<u>989 277 2507</u>	
	<u>John Matuszek</u>	<u>Cardno ENTRIX</u>	<u>406 860 7814</u>	
	<u>Greg Bam</u>	<u>MT FWP</u>	<u>415 215 0690</u>	
	<u>JULEY</u>	<u>EPA</u>		

3 SEGMENT Total Segment/Reach Length 565 m Segment/Reach Length Surveyed 504 m

Start GPS: LATITUDE 45 deg. 43.948 min. LONGITUDE 108 deg. 32.531 min. Datum: WGS84

End GPS: LATITUDE 45 deg. 44.072 min. LONGITUDE 108 deg. 32.158 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 S confined or leveed ___ Substrate Type: Veg

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

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

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

5 OPERATIONAL FEATURES

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

Debris: Y/N oiled Y/N amount ✓ bags or ___ trucks access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)			
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO		
<u>A</u>				<u>P</u>	<u>504</u>	<u>10</u>	<u>50</u>			<u>P</u>	<u>S</u>						<u>P</u>						<u>Veg</u>
<u>B</u>				<u>P</u>	<u>504</u>	<u>150</u>	<u>0</u>														<u>P</u>		<u>Veg</u>

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

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

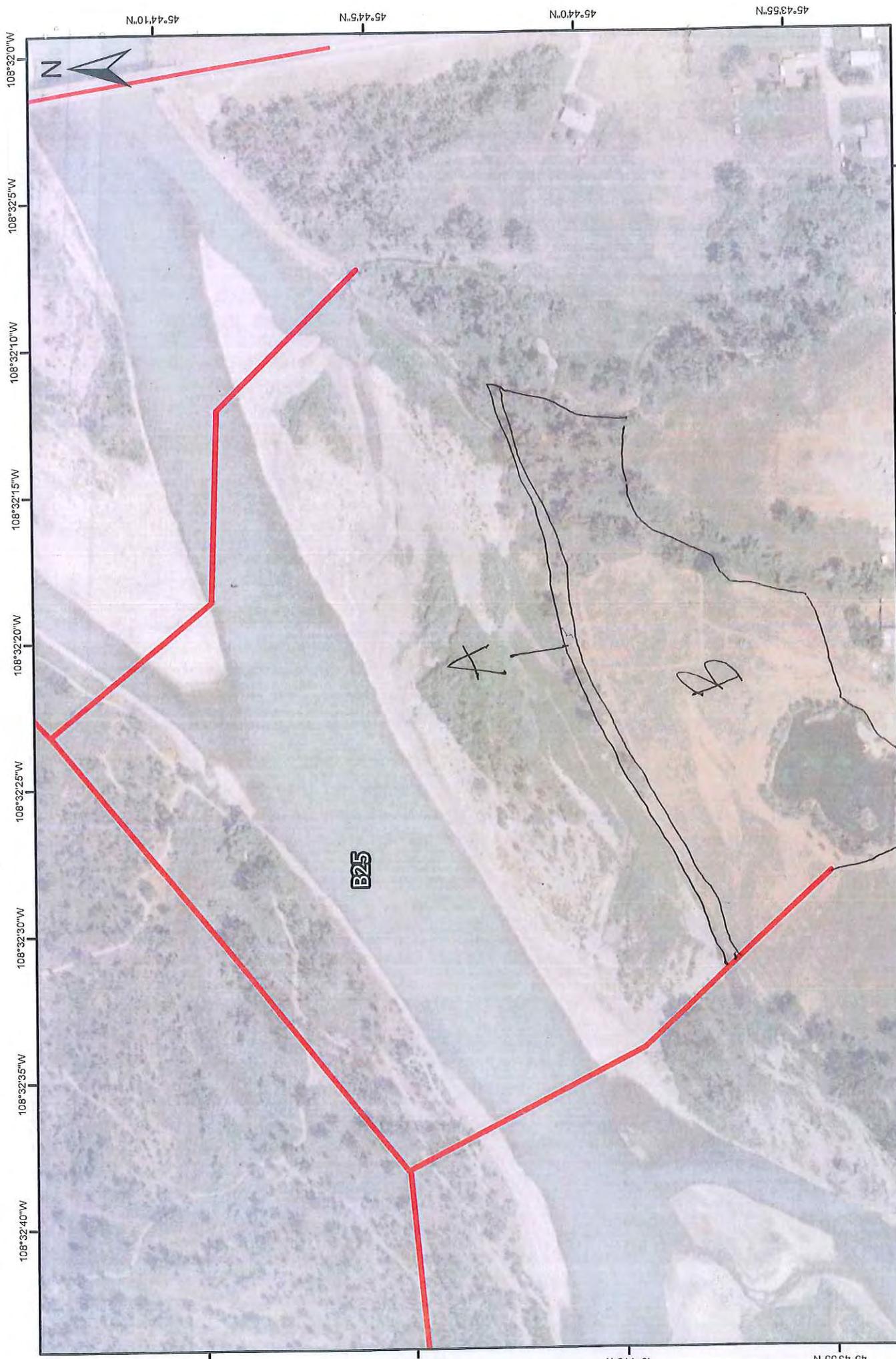
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Zone A - Team 4 recommends Low Priority vegetation cut and removal of coated vegetation. Debris pile removal @ 45.44.027, 108 32.266

