

ExxonMobil Pipeline Company

**SCAT Area Transition Report
for B21**

Silvertip Pipeline Incident
Laurel, Montana

October 21, 2011



SCAT Area Transition Report for B21

Silvertip Pipeline Incident
Laurel, Montana

Prepared for:
ExxonMobil Pipeline Company

Prepared by:
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Our Ref.:
B0085883.1103

Date:
October 21, 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 B21, 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 B21. 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 B21, 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 B21 is 34.8. There were no access issues for this area.

1.2 Cultural, Historic, and Natural Resource Constraints

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

Figure 2 summarizes the natural resources identified in this segment. International Bird Rescue and Resource Advisors from U.S. Fish and Wildlife Service conducted regular inspections of Area B21. No oiled wildlife was observed or recovered. A Wildlife Priority Cleanup Area (WPCA) was identified that encompassed the four segments that make up the B20 Island (B20-LB, B21-LB, B22-RB, and B23-RB). The WPCA is made up of several areas of transferable oil located across the island. The WPCA was treated to reduce the potential for wildlife oiling and is no longer considered a wildlife hazard. No active migratory bird nests were identified in Area B21.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area B21. 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 B21 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	BIMT0801DW704	8/1/2011	Water_Drinking	BIMT_465_DW704	45.730320	-108.554492
CTEH	BIMT0801DW707	8/1/2011	Water_Drinking	BIMT_465_DW707	45.730151	-108.553720
CTEH	BIMT0801DW710	8/1/2011	Water_Drinking	BIMT_465_DW710	45.730357	-108.552819
CTEH	BIMT0801DW713	8/1/2011	Water_Drinking	BIMT_465_DW713	45.730752	-108.552926
CTEH	BIMT0801IW701	8/1/2011	Water_Irrigation	BIMT_465_IW701	45.730790	-108.552935
CTEH	BIMT0801IW702	8/1/2011	Water_Irrigation	BIMT_465_IW701	45.730790	-108.552935
CTEH	BIMT0801IW704	8/1/2011	Water_Irrigation	BIMT_465_IW704	45.730824	-108.552956
CTEH	BIMT0801IW705	8/1/2011	Water_Irrigation	BIMT_465_IW705	45.730869	-108.552722

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 detections and therefore no exceedances.

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 B21 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area B21.

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. 21](#) and [CTR No. 36](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area B21 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

A Pre-Inspection Survey Transmittal (PIST) was not conducted for this area.

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 B21 following completion of oil removal activities. The SCAT team performed final surveys of the right and left banks within SCAT Area B21 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 B21, no further treatment is recommended for these segments. SCAT Segment Sign-Off Forms are included as Appendix F.



**SCAT Area Transition
Report for B21**

Silvertip Pipeline Incident
Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for B21

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
Report for B21**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for B21

Prepared for:

Unified Command

10/11/2011
Date

 S. McElroy
Unified Command – FOSC



**SCAT Area Transition
Report for B21**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for B21

Prepared for:

Unified Command

Date

Unified Command – MDEQ

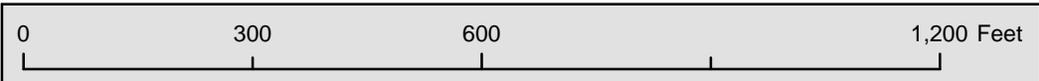
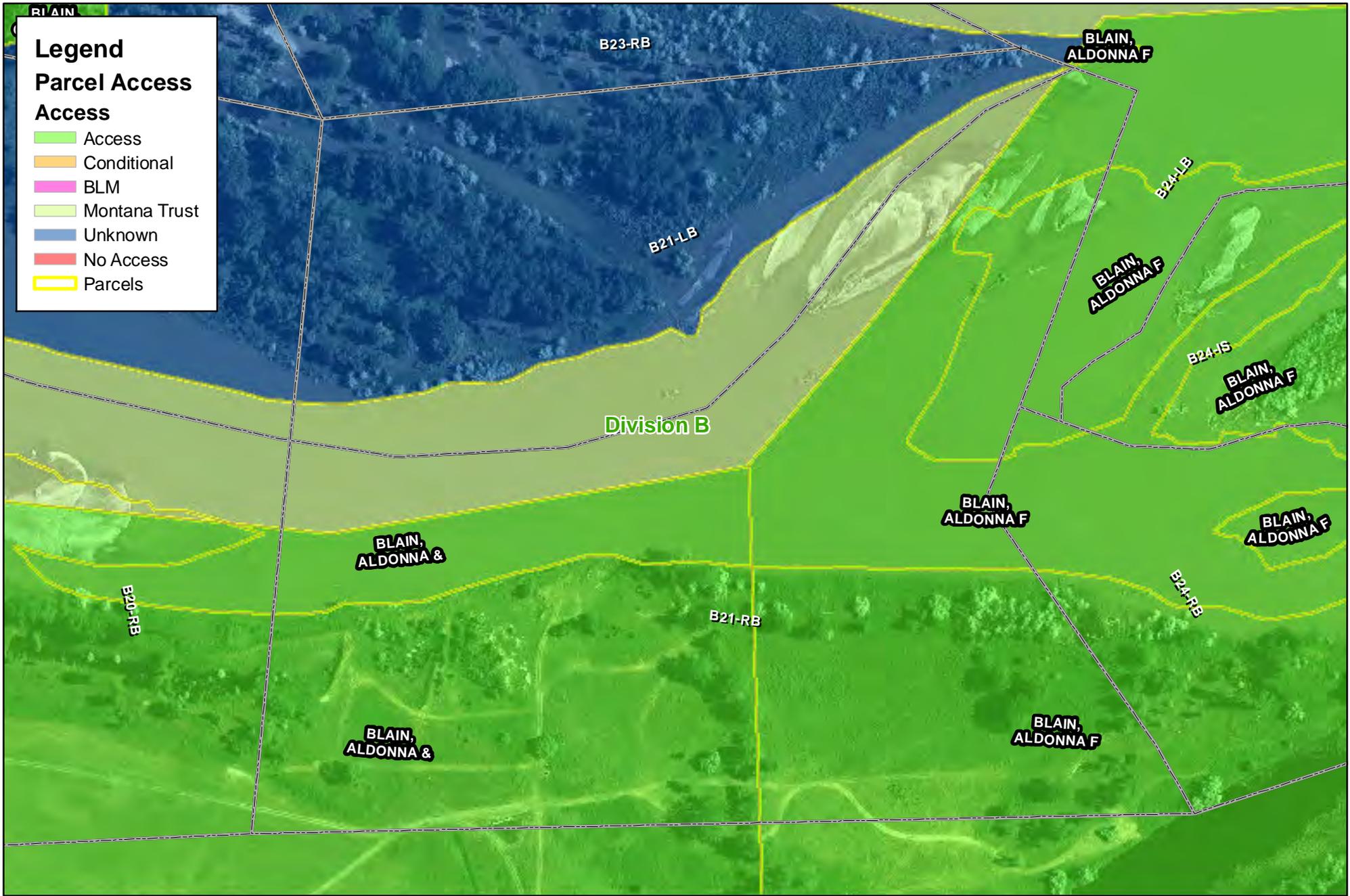


