

ExxonMobil Pipeline Company

**SCAT Area Transition Report
for B45**

Silvertip Pipeline Incident
Laurel, Montana

October 28, 2011



SCAT Area Transition Report for B45

Silvertip Pipeline Incident
Laurel, Montana

Prepared for:
ExxonMobil Pipeline Company

Prepared by:
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Our Ref.:
B0085883.1103

Date:
October 28, 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 B45, 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 B45. 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 B45, 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 B45 is 7.7. There were access issues for a portion of the right bank.

1.2 Cultural, Historic, and Natural Resource Constraints

No historic properties or cultural resources have been identified within this 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 B45. No oiled wildlife was observed or recovered. No Wildlife Priority Cleanup Areas were identified. No active migratory bird nests were identified in Area B45.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area B45. 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 B45 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude	Results Validated?
EPA	SPSE114_071311	13-Jul-11	Sediment	SPSE114	45.7930244	-108.4725973	NA
EPA	SPSE114_071311	13-Jul-11	Sediment	SPSE114	45.7930244	-108.4725973	Yes

NA - Not Available

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, no detections were reported.

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 B45 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area B45.

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. 32](#) and [CTR No. 33](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area B45 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 B45 following completion of oil removal activities. The SCAT team performed final surveys of the right and left banks within SCAT Area B45 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 right and left banks within Area B45, no further treatment is recommended for these segments. SCAT Segment Sign-Off Forms are included as Appendix F.



**SCAT Area Transition
Report for B45**

Silvertip Pipeline Incident
Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for B45

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
Report for B45**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for B45

Prepared for:

Unified Command

Date

Unified Command – FOSC



**SCAT Area Transition
Report for B45**

Silvertip Pipeline Incident
Laurel, Montana

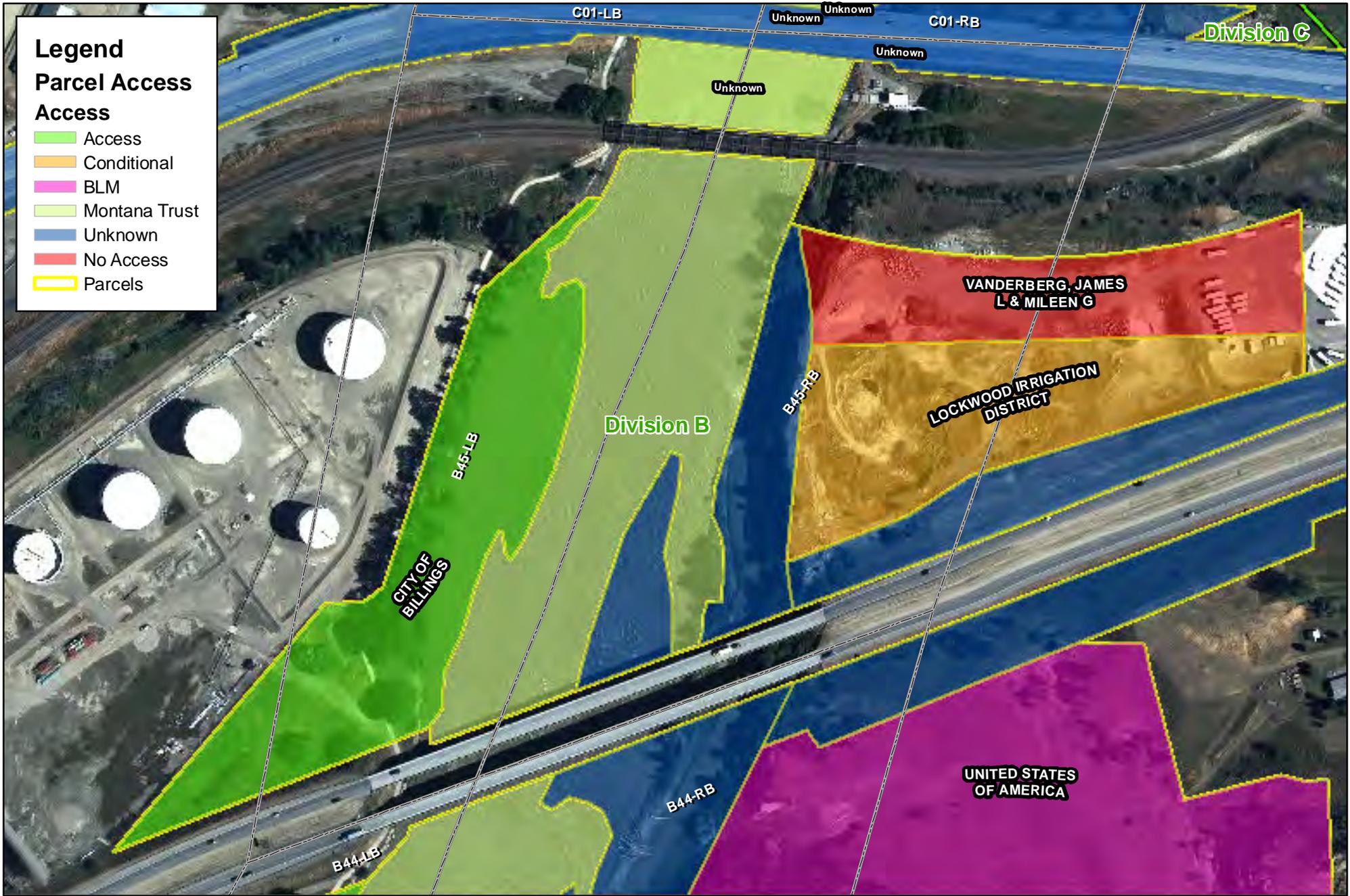
SCAT Area Transition Report for B45

Prepared for:

Unified Command

Date

Unified Command – MDEQ



Legend

Parcel Access

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

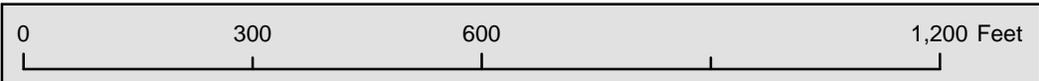
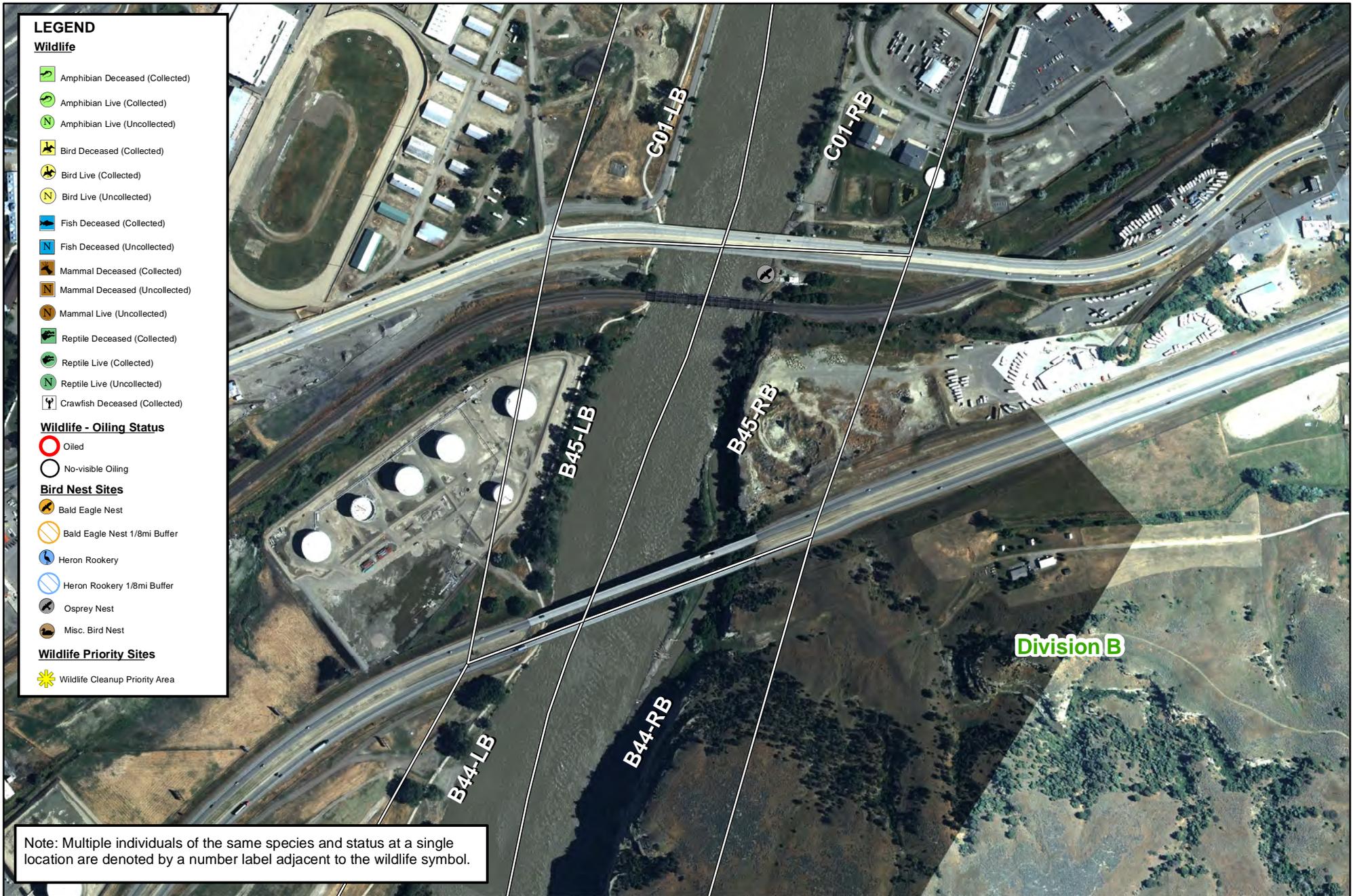


Figure 1



LEGEND

Wildlife

- Amphibian Deceased (Collected)
- Amphibian Live (Collected)
- Amphibian Live (Uncollected)
- Bird Deceased (Collected)
- Bird Live (Collected)
- Bird Live (Uncollected)
- Fish Deceased (Collected)
- Fish Deceased (Uncollected)
- Mammal Deceased (Collected)
- Mammal Deceased (Uncollected)
- Mammal Live (Uncollected)
- Reptile Deceased (Collected)
- Reptile Live (Collected)
- Reptile Live (Uncollected)
- Crawfish Deceased (Collected)

Wildlife - Oiling Status

- Oiled
- No-visible Oiling

Bird Nest Sites

- Bald Eagle Nest
- Bald Eagle Nest 1/8mi Buffer
- Heron Rookery
- Heron Rookery 1/8mi Buffer
- Osprey Nest
- Misc. Bird Nest