Zone B - no recommendations

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

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



108°32'45"W 108°32'40"W 108°32'35"W 108°32'30"W 108°32'25"W 108°32'20"W 108°32'15"W 108°32'10"W 108°32'5"W 108°32'0"W

45°43'56"N 45°44'0"N 45°44'5"N 45°44'10"N

B25 -
(L/R/I)??

DATE: 7/21/11
TEAM: 4

COMMENTS:

0 40 80 120 160
Meters

DB/6/13

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 29/07/11	Time (24h): std / daylight 1300 hrs to 1400 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: B <u>25</u> Left Bank <input checked="" type="checkbox"/> Right Bank <input checked="" type="checkbox"/> Island <input checked="" type="checkbox"/>		Operations Division:		
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 # 1	Name	Organization	Signature
Pete Lee	<i>Pete Lee</i>	Polaris	225.892.6459
Janice Witul		US EPA	415.816.6582
Mark Peterson	<i>M. Peterson</i>	MT DEQ	406.498.4835
Nathan Hammond	<i>Nathan Hammond</i>	Cardno Entrix	513.256.2479

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 365 m

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

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

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

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

Sediment Bank: Clay/Mud _____ Sand _____ Mixed 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 100 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 20 bags or _____ trucks access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)	
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO
A				X	65	75	10			X	X		X								Grass, trees, debris
B				X	75	75	10			X	X		X								"
C				X	100	50				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				

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: Zone A has much debris; debris pile flagged @ N 45° 44 045 W 108° 32.388

Treatment recommendations: Zone : No oil observed; no treatment required.

Zone A,B : Cut & remove oil coated vegetation smaller than 1" diameter. Remove debris smaller than 4" diameter. Wipe larger oil coated vegetation.

Zone B: Light

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

Note: Island accessible only by boat at time of survey

Sketch Yes / No Photos Yes / No Frames 0270-0277 (see) 2351-2359 (Peterson) Photographer _____

DB/613

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 29/07/11	Time (24h): std / daylight 1300 hrs to 1400 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: B <u>25</u> Left Bank: <u>Right Bank</u> <u>Island</u>		Operations Division:		
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>28</u> deg C
2 SURVEY TEAM # 1		Name	Organization	Signature
Pete Lee		Polaris	225.892.6459	
Janice Witul		US EPA	415.816.6582	<i>Janice Witul</i>
Mark Peterson		MT DEQ	406.498.4835	
Nathan Hammond		Cardno Entrix	513.256.2479	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 365 m

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

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

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

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

Sediment Bank: Clay/Mud _____ Sand _____ Mixed 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 100m est. water depth: <1m 1-3m 3-10m >10m _____ m

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

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

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

Debris: Y/N oiled (Y) amount 20 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										SUBST. TYPE(S)				
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
<u>1024</u> A				X	65	75	10			X	X		X									Grass, trees, debris
<u>1030</u> B				X	100 300	75	10			X	X		X									"
C				X	100	50				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: Zone A has much debris; debris piled up N 45° 44' 04S W 108° 32' 38E

Treatment recommendations:

Zone : No oil observed; no treatment required.

