

ExxonMobil Pipeline Company

**SCAT Area Transition Report for
A07**

Silvertip Pipeline Incident
Laurel, Montana

October 27, 2011



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Laurel, Montana

Prepared for:
ExxonMobil Pipeline Company

Prepared by:
ARCADIS G&M of North Carolina, Inc.
11000 Regency Parkway
West Tower, Suite 205
Cary, North Carolina 27518-8518
Tel 919.469.1952
Fax 919.469.5676

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

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1. Executive Summary of Oil Removal Activities

This Shoreline Cleanup Assessment Technique (SCAT) Area Transition Report provides a summary of the SCAT surveys conducted to determine the extent of oiling along the riverbanks and floodplain within SCAT Area A07, 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 A07. 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 A07, 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 A07 is 23.7. There were partial access issues for the left 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 A07. No oiled wildlife was observed or recovered. One Wildlife Priority Cleanup Area (WPCA) was identified. The WPCA consists of a log depression area on the edge of the river bank; treatment efforts are ongoing at the site as discussed in Section 1.10. No active migratory bird nests were identified in Area A07.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area A07. 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 A07 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	LAMT0816SO406	16-Aug-11	Soil_River	SO-A07-1	45.649927	-108.72476
EPA	SPPR01_070411	04-Jul-11	Product_Oil	SPPR01	45.6497457	-108.7244949
EPA	SPPR02_070411	04-Jul-11	Product_Oil	SPPR02	45.64981	-108.72442

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 A07 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area A07.

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. 6](#) and [CTR No. 10](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area A07 in accordance with the ATMs identified in the CTRs. [Appendix I](#) of the Summary of Assessment and Oil Removal Activities report presents this data including: date range/days worked, average number of people working per day, equipment used, and various types of bags removed: oily debris, personal protective equipment, plastic, trash, super sacks, wood chips, and contaminated wood.

1.7 Pre-Inspection Survey Transmittal

SCAT Operations liaisons performed an inspection of the remediated areas of SCAT Area A07 and developed a Pre-Inspection Survey Transmittal (PIST) associated with the right and left banks within Area A07, 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 A07 and developed a Post-Inspection Survey Transmittal (POST) associated with the right bank within Area A07, which is presented in Appendix D.

1.9 Summary of Final SCAT Surveys

Figure 5 shows the oiling conditions within Area A07 following completion of oil removal activities. The SCAT team performed final surveys of the right and left banks within SCAT Area A07 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 A07, no further treatment is recommended and no oil is observed for the right and left banks. SCAT Segment Sign-Off Forms are included as Appendix F.

General Messages were conveyed highlighting specific remediation areas in A07. Based on the initial SCAT assessment, riprap on the right bank of Area A07 was noted to be emanating a sheen that posed a threat to wildlife. Sorbent booms were put in place and flushing was performed until no further sheen occurred. No additional work is required in this area and details of the action taken are described in Appendix G. In addition, a log depression area was identified on the right bank of Area A07 and was noted to be emanating a sheen. A sorbent boom was being maintained at a distance from the depression to contain any further potential sheen, but was determined to be no longer needed. Long-term monitoring and maintenance will be performed at the site as described in Appendix G.



**SCAT Area Transition
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Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for A07

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
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Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for A07

Prepared for:

Unified Command

Date

Unified Command – FOSC



**SCAT Area Transition
Report for A07**

Silvertip Pipeline Incident
Laurel, Montana

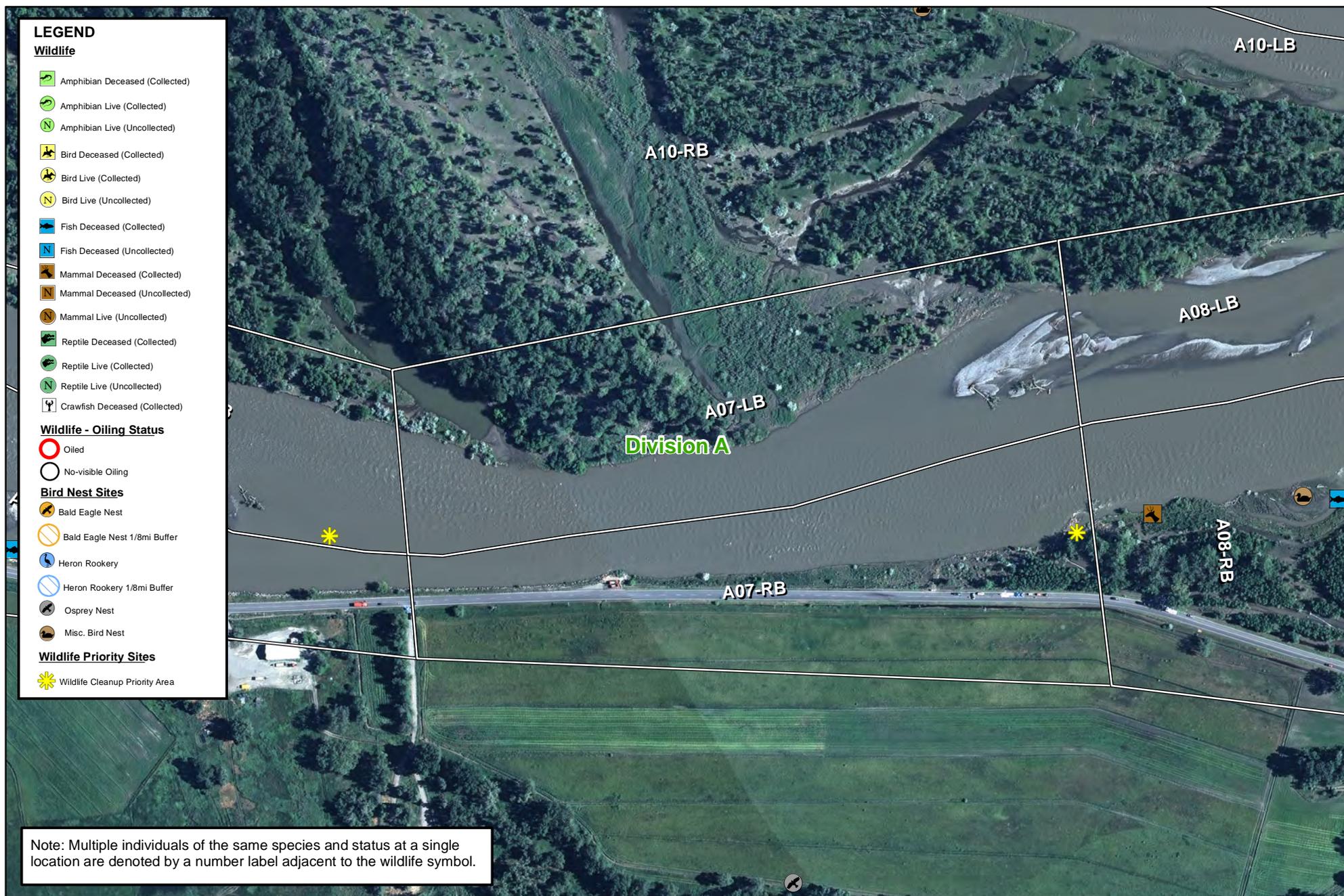
SCAT Area Transition Report for A07

Prepared for:

Unified Command

Date

Unified Command – MDEQ



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.

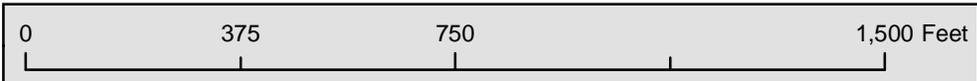
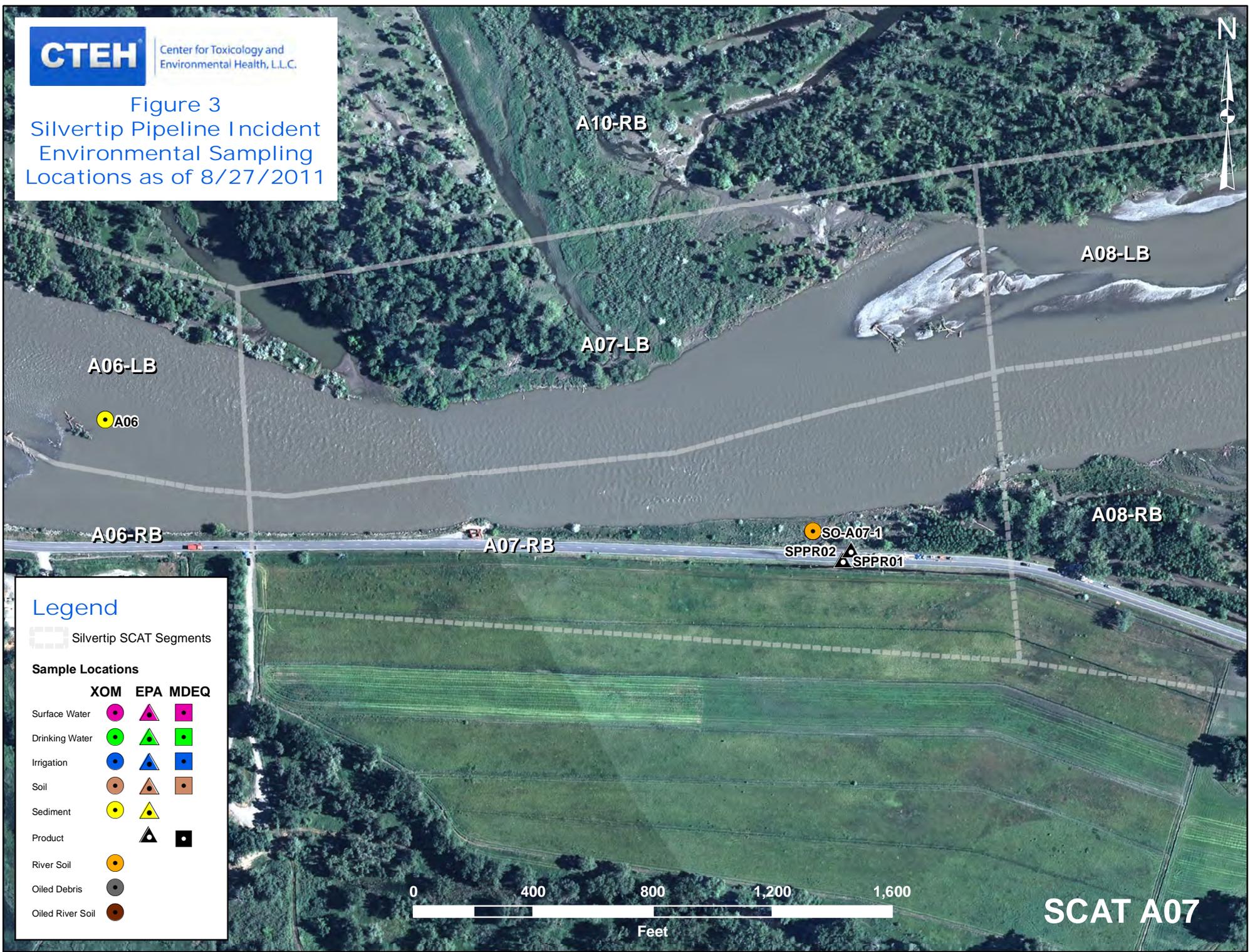