Wildlife Priority Sites

- Wildlife Cleanup Priority Area

Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

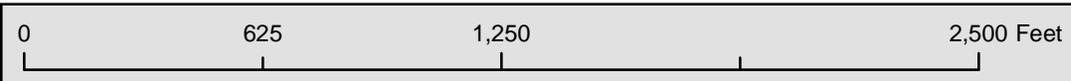
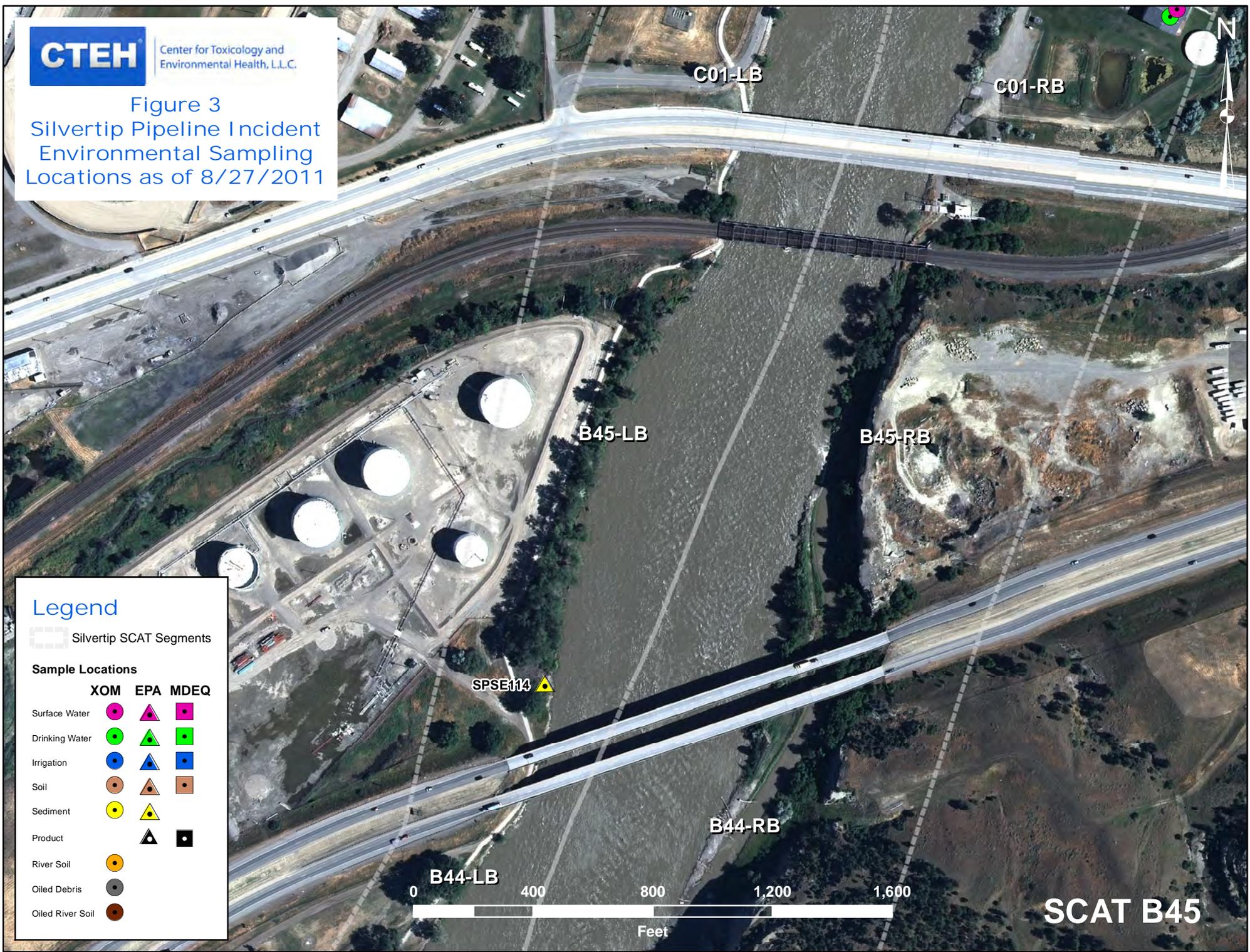


Figure 2
Wildlife Resources

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



Legend

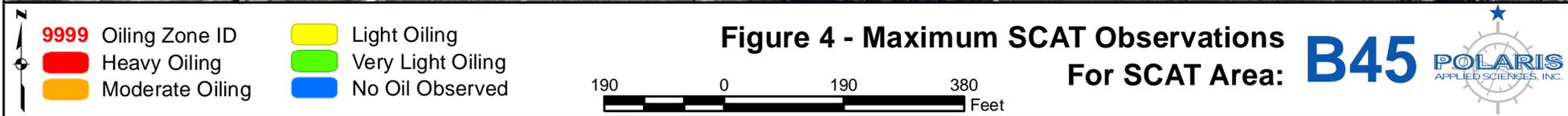
Silvertip SCAT Segments

Sample Locations

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



SCAT B45





**Figure 5 - Final SCAT Observations
For SCAT Area:**





Appendix A

Sample Detection Summary



Sample Results For SCAT Area B45

Printed 9/20/2011

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

D B/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>B45</u>	Left Bank <input type="checkbox"/> Right Bank <input checked="" type="checkbox"/> Island	<u>19 / 07 / 11</u>	<u>0850</u> hrs to <u>0851</u> hrs	low - mean <input checked="" type="checkbox"/> bankfull <input type="checkbox"/> overbank
Operations Division: <u>B</u>				falling <input checked="" type="checkbox"/> steady - rising
Survey by: <u>Foot / ATV / Boat</u> Helicopter / Overlook /		<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 <u>JB</u>	EPA	707 364 0491
	Ken Frazer	FWP	406 247 2961

3 SEGMENT Total Segment/Reach Length 425 m Segment/Reach Length Surveyed 425 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) prop Wetland: Swamp Bog/Fen Marsh

Sediment Bank: Clay/Mud Sand S 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 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 200 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: bordered by I-90, vertical from river

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	10		100			S	P		X									veg bank

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

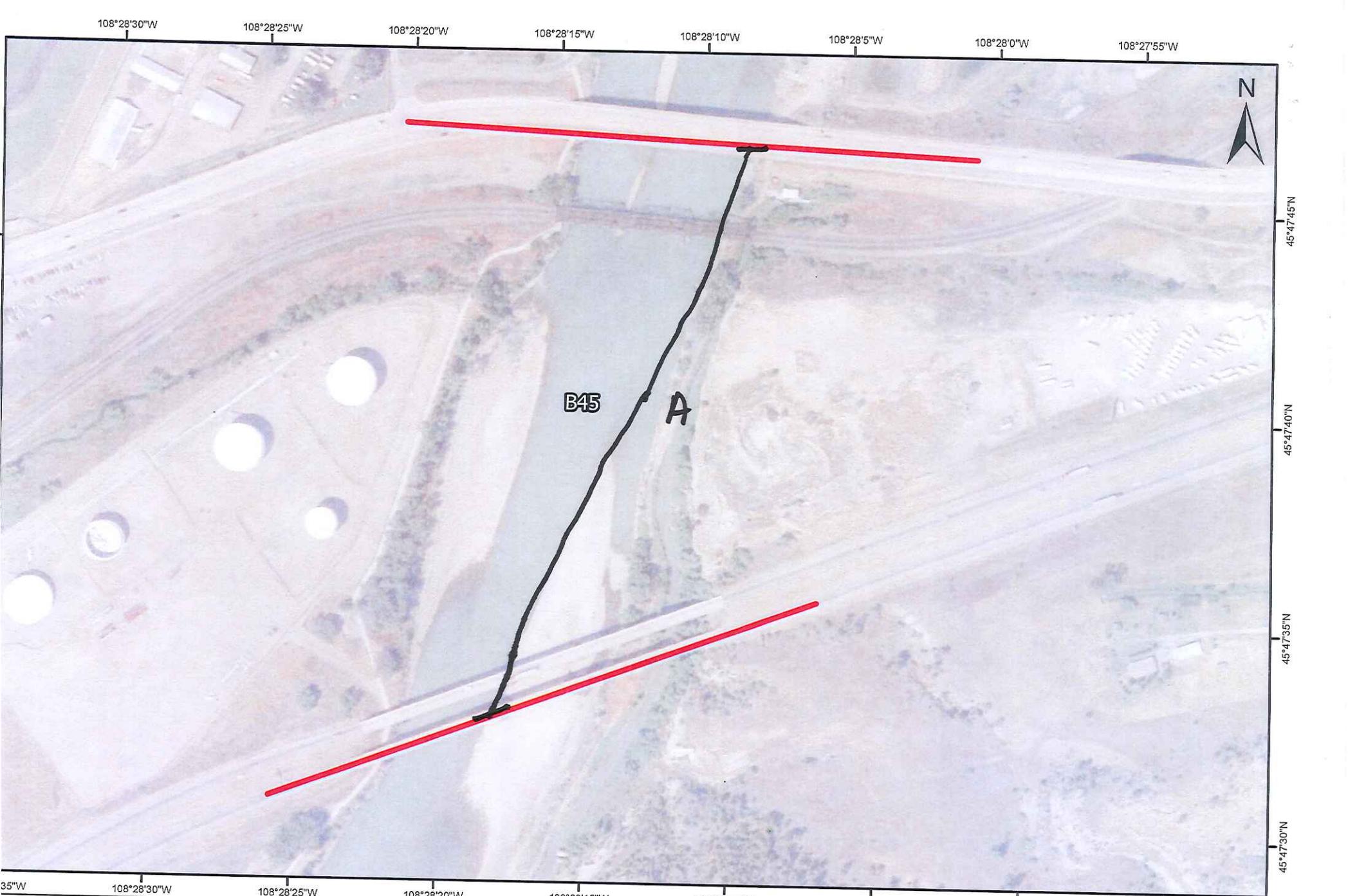
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