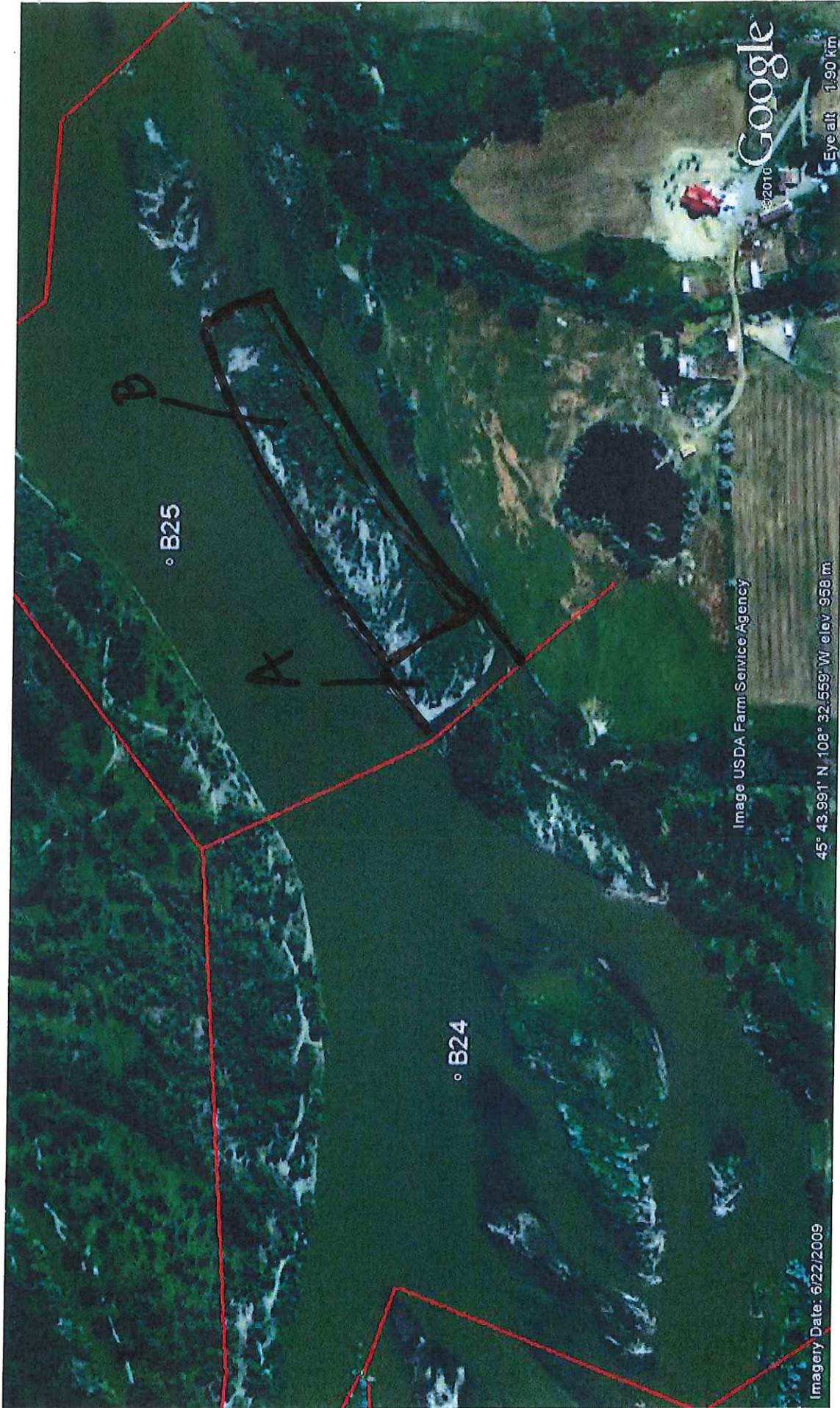
Zone A, B : Cut & remove oil coated vegetation smaller than 1" diameter. Remove debris smaller than 4" diameter. Wipe larger oil coated vegetation.