Figure 1

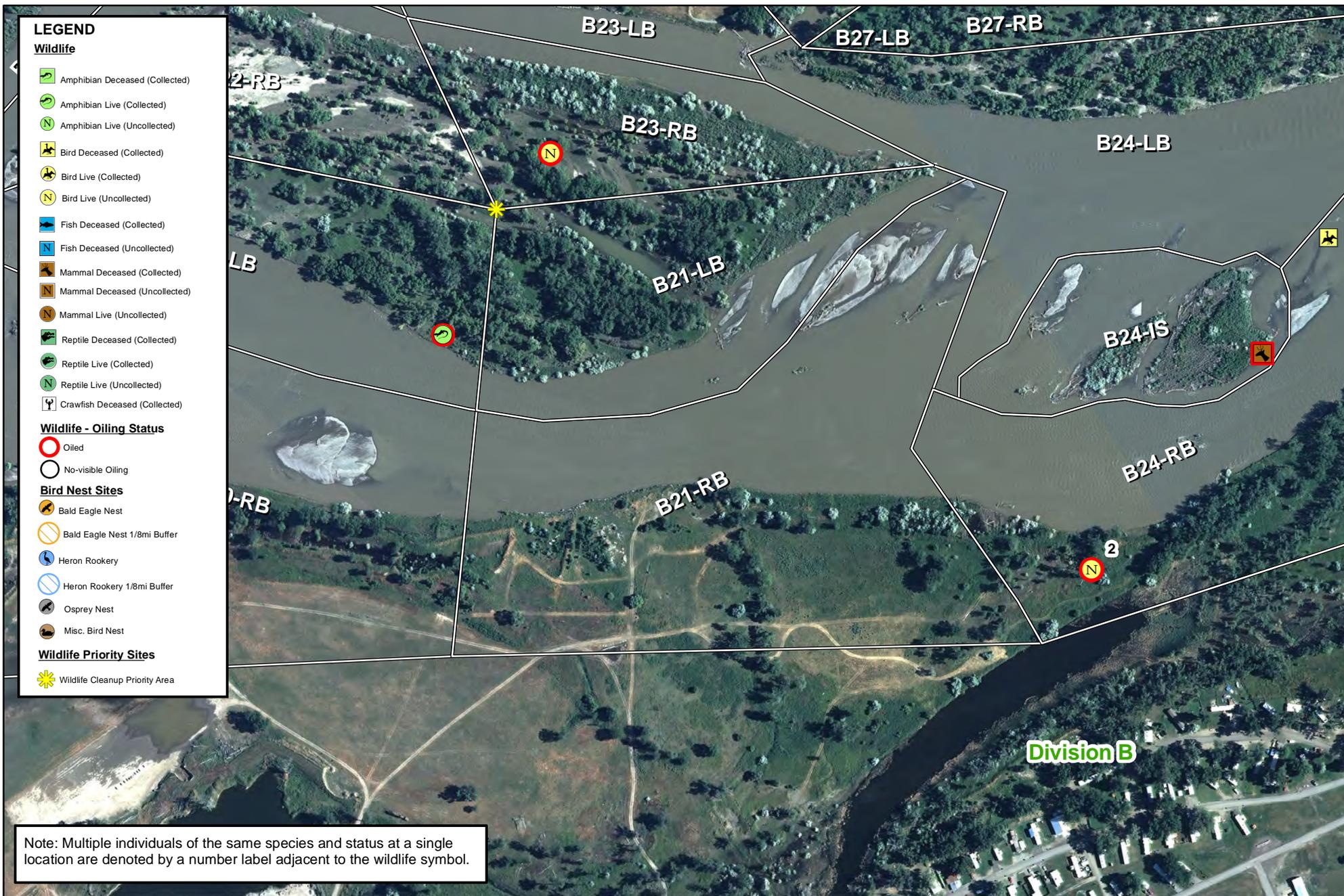
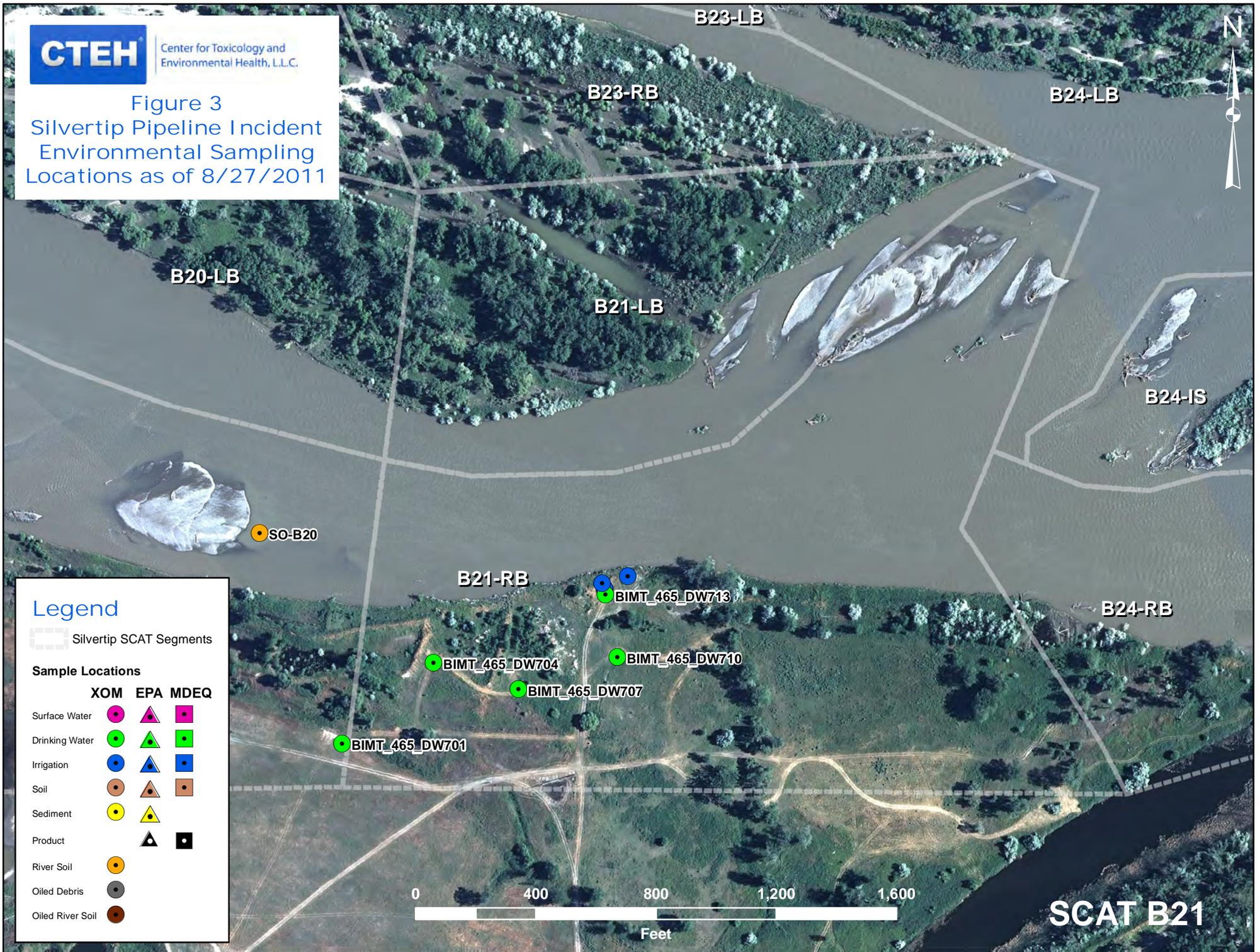


Figure 3
 Silvertip Pipeline Incident
 Environmental Sampling
 Locations as of 8/27/2011