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)

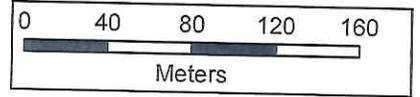
Sketch (Yes/No) Photos (Yes/No) (Roll # 4975 Frames 4976) Video Tape Yes/No (Tape #)



B45 -
(L/R/I)??

DATE:
TEAM:

COMMENTS:



DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

1 GENERAL INFORMATION		Date (dd/mm/yy) <u>30/07/11</u>	Time (24h): std / daylight <u>11:44</u> hrs to <u>12:32</u> hrs	Water-Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>B45</u> Left Bank / Right Bank / Island				
Operations Division:				
Survey by: (Foot) <u>ATV</u> / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>36</u> deg C

2 SURVEY TEAM # <u>1</u>	Name	Organization	Signature
	<u>Rich Marty</u>	<u>RP/Polaris</u>	<u>Richard Marty</u>
	<u>Darcey Miller</u>	<u>RP/ Cardio ENTRIX</u>	<u>Darcey B. Miller</u>
	<u>John Beach</u>	<u>EPA</u>	<u>John Beach</u>
	<u>Aaron Anderson</u>	<u>MT DEQ</u>	

3 SEGMENT Total Segment/Reach Length 382 m Segment/Reach Length Surveyed 382 m

Start GPS: LATITUDE 45 deg. 47.779 min. LONGITUDE 108 deg. 28.135 min. Datum: WGS 84

End GPS: LATITUDE 45 deg. 47.576 min. LONGITUDE 108 deg. 28.216 min.

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 160m 200m 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

1002
1053

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	12	70	25			P			X								
B				X	382	30	5			S	P		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

Zones A & B - Hand crews cut oiled vegetation.

Zone A - Height above substrate 0.5 m, thickness 2.0 m.

D. Miller: 10, 11
John Beach: 1448 - 1451

Miller, Beach,
Marty

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

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

1 GENERAL INFORMATION

Segment/Reach ID: B15 Left Bank / Right Bank / Island Right Bank

Date (dd/mm/yy) 30/07/11 Time (24h): std / daylight 11:44 hrs to 12:32 hrs

Operations Division: _____

Survey by: (Foot) / ATV / Boat / Helicopter / Overlook / _____ Sun / Clouds / Fog / Rain / Snow / Windy / Calm

Water Level: low - near - bankfull - overbank low - near - bankfull - overbank
 falling - steady - rising falling - steady - rising

Air Temp +/- 30 deg C

2 SURVEY TEAM # 1

Name	Organization	Signature
<u>Rich Marty</u>	<u>RP/Dolans</u>	<u>Richard Marty</u>
<u>Darcey Miller</u>	<u>RP/Carano ENTRIX</u>	<u>Darcey B. Miller</u>
<u>John Beach</u>	<u>EPA</u>	<u>John Beach</u>
<u>Aaron Anderson</u>	<u>MT DER</u>	<u>Aaron Anderson</u>

3 SEGMENT Total Segment/Reach Length 382 m Segment/Reach Length Surveyed 382 m

Start GPS: LATITUDE 45 deg. 47.779 min. LONGITUDE 108 deg. 28.135 min. Datum: WGS 84

End GPS: LATITUDE 45 deg. 47.576 min. LONGITUDE 108 deg. 28.216 min.

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 160m 200m 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

1002
1003

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	12	70	25			P			X								
B				X	382	30	5			S	P		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)

Zones A & B - Hand crews cut oiled vegetation.

Zone A - Height above substrate 0.5 m, thickness 2.0 m.