Zone B: Light

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

Note: Island accessible only by boat at time of survey

Sketch Yes / No Photos Yes / No Frames 0270-0277 (see) Photographer _____
2351-2359 (Peterson)



Zone A extends 65m downstream of seg. bound.

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>B25</u>	Left Bank/ Right Bank / Island	<u>19/08/2011</u>	<u>12:30</u> hrs to <u>2:00</u> hrs	low - <u>mean</u> - bankfull - overbank
Operations Division: <u>B25</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>27</u> deg C		

2 SURVEY TEAM # <u>5</u>	name	organization	contact phone number
	Merlo Gauvreau	Polaris	<i>[Signature]</i>
	Todd Farrar	Polaris	<i>[Signature]</i>
	Ariel Blanc	Polaris	<i>[Signature]</i>
	Linda Watson	EPA	<i>[Signature]</i>
	Betsy Hovda	DEQ	<i>[Signature]</i>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 1001 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 P (type) rip-rap Wetland: Swamp _____ Bog/Fen _____ Marsh _____

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: _____ Est Height 2-3 m canyon _____ manmade _____ meander _____ confined or leveed P Substrate Type: sed

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m m est. water depth: <1m (1.3m) 3-10m >10m m

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

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

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

Debris (Y) N oiled (Y) N amount 2 bags or _____ trucks access restrictions Private 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

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER					SUBST. TYPE(S)			
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO
<u>1725</u> A				X	512	0.5	40			X	(X)						X				veg
<u>1726</u> B				X	97	15	1		X	(X)							X				veg
<u>1727</u> C				X	392	20	-														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

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

Zone A: Band along veg on top of bank NFT

Zone B: Oiled veg and small (e.g. 1x1m) areas of sporadic distribution, clumps of debris/CV. Areas have been flagged for operations. Recommend ATM1 & 2