Legend

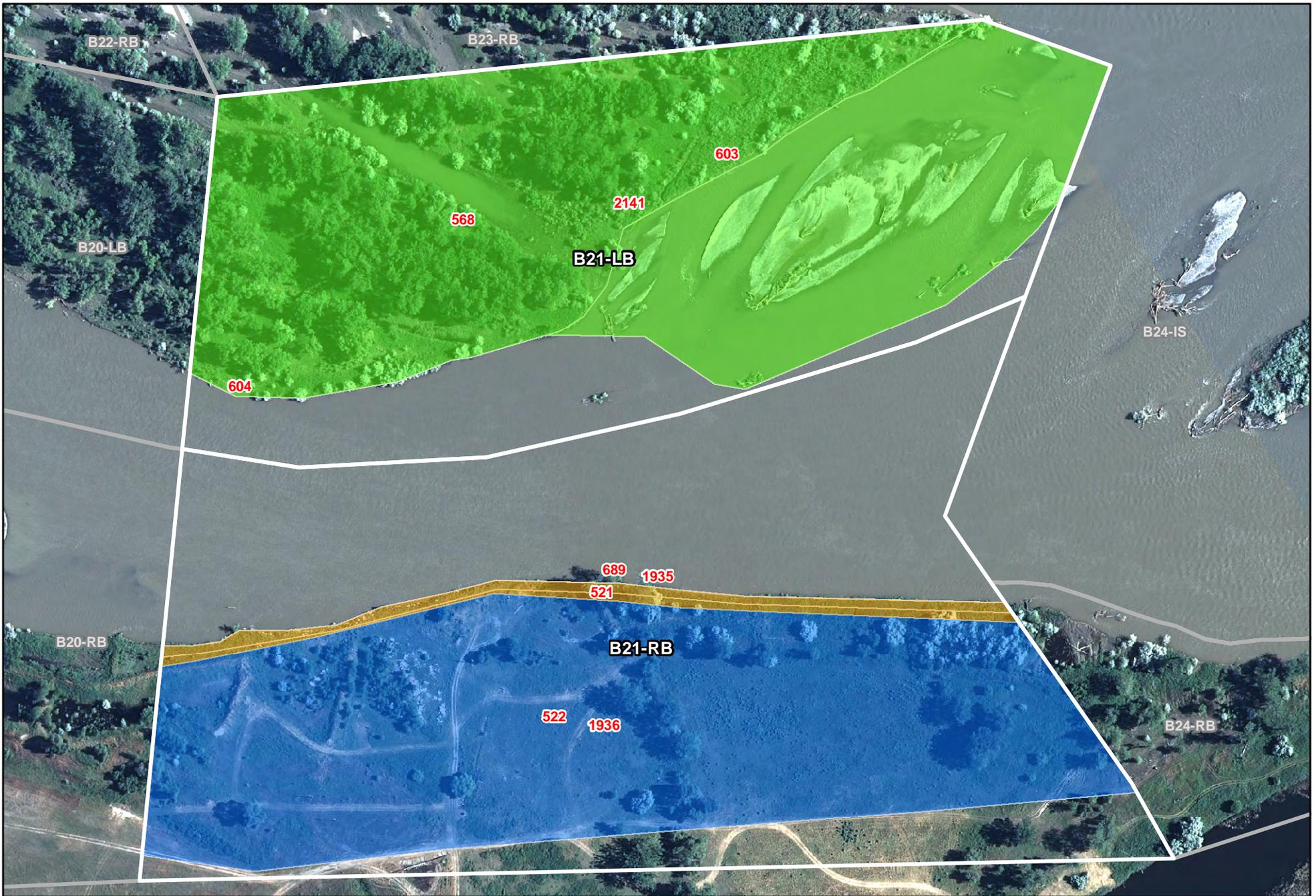
Silvertip SCAT Segments

Sample Locations

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



SCAT B21



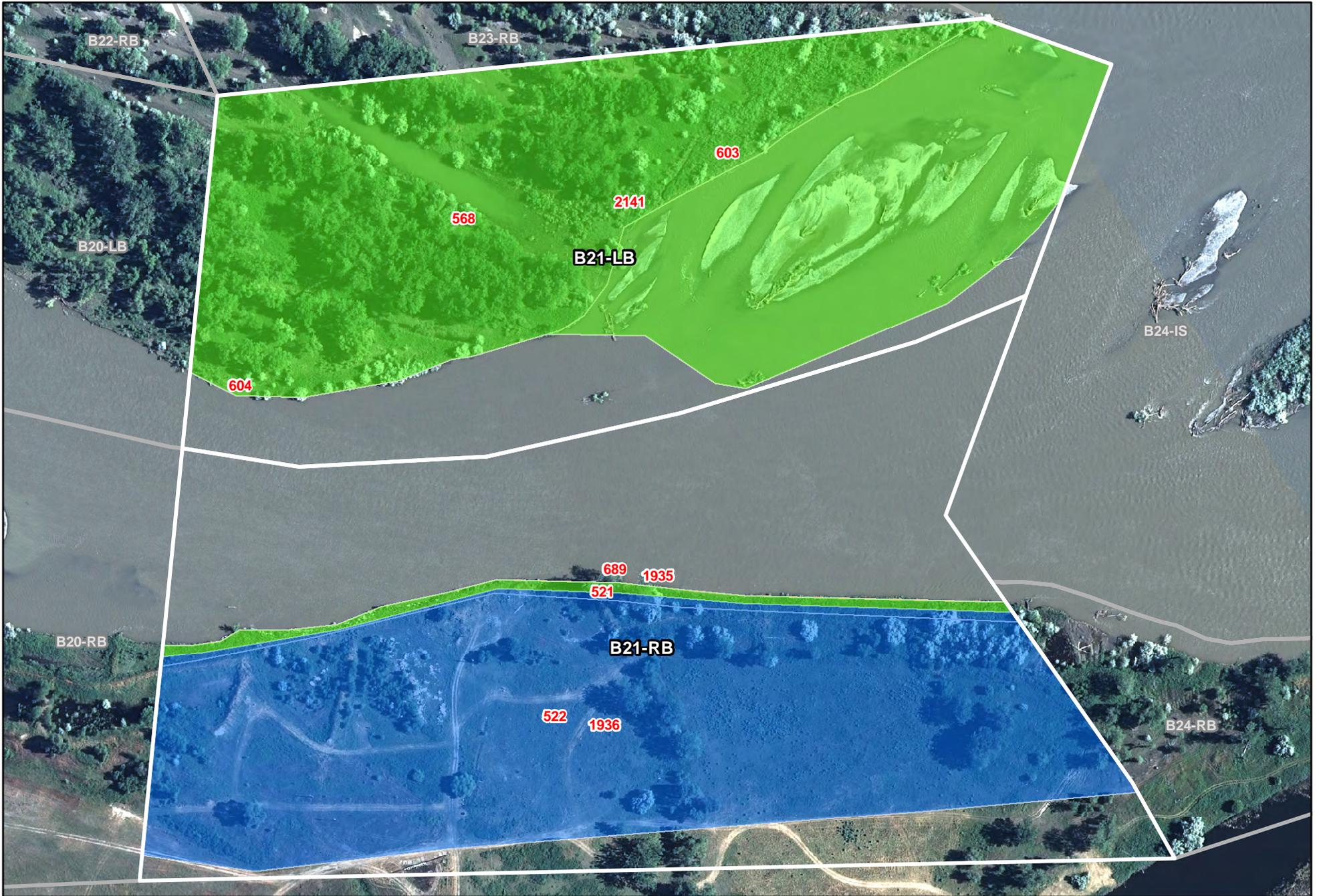

9999 Oiling Zone ID
 Heavy Oiling
 Moderate Oiling

 Light Oiling
 Very Light Oiling
 No Oil Observed

Figure 4 - Maximum SCAT Observations For SCAT Area:



175 0 175 350 Feet



9999 Oiling Zone ID
 Heavy Oiling
 Moderate Oiling

Light Oiling
 Very Light Oiling
 No Oil Observed

Figure 5 - Final SCAT Observations
For SCAT Area: B21



175 0 175 350
 Feet



Appendix A

Sample Detection Summary



Detections in Samples Collected in SCAT Area B21

Printed 9/8/2011

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
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No Detections in Field Samples



Appendix B

Initial SCAT Survey Forms and
Sketches

DB/G/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>B21</u>	Left Bank / <u>Right Bank</u> / Island	<u>19 / 07 / 11</u>		low - mean / <u>bankfull</u> / overbank
Operations Division: <u>B</u>			<u>1036</u> hrs to <u>1057</u> hrs	<u>falling</u> / steady - rising
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		<u>Sun</u> / 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 434 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 S Mixed P Pebble/Cobble S Boulder _____ Peat/Organic _____ **Vegetated Bank:** P **Wooded Upland:** _____

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

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

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

Sloped: (>5°)(15°)(30°) straight X braided rip rap 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 3-10m >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 150 bags or _____ trucks access restrictions _____

Oiled trees/shrubs Y/N River Current strong Y/N Other Features: access? river likely

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

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)	
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO
A				<u>X</u>	<u>434</u>		<u>10</u>				<u>P</u>		<u>✓</u>								<u>veg bank</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				