D. Miller: 10, 11
John Beach: 1448 - 1451

Miller, Beach, Marty

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

108°28'30"W

108°28'25"W

108°28'20"W

108°28'15"W

108°28'10"W

108°28'5"W

108°28'0"W

108°27'55"W



45°47'45"N

45°47'40"N

45°47'35"N

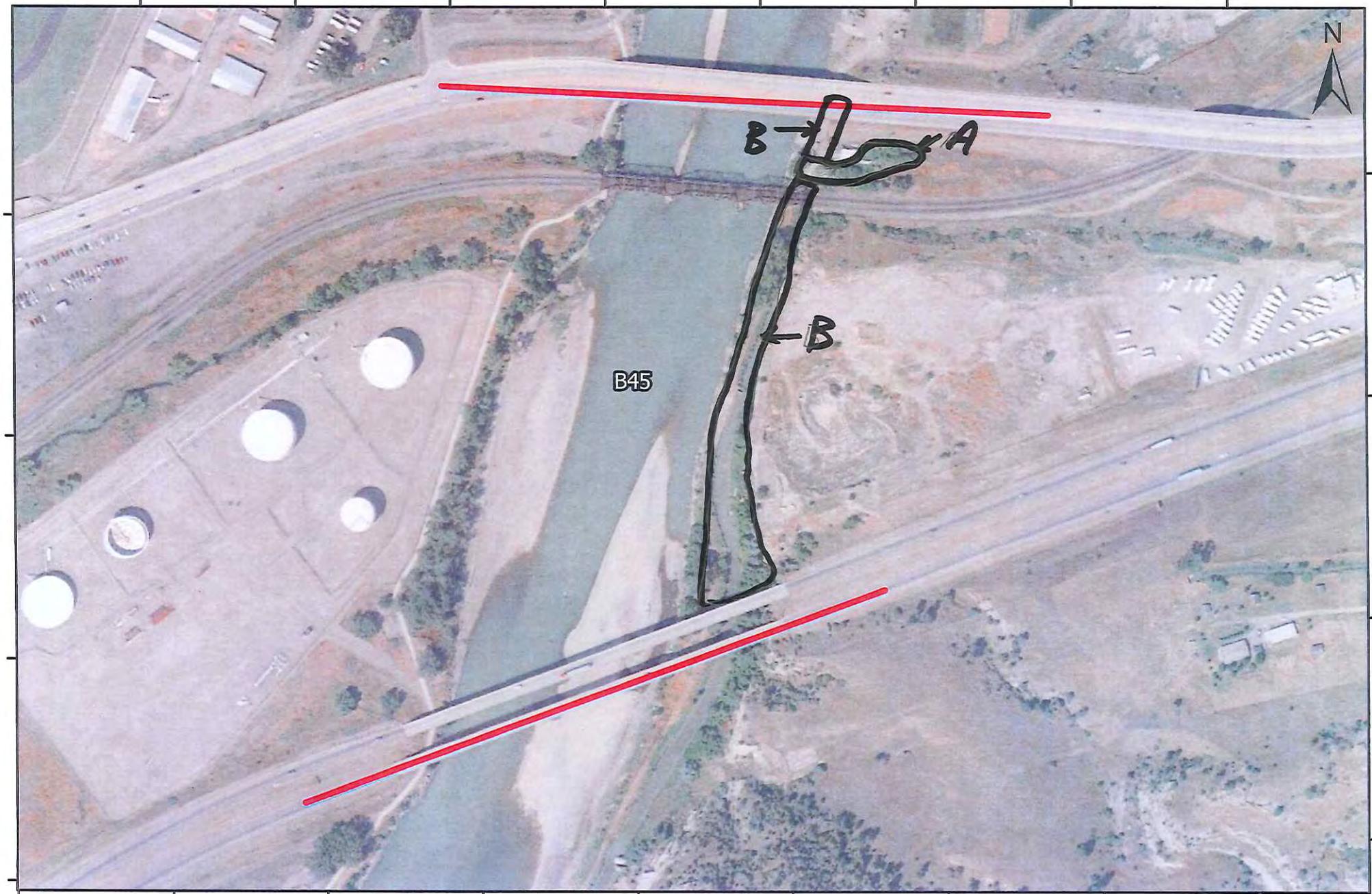
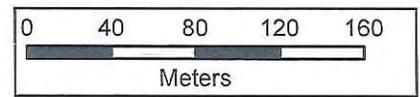
45°47'30"N

108°28'35"W 108°28'30"W 108°28'25"W 108°28'20"W 108°28'15"W 108°28'10"W 108°28'5"W 108°28'0"W 108°27'55"W

B45 -
(L/R/I)??

DATE:
TEAM:

COMMENTS:



DB/C 15

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy) 07/30/2011	Time (24h): std / daylight 1140 1235 hrs to _____ hrs	Water Level low - mean (bankfull) - overbank falling - steady - rising
Segment/Reach ID: B45 (Left Bank) Right Bank / Island				
Operations Division: A				
Survey by: (Foot) ATV / Boat / Helicopter / Overlook / _____ (Sun) Clouds / Fog / Rain / Snow / Windy (Calm)				Air Temp +/- 35 deg C

2 SURVEY TEAM # 7	name	organization	contact phone number
Bruce Kvam	<i>Bruce Kvam</i>	Polaris Applied Sciences, LLC	(206) 953-6904
Mark Peterson	<i>Mark Peterson</i>	MTDEQ	(406) 498-4835
Peter Reich	<i>Peter Reich</i>	USEPA	(415) 595-8352

3 SEGMENT Total Segment/Reach Length 483 m Segment/Reach Length Surveyed 483 m

Start GPS: LATITUDE 45 deg. 4732 min. LONGITUDE 108 deg. 2822 min. Datum: WGS 84

End GPS: LATITUDE 45 deg. 4747 min. LONGITUDE 108 deg. 2814 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 S (type) rip rap Wetland: Swamp _____ Bog/Fen _____ Marsh _____

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 161 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 12 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	
1024 A				X	329	20	15			X	(X)		X									Shrubs, grass, trees
1025 B				X	154 20	20															X	
1074 C				X	134																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

Oil band height on grass: 17 cm

Treatment Recommendations:

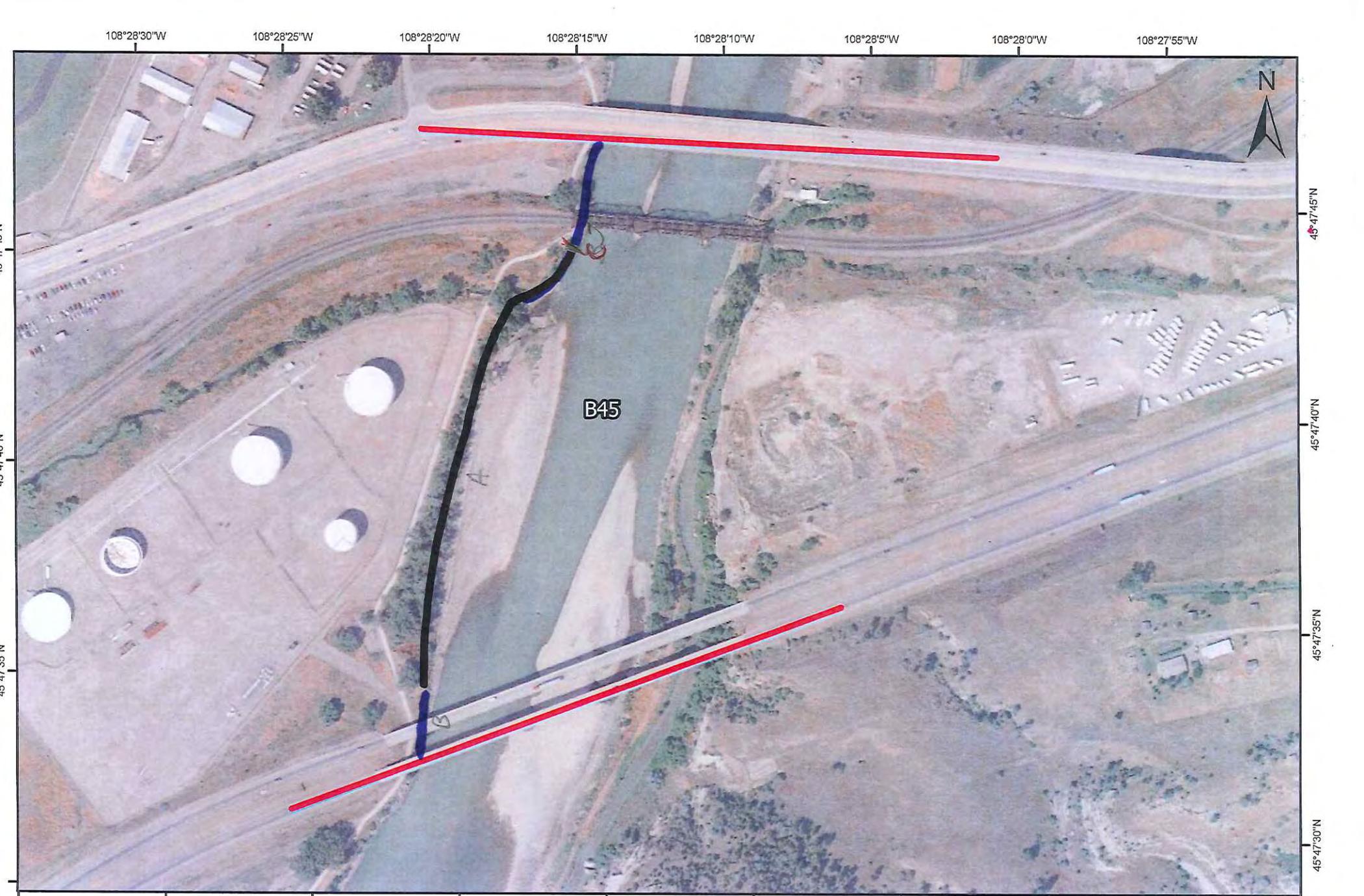
Zone A: Cut and remove oil coated vegetation smaller than 1" diameter.

Zone B: No further treatment necessary.

BK-017-026

(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°28'30"W

108°28'25"W

108°28'20"W

108°28'15"W

108°28'10"W

108°28'5"W

108°28'0"W

108°27'55"W



45°47'45"N

45°47'40"N

45°47'35"N

45°47'30"N

108°28'35"W

108°28'30"W

108°28'25"W

108°28'20"W

108°28'15"W

108°28'10"W

108°28'5"W

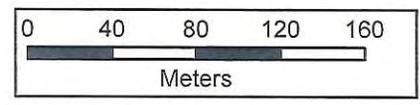
108°28'0"W

108°27'55"W

B45 -
(L/R/I)??

DATE: 7/30/2014
TEAM: 2

COMMENTS:





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

11/3/16

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 08/25/11	Time (24h): std / daylight 1300 hrs to 1355 hrs	Water Level low - <u>mean</u> - bankfull - overbank <u>falling</u> steady - rising
Segment/Reach ID: B45 Left Bank <u>(Right Bank)</u> / Island				
Operations Division:				
Survey by: <u>Fog</u> / ATV / Boat / Helicopter / Overlook /		<u>(Sun)</u> / <u>(Clouds)</u> / Fog / Rain / Snow / Windy <u>(Calm)</u>		Air Temp +/- 30 deg C

2 SURVEY TEAM # 6	Name	Organization	Signature
Mike Herman		MFW&P	<i>[Signature]</i>
David Eric Harlow		Cardno Entrix	<i>[Signature]</i>
Bruce Kvam		Polaris Applied Sciences, LLC	<i>[Signature]</i>
Jay Parks		BLM	<i>[Signature]</i>
Marcile Sigler		MDEQ	<i>[Signature]</i>
Terry Tanner		USEPA	<i>[Signature]</i>

3 SEGMENT Total Segment/Reach Length 436 390 m Segment/Reach Length Surveyed 436 390 m

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

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

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 1 0 3 m est. water depth: <1m (1-3 m) 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 4 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

1866

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)			
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
A			<u>X</u>	<u>(X)</u>	<u>436</u> <u>390</u>	33	<1			<u>X</u>	<u>(X)</u>						X					Shrubs, trees, woody 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