Zone C: Slew. NOC

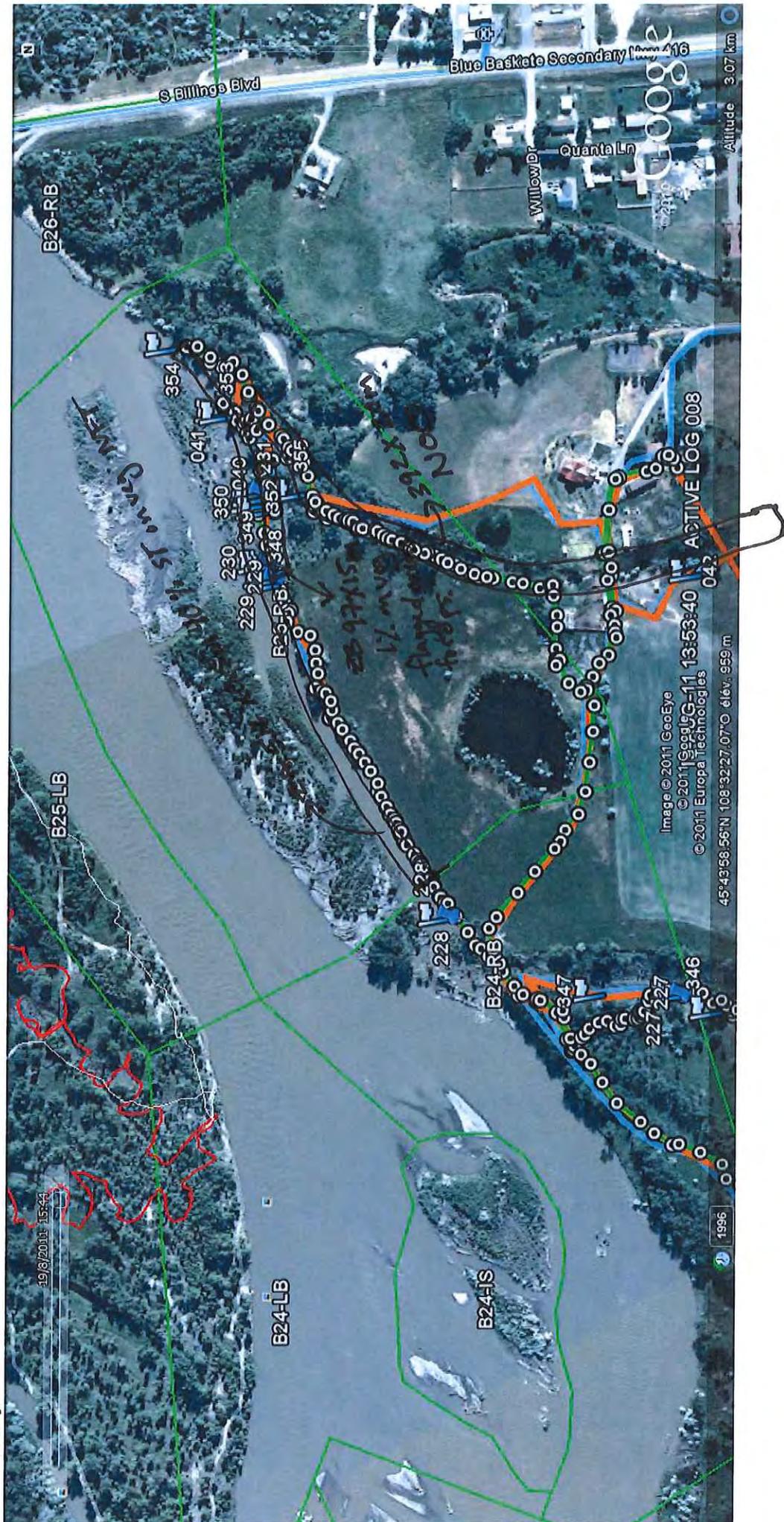
(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)

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

SCATS
19 Aug 2011

BLS

P. 2 of 2



03/9

1 GENERAL INFORMATION		Date (dd/mm/yy) 02/09/11	Time (24h): std / daylight 0830 hrs to 1100 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: B25 Left Bank / <u>Right Bank</u> / Island				
Operations Division: B				
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- _____ deg C

2 SURVEY TEAM # <u>Tand 3 5</u>		Name	Organization	Signature
		Josh Hofkes	Cardno ENTRIX	
		Matthew Kent	DEQ	
		Juan Patino	USCG	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 550 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 _____ 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 S oxbow _____ flood plain valley P Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10 m (0-100 m) >10m 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 _____ bags or _____ trucks access restrictions ZONE B

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	550	50	<1			X	⊗						X					mix
B				X	550	80	>5			⊗	X						X					mix

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: Less than 1% stain
N.F.T.

B: Requires treatment by Ops.

Removed 6 bags of oiled coat, shore of boom from ZONE A

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



TEAM 5 B25 RB A: Less than 176 stain

September 2, 2011

N.F.T
B: Requires Ops to remove coat

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 19-Jul-2011	Time (24h): std / daylight 1028 hrs to 1029 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: B25 <u>Left Bank</u> / Right Bank / Island				
Operations Division: B				
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / <u>Windy</u> / Calm		Air Temp +/- <u>31</u> deg C

2 SURVEY TEAM # 1	name	organization	contact phone number
Pete Lee	<u>PBL</u>	Polaris	
Larry Alheim	<u>LA</u>	MTDEQ	
Andy Johnson	<u>AUSTIN MESS</u>	USCG	<u>[Signature]</u>

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 S _____ 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 125m 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 50 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	
474 475 476 477 A				X	34	1															X	Grass, trees, debris
B				X	15	1	100			X	X			X								Grass, trees, debris
C				X	234	1															X	Grass, trees, debris
D				X	143	1	100			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 band heights: Zone B - 40cm

Treatment Recommendations:
 Zones A, C: No oil observed; no treatment required.
 Zones B, D: Cut & remove oil coated vegetation smaller than 1" diameter. Wipe larger oil coated vegetation.