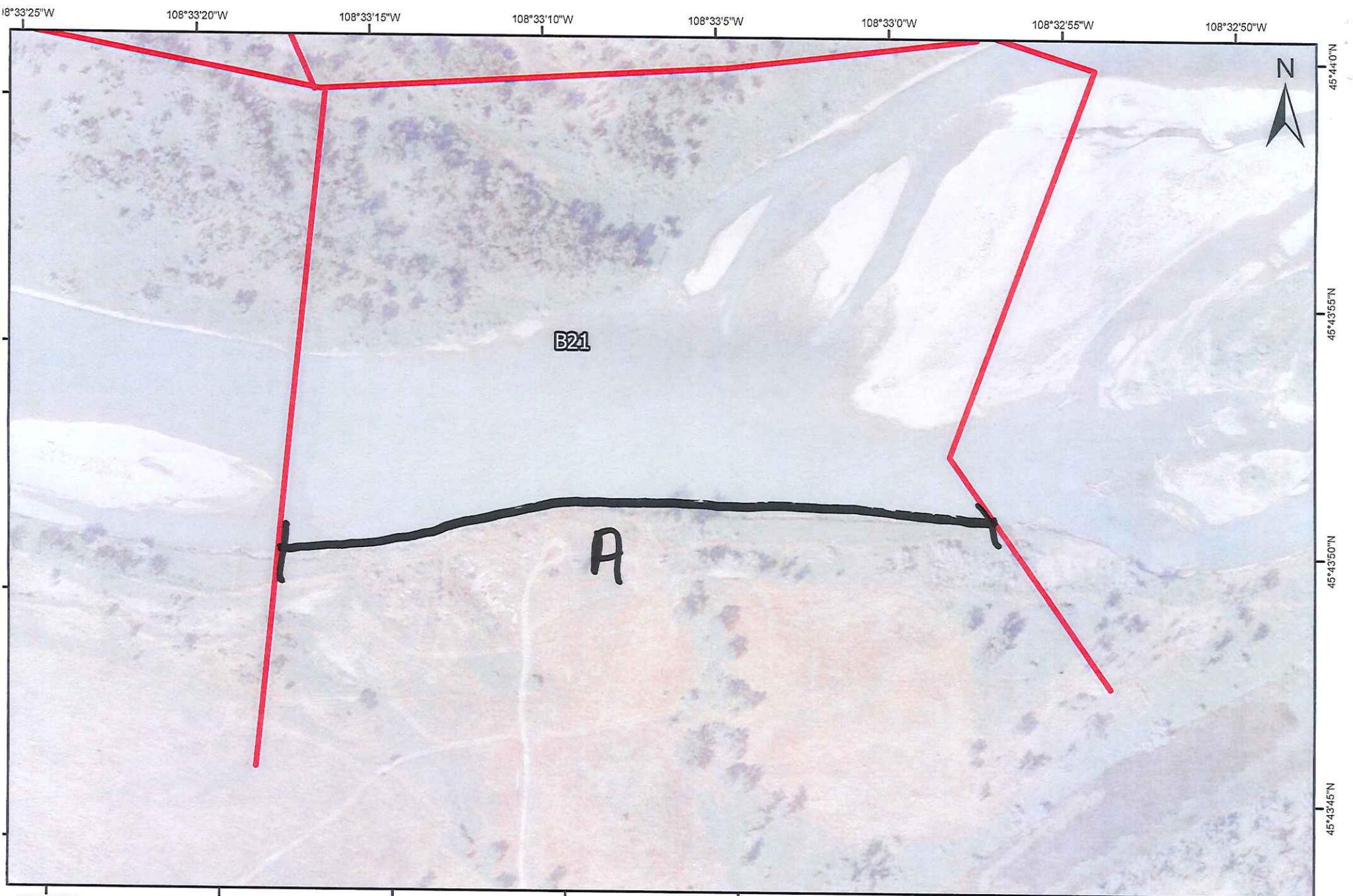
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

OSR = M OSC = link SSC = link

5221, 5250 - 5260

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

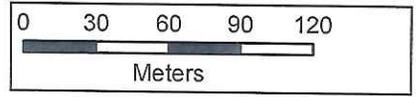
Sketch Yes/No Photos Yes/No (Roll # _____ Frames _____) Video Tape Yes/No (tape# _____)



B21 -
(L/R/I)??

DATE:
TEAM:

COMMENTS:



DB/

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>11:35</u> hrs to <u>12:00</u> hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>B21</u> Left Bank / Right Bank / Island				
Operations Division: <u>B</u>				
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		(Sun) Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>22</u> deg C

2 SURVEY TEAM #	name	organization	contact phone number
<u>4</u>	<u>John Williams</u>	<u>Cardno ENTRIX</u>	<u>361 676 8138</u>
	<u>John Matousek</u>	<u>Cardno ENTRIX</u>	<u>989 277 2507</u>
	<u>Gary Biley</u>	<u>EPA</u>	<u>415 215 0690</u>
	<u>Courtney Tyne</u>	<u>FWP</u>	<u>406 860 7814</u>

3 SEGMENT Total Segment/Reach Length 440 m Segment/Reach Length Surveyed 440 m

Start GPS: LATITUDE 45 deg. 43.838 min. LONGITUDE 108 deg. 33.307 min. Datum: WGS 84

End GPS: LATITUDE 45 deg. 43.842 min. LONGITUDE 108 deg. 32.954 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 S Manmade: Solid Permeable (type) S Wetland: Swamp Bog/Fen Marsh S

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

Sediment Flat: Clay/Mud Sand Mixed/Coarse 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 manmade meander S confined or leveed S 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 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	
<u>A</u>				<u>P</u>	<u>440</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>440</u>	<u>120</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				