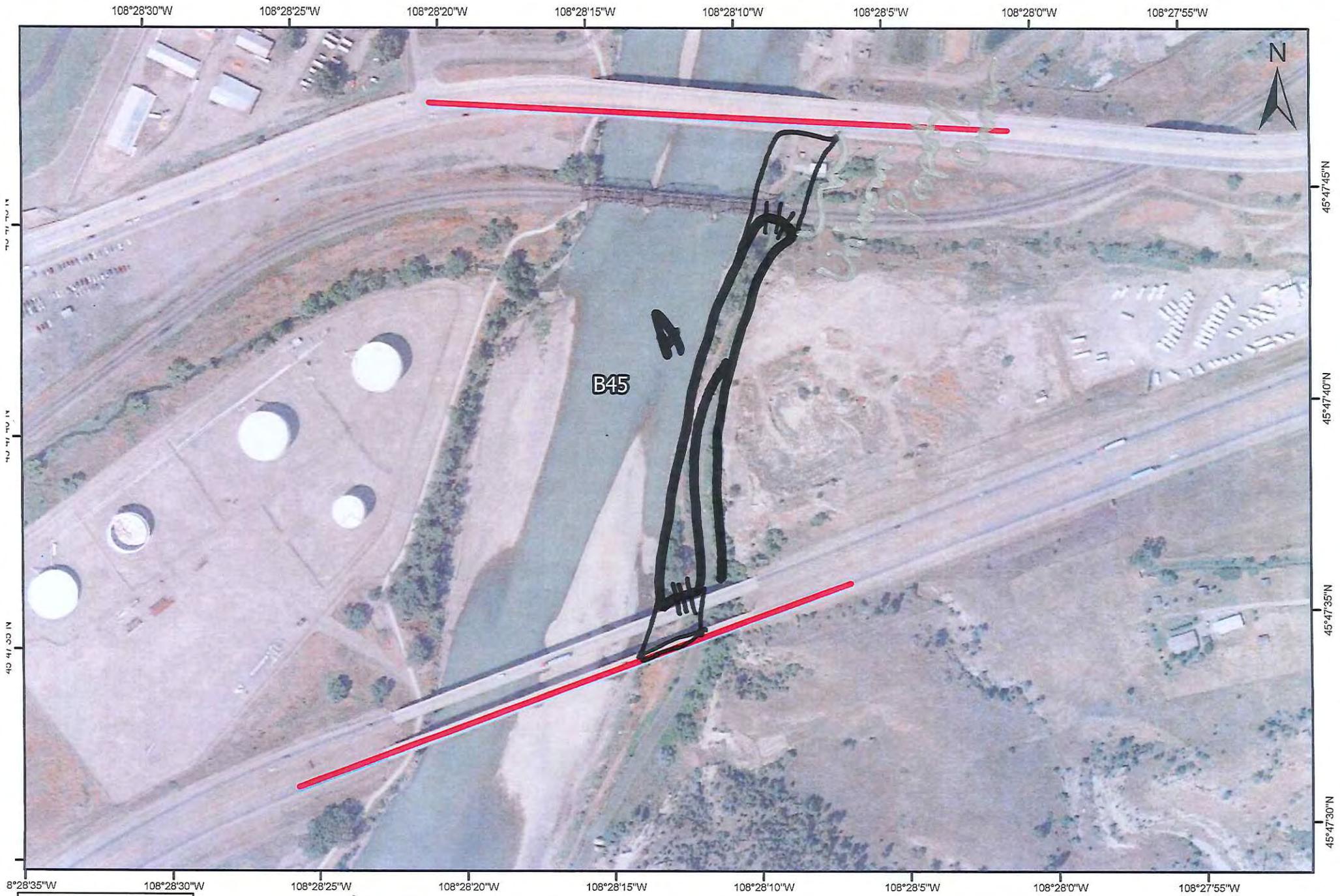
Overbank Survey Required Y / (N) Overbank Survey Completed (Y) / N Shoreline Survey Completed (Y) / N

Treatment Recommendations*:

Zone A: Used hot shot Operations team to: 1) cut and remove oil coated vegetation smaller than 1" diameter; 2) remove oil coated debris smaller than 4" diameter; and 3) dust oil coated debris. No further treatment required.

* Refer to current (8-24-11 version) treatment recommendations.

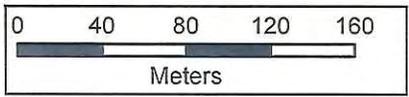
Sketch (Yes) / No Photos (Yes) / No Frames 2-4 Photographer EBK



B45 -
(LBI)??

DATE: 08/25/2011
TEAM: 6

COMMENTS:



AS/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 28/09/11	Time (24h): std / daylight 0900 hrs to 930 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>B45</u> Left Bank / <u>Right Bank</u> / 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>25</u> deg C
2 SURVEY TEAM # 3		Name	Organization	Signature
		Pete Lee	Polaris	<u>P. Lee</u>
		Tom Bovington	MTDEQ	<u>Tom Bovington</u>

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 325 m

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

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

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

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

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

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

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

Debris Y N oiled Y N amount _____ bags or _____ trucks Access restrictions: _____

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)	
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO
A				<u>X</u>	<u>325</u>	<u>30</u>	<u><1</u>			<u>S</u>	<u>P</u>						<u>X</u>				Grass, trees, debris

2409

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: 90-120cm

Treatment recommendations:

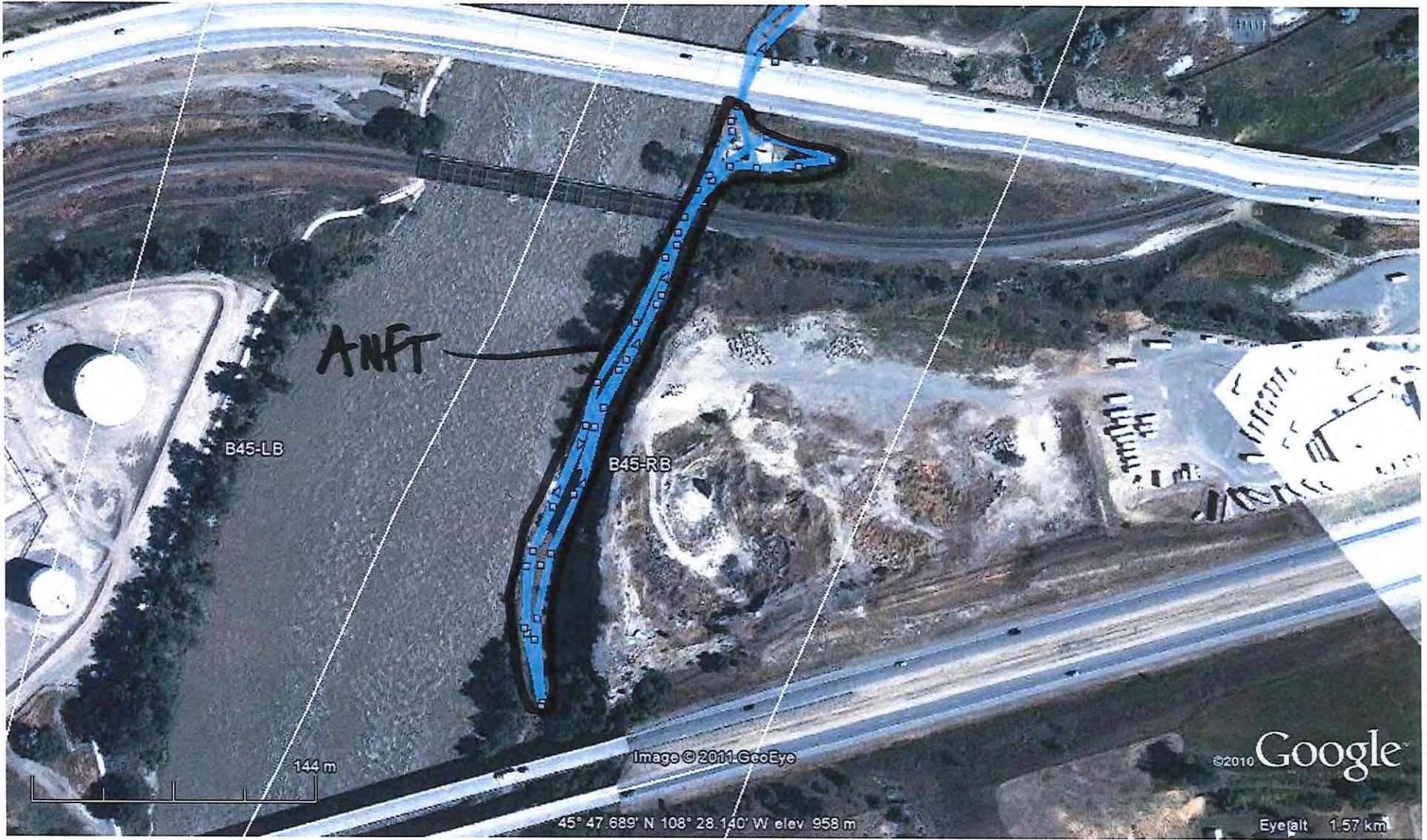
Zone A : Treated by Ops and Hot Shot Ops; No Further Treatment (NFT)