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

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 19-Jul-2011	Time (24h): std / daylight <u>8</u> <u>29</u> 1028 hrs to 1028 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: <u>B28/5 Left Bank</u> / Right Bank / Island		Operations Division: B		
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / <u>Windy</u> / Calm		Air Temp +/- <u>31</u> deg C

2 SURVEY TEAM # 1	name	organization	contact phone number
Pete Lee		Polaris	
Larry Alheim		MTDEQ	
Andy Johnson		USCG	
			<u>426</u>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 462 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 120m 5 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 20 bags or _____ trucks access restrictions _____
 Oiled trees/shrubs Y / N 50 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	142	1															X	Grass, trees, debris
B			15	X	205	1	100			X	(X)		X									Grass, trees, debris
C		234		X	160	1															X	Grass, trees, debris
D					<u>143</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

Oil band heights: Zone B -- 40cm

Treatment Recommendations:
 Zone A: No oil observed; no treatment required.
 Zone B: Cut & remove oil coated vegetation smaller than 1" diameter. Wipe larger oil coated vegetation.
 Zone C: No oil observed; no treatment required.

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

Sketch Yes / No Photos Yes / No Frames 1178-1191 (Lee) 1156-1163



©2010 Google

Eye alt 4723 ft

Image © 2011 GeoEye

45°44'07.58" N 108°32'28.18" W elev 3143 ft

Imagery Date: 8/5/2009

D13/G15

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 22/07/2011	Time (24h): std / daylight 10:00 hrs to 11:05 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: B25	Left Bank / Right Bank / Island			
Operations Division: <u>B</u>				
Survey by: <u>(Foot)</u> / ATV / Boat / Helicopter / Overlook /		<u>(Sun)</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>29</u> deg C

2 SURVEY TEAM # 3	Name	Organization	Signature
Jenni Nelson		Polaris	<i>Jenni Nelson</i>
John Bauer		Polaris	<i>John Bauer</i>
Janice Wital (<i>witul</i>)		EPA	<i>Janice Wital</i>
Earl Radonski		MFWP	<i>Earl Radonski</i>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 350 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 X confined or leveed _____ Substrate Type: Silt/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 125 m est. water depth: <1m 1-3m 3-10 m >10m _____ m

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

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

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

Debris: Y/N oiled Y/N amount _____ bags or _____ trucks access restrictions: Area has many ponds, sloughs, standing water,

Oiled trees/shrubs Y/N River Current strong Y/N Other Features: areas of deep mud and wet unstable sand; thick veg

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

526

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>	350	65	<1			<u>(X)</u>	<u>X</u>						<u>X</u>				<u>veg</u>

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

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER					WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)		
	MS	LB	UB	OB			SAP	OP	PP	OR	OF					TR	NO
None																	

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 - intermittent trace oiling found throughout along drainages, primarily on grass, wood debris, & brush.

Ops working areas west of wp#20 along pathway during survey.

Sketch Yes / No Photos Yes / No Frames _____ Photographer J. Nelson, J. Bauer



BAS L SCAT #3 22 July 2011



Appendix C

Pre-Inspection Survey Transmittal

✓

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 10-11 August 2011

Segment: B25LB

Team: SCAT Liaison John Spenik

Signed: 

~~USCG~~ Observer TRUMAN SKANG

Signed: 

Observer _____

Signed: _____

Observer _____

Signed: _____

Segment meets criteria? YES X NO _____

RBOS attached? YES _____ NO X

If NO:

Location Sketch attached? YES N/A NO _____

CTR continue? YES _____ NO x

Comments: During the survey some light oiling was encountered and was collected /cleaned by a hot shot cleanup crew.