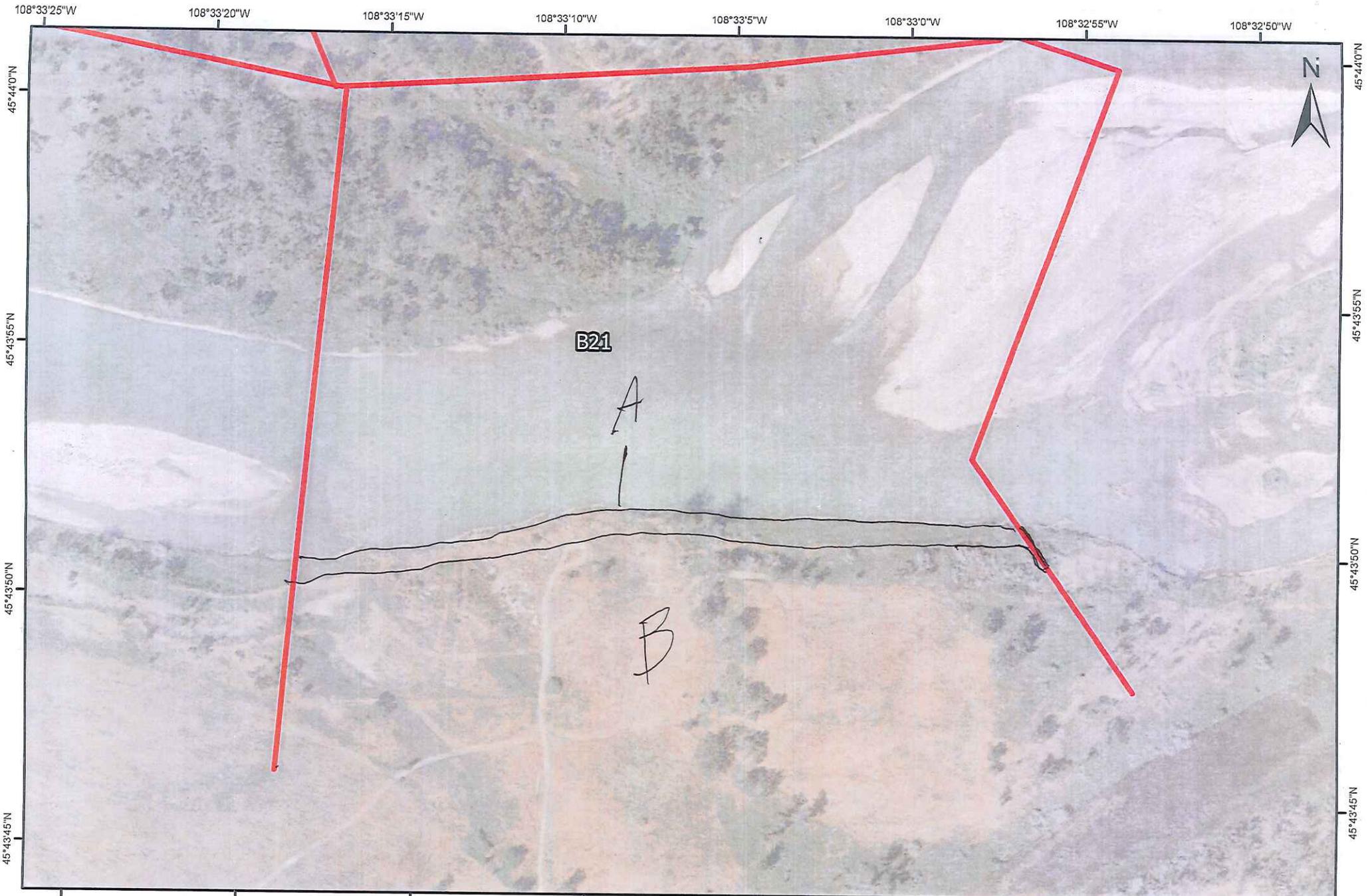
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

Zone A - Recommend Low Priority Coated Vegetation Removal by cutting and bagging

Zone B - No Recommendations

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

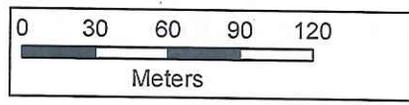
Sketch (Y) / No Photos (Y) / No (Roll # Frames) Video Tape (Y) / No (Tape #)



B21 -
(L/R/I)??

DATE: 7/21/11
TEAM: 4

COMMENTS:



DB/6/15

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 19-Jul-2011	Time (24h): std / daylight 1040 hrs to 1042 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: B <u>21</u> (Left Bank / 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>P. Lee</u>	Polaris	
Larry Alheim	<u>L. Alheim</u>	MTDEQ	
Andy Johnson	<u>A. Johnson</u>	USCG	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 445 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 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 10 bags or _____ trucks access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)			
					Length	Width	Distrib.															
	MS	LB	UB	OB	m	m	%	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
A				X	415	1															X	Grass, trees, debris
B				X	30	1	100			X	X		X									11

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:

Treatment Recommendations:
 Zone A: No oil observed; no treatment required.
 Zone B: Cut & remove oil coated vegetation smaller than 1" diameter. Remove oil coated debris smaller than 4" 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)

Sketch Yes / No Photos Yes / No Frames 1213-1214 Lee



Image USDA Farm Service Agency

©2010 Google

Imagery Date: 6/20/2006

45°43'55.92" N 108°33'07.14" W elev 3151 ft

Eye alt 5110 ft

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>B 21</u> <input checked="" type="radio"/> Left Bank / <input type="radio"/> Right Bank / <input type="radio"/> Island		<u>24/07/11</u>	<u>0845</u> hrs to <u>1200</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>D</u>				falling - steady - rising
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>19</u> deg C