Zone : _____

PARTIAL SEGMENT FILL-IN

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

P20f2



B45 RB PARTIAL FILL-IN
T3 9/28/11

8/24/2011

2011



24-AUG-11 03:47:46 PM

24-AUG-11 B5:47:53

ZONE A
N00

ZONE B
VERY LIGHT
NFT

ZONE C
N00

TEAM 1
8/24/11

• B45
(LB)

B45 - B
SCAT
24 Aug 2011

Image USDA Farm Service Agency

© 2011 Google

©2010

45°47'40.53" N 108°28'19.60" W elev 3104 ft

009 1996



Appendix F

Completed SCAT Segment
Sign-Off Forms

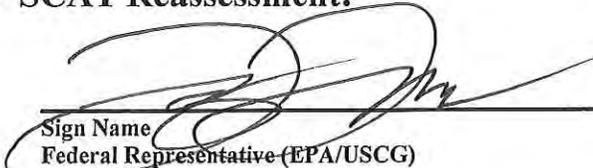
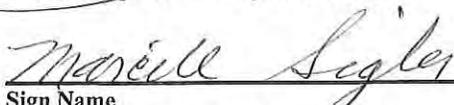
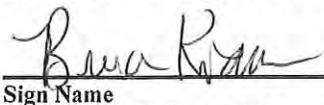
Silvertip Pipeline Spill SCAT Segment Sign-Off Sheet

COMPLETED

Operations Division: A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/>
SCAT Area Number (i.e. A12): <u>B45</u>
SCAT Segment Number (i.e. A12-LB/IS/RB): <u>RB</u>

Part 1

- | | |
|--|---|
| <p>1. Completion Date for Initial SCAT Assessment: <u>30 JUL 11 (EL)</u></p> <p>2. Combined Treatment Recommendations (CTRs) Developed/Issued:
List CTRs Applicable to SCAT Segment: <u>32</u></p> <p>3. Clean-Up Operations Conducted:</p> <p>4. Meets Qualitative Approved Treatment Methods Target Endpoints:</p> <p>5. SCAT Reassessment:</p> | <p>Check if Complete:</p> <p><input checked="" type="checkbox"/></p> <p><input checked="" type="radio"/> Yes / <input type="radio"/> No</p> <p><input type="checkbox"/></p> <p><input checked="" type="radio"/> Yes / <input type="radio"/> No</p> |
|--|---|

	Terry Tanner	8/25/11
Sign Name Federal Representative (EPA/USCG)	Print Name	Date
	Marcile Sigler	8/25/11
Sign Name State Representative (DEQ/FWP)	Print Name	Date
	Bruce Kvam	8/25/11
Sign Name RP Representative (SCAT Contractor)	Print Name	Date

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

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment B45 RB Date of Survey 9/28/11

Dates of Initial SCAT Assessments 19 Jun 2011 (15)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 32

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

Segment Assessment Complete¹
Partial Segment Assessment

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

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

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

No Federal Rep Present

Sign Name _____ Print Name/ Affiliation _____ Date _____

Federal Representative (EPA/USCG)

[Signature]

Thomas P Bovington

9/28/2011

Sign Name _____ Print Name/ Affiliation _____ Date _____

State Representative (DEQ/FWP)

[Signature]

Pete Lee / Polaris

9/28/11

Sign Name _____ Print Name/ Affiliation _____ Date _____

RP Representative (SCAT RP Representative)

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

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

Silvertip Pipeline Spill SCAT Segment Sign-Off Sheet

COMPLETED

Operations Division: A <u> </u> B <u>X</u> C <u> </u>
SCAT Area Number (i.e. A12): <u>B 45</u>
SCAT Segment Number (i.e. A12-LB/IS/RB): <u>B 45 LB</u>

Complete

- | | |
|--|-------------------------------------|
| | Check if Complete: |
| 1. Completion Date for Initial SCAT Assessment: <u>30 JUL 11</u> ^(FC) | <input type="checkbox"/> |
| 2. Combined Treatment Recommendations (CTRs) Developed/Issued: | Yes/No |
| List CTRs Applicable to SCAT Segment: _____ | |
| 3. Clean-Up Operations Conducted: | <input checked="" type="checkbox"/> |
| 4. Inspection (CTR Objectives and CTR Addendums Complete): | <input type="checkbox"/> |

RP Representative (SCAT/Ops Liaison Contractor)	Date
---	------

5. SCAT Reassessment:

Yes/No

<i>Linda R. Blab</i>	8/24/11
Federal Representative (EPA/USCG)	Date
<i>Robert Ashton</i>	8/24/11
State Representative (DEQ/FWP)	Date
<i>Charles Pons</i>	8-24-11
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.