Appendix D

Post-Inspection Survey Transmittal

POST

Post Inspection Survey Transmittal

Segment B25 RB

Date of Survey September 2, 2011

SCAT Team Member Josh Hofkes

Signed: [Signature]

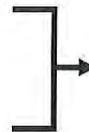
SCAT Team Member Juan Pineda

Signed: [Signature]

SCAT Team Member MA [Signature] Kent

Signed: [Signature]

Segment FAILED ReSCAT



Referred to Ops
For Further Treatment

Segment Conditionally PASSES ReSCAT



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

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

Zone B (Island) appears to have NOT been treated by Ops. Large amount of transferable oil coat on willows.

ATM: # 1 & # 2

Zone Dimensions: Length 550 Width 80 GPS Waypoint: Lat. _____ Long. _____
(required) meters (center of zone)

Estimated Work Effort: Number of People 10 Hours of Work 30 Applicable CTR(s) _____
(required)

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

[Signature] John Spenik/Poharis 09 Sep 2011
Sign Name Print Name/ Affiliation Date

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



Appendix E

Final SCAT Survey Forms
and Sketches

DB/Gre

R

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (16/08/11)	Time (24h): std / daylight	Water Level
Segment/Reach ID: B25 <u>Left Bank / Right Bank / Island</u>			8h00 hrs to 11h00 hrs	low - <u>mean</u> - bankfull - overbank
Operations Division:				falling - steady - rising
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 # 5	<i>name</i>	<i>organization</i>	<i>contact phone number</i>
Merlo Gauvreau		Polaris	
Chris Arrendondo		Cardno Entrix	
Cindy Santiago		EPA	<i>Cindy Santiago</i>
Marcile Sigler		DEQ	<i>Marcile Sigler</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 S Boulder _____ Peat/Organic _____ **Vegetated Bank:** S **Wooded Upland:** P

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

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

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

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

4C RIVER CHANNEL CHARACTER *circle or select as appropriate*

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

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

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

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

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

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)	
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO
A				X	418	65	0														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				

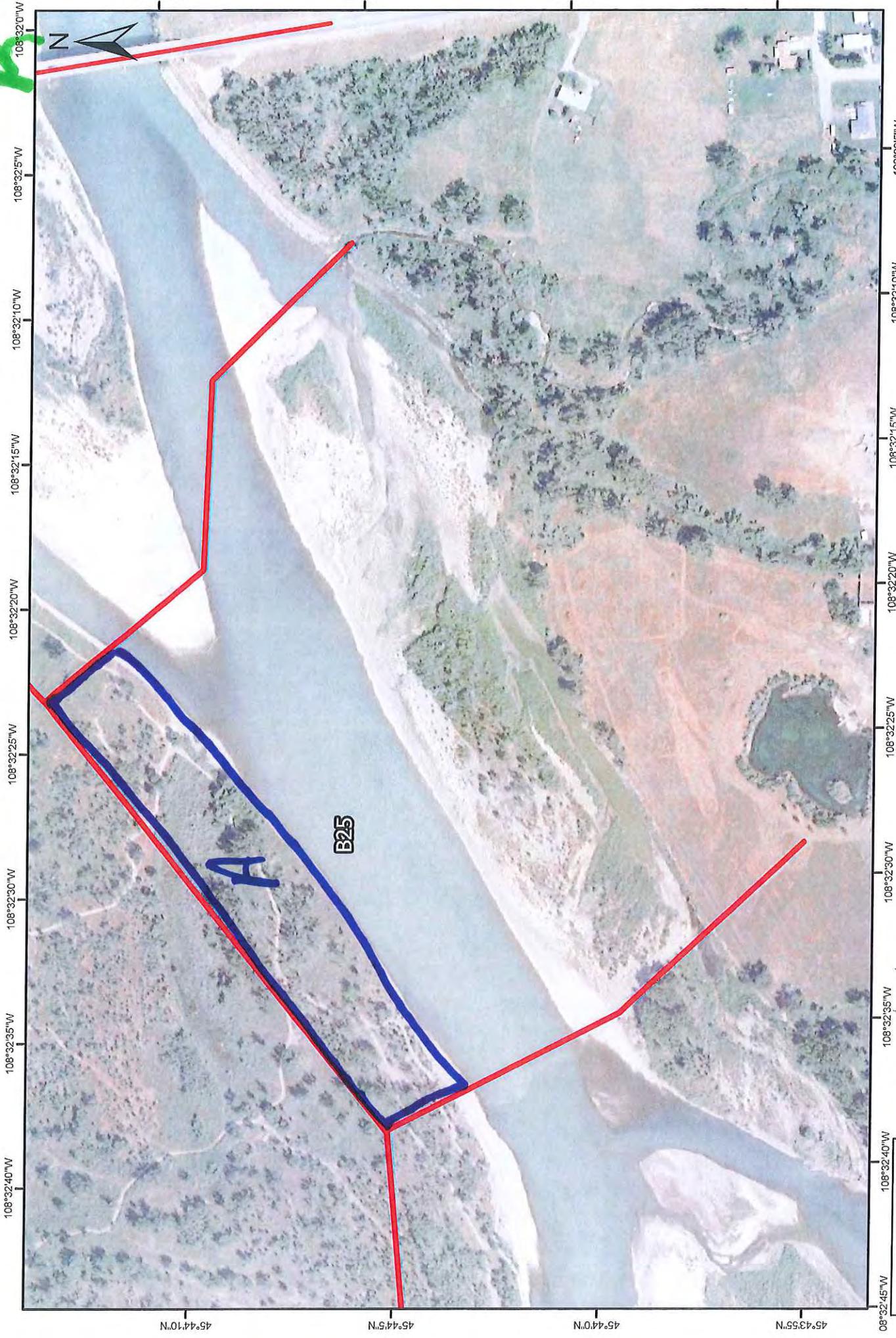
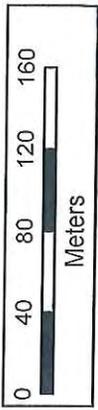
8 COMMENTS *ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations*