2 SURVEY TEAM # <u>3</u>	Name	Organization	Signature
	<u>Nick Taylor</u>	<u>FWRP</u>	<u>Nick Taylor</u>
	<u>JANICE WITUL</u>	<u>USEPA</u>	<u>Janice Witul</u>
	<u>Joe Boyle</u>	<u>Cardno ENTRX</u>	<u>Joe Boyle</u>

3 SEGMENT Total Segment/Reach Length 475 m Segment/Reach Length Surveyed 400 m

Start GPS: LATITUDE 45 deg. 32.43.41 min. LONGITUDE 108 deg. 34.288 min. Datum: WGS 84

End GPS: LATITUDE 45 deg. 44.016 min. LONGITUDE 108 deg. 32.998 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: Wooded Upland:

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

4B RIVER VALLEY CHARACTER select as appropriate

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

Sloped: (>5°)(15°)(30°) 45° 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 120m 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 1 bags or 1 trucks access restrictions island, dense veg, mud

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			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	400	140	5			S	P		P									mud

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

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

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

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

Zone A: widespread patchy oil stained/coated vegetation
 1 area ~ 20m² of standing water with light - moderate sheen. (flagged → WP 107 = 45° 43.938', -108° 33.211')

Recommendations: cut/trim oiled veg. deploy sorbents on sheen.

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

7/23/2011

2011

○ B22

○ B23

104

105

10b

108

109

ZONE A

ZONE B

○ B20

107

○ B21

Image USDA Farm Service Agency

635 ft

©2010

© 2011 Google

lat 45.733496° lon -108.555157° elev 3152 ft

1996



Appendix C

Pre-Inspection Survey Transmittal

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



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

1 GENERAL INFORMATION		Date (dd/mm/yy) 28/08/11	Time (24h): std / daylight 1230 hrs to 1500 hrs	Water Level low - (mean) - bankfull - overbank falling - steady - rising
Segment/Reach ID: B21 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 # 2		Signature		
Name		Organization		
Pete Lee		Polaris		<i>P. Lee</i>
Eric Harlow		Cardno ENTRIX		<i>Eric Harlow</i>
Griff Miller		USEPA		<i>Griff Miller</i>
Marcile Sigler		MTDEQ		<i>Marcile Sigler</i>
Dave Hergenrider		MTFWP		<i>Dave Hergenrider</i>

3 SEGMENT Total Segment/Reach Length 500 m Segment/Reach Length Surveyed 500 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 X Substrate Type: _____

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

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

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	%														
1935 1936 A				X	450	5	21				X						X				Grass, trees, debris
B				X	500	140														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	OILED ZONE	SUBSURFACE OIL CHARACTER						WATER TABLE	SHEEN COLOUR	CLEAN BELOW	SUBST. TYPE(S)
							SAP	OP	PP	OR	OF	TR				
	MS	LB	UB	OB	cm	cm-cm							cm	B, R, S, N	Yes / No	

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

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

Oil height: 30-90 cm

Treatment recommendations:

Zone A : No further treatment required.

Zone B : NOO

Ops Hot Shot (Rich Jessup)

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



RESCAT
B21RB
TZ- 8/28/11

DB16

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 06/09/11	Time (24h): std / daylight <u>12:30</u> hrs to <u>14:30</u> hrs	Water Level low - MEAN - bankfull - overbank falling - STEADY - rising
Segment/Reach ID: <u>B21</u> (Left Bank) Right Bank / Island				
Operations Division:				
Survey by: <u>Foot</u> ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>26</u> deg C

2 SURVEY TEAM # <u>1</u>	name	organization	contact phone number
	Tom Freeman	Polaris Applied Sciences	<i>Tom Freeman</i>
	Jeffrey Herrick	<i>NFT DEC</i>	<i>Jeffrey Herrick</i>
	Griff Miller	<i>USEPA</i>	<i>Griff Miller</i>

3 SEGMENT Total Segment/Reach Length 480 m Segment/Reach Length Surveyed 480 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: Yes _____ 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 _____ 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 4.3M 3-10m >10m _____ m

shoal(s) present point bar present 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 River Current strong 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	480	150	<L			S	P						X					Veg/Debris

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

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

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

Zone A: NFT. One bag removed by Hot Shot team

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

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

B-21 LB

SCAT TEAM #1

Sept. 6, 2011





Appendix F

Completed SCAT Segment Sign-Off
Forms

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment B21 RB Date of Survey 8/28/11

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

CTR(s) Associated with SCAT Segment 36

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

Segment Assessment Complete¹

Partial Segment Assessment

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

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

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

[Signature] Griff Miller/EPA 8-28-11
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] Dave Hergenrieter 8/28/2011
Sign Name Print Name/ Affiliation FWP Date
State Representative (DEQ/FWP)

[Signature] David Eric Hartow 8/28/2011
Sign Name Print Name/ Affiliation carduo ENTRIX Date
RP Representative (SCAT RP Representative)

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

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

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment B-21 LB Date of Survey Sept 6, 2011

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

CTR(s) Associated with SCAT Segment CTR 21

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] G. A. Miller / EPA 9-6-11
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] Frank Herrick 06 Sept. 2011
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] Tom Freeman / Polaris Sept. 6, 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.