A: ReSCAT, No oil observe, meet the conditions of the CTR, NFT

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

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

R



A

B25

COMMENTS:

DATE: 8/16/2011
TEAM: 5

B25 -  (R/I)??

108°32'45"W 108°32'40"W 108°32'35"W 108°32'30"W 108°32'25"W 108°32'20"W 108°32'15"W 108°32'10"W 108°32'5"W 108°32'0"W

45°43'55"N 45°44'0"N 45°44'5"N 45°44'10"N



Appendix F

Completed SCAT Segment
Sign-Off Forms

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment B25 RB

Date of Survey September 2, 2011

Dates of Initial SCAT Assessments

11 JUL 11 ^{EC}
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment

35

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] VBCC GST 02 AUG 2011
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

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

[Signature] Josh Hofkes/Carreno 9/2/2011
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

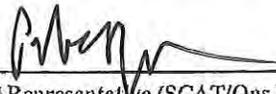
COMPLETED

Operations Division: A B C
SCAT Area Number (i.e. A12): <u>B25</u>
SCAT Segment Number (i.e. A12-LB/IS/RB): <u>B25 LB</u>

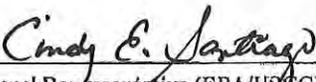
Complete

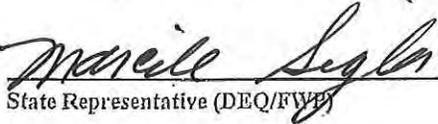
Check if Complete:

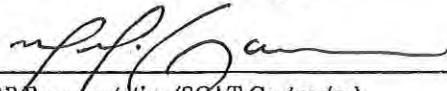
1. Completion Date for Initial SCAT Assessment: 22 July 2011
2. Combined Treatment Recommendations (CTRs) Developed/Issued:
 List CTRs Applicable to SCAT Segment: 22
3. Clean-Up Operations Conducted:
4. Inspection (CTR Objectives and CTR Addendums Complete):

 22 Aug 2011
 RP Representative (SCAT/Ops Liaison Contractor) Date

5. SCAT Reassessment:

 8/22/11
 Federal Representative (EPA/USCG) Date

 8/24/11
 State Representative (DEQ/FWPD) Date

 22-08-11
 RP Representative (SCAT Contractor) Date

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