Figure 2
Wildlife Resources

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 A07



**Figure 4 - Maximum SCAT Observations
For SCAT Area: A07**



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





<p>9999 Oiling Zone ID</p> <p>Heavy Oiling</p> <p>Moderate Oiling</p>	<p>Light Oiling</p> <p>Very Light Oiling</p> <p>No Oil Observed</p>	<p>Figure 5 - Final SCAT Observations</p> <p>For SCAT Area: A07</p>	
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150 0 150 300 Feet



Appendix A

Sample Detection Summary



Detections in Samples Collected in SCAT Area A07

Printed 9/9/2011

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
SPPR01_070411	04-Jul-11	Field	Product_Oil	EPA 8015	Diesel Range Organics (DRO)	Y	221000			mg/kg	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	EPA 8015	Oil Range Hydrocarbons (C28-C40+)	Y	148000			mg/kg	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	EPA 8015	Total Extractable Hydrocarbons	Y	365000			mg/kg	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	EPA 8270	Phenanthrene	Y	5.8		J	mg/kg	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C11-C12	Y	0.06			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C12-C13	Y	0.08			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C13-C14	Y	0.99			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C14-C15	Y	2.6			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C15-C16	Y	3.73			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C16-C17	Y	4.45			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C17-C18	Y	4.68			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C18-C19	Y	4.98			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C19-C20	Y	5.07			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C20-C21	Y	4.45			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C21-C22	Y	4.59			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C22-C23	Y	4.38			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C23-C24	Y	4.29			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C24-C25	Y	3.8			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C25-C26	Y	3.84			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C26-C27	Y	3.8			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C27-C28	Y	3.87			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C28-C29	Y	3.78			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C29-C30	Y	4.03			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C30-C32	Y	7.42			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C32-C34	Y	6.79			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C34-C36	Y	6.68			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C36-C38	Y	6.57			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C38-C40	Y	3.88			Vol %	no
SPPR01_070411	04-Jul-11	Field	Product_Oil	SimDist	C40+	Y	1.17			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	EPA 8015	Diesel Range Organics (DRO)	Y	163000			mg/kg	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	EPA 8015	Oil Range Hydrocarbons (C28-C40+)	Y	100000			mg/kg	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	EPA 8015	Total Extractable Hydrocarbons	Y	261000			mg/kg	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	EPA 8270	Benzo(a)anthracene	Y	1.3		J	mg/kg	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	EPA 8270	Benzo(a)pyrene	Y	1.2		J	mg/kg	no



Detections in Samples Collected in SCAT Area A07

Printed 9/9/2011

NA - Not Available

Detected Above Screening Level

Sample Num	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
SPPR02_070411	04-Jul-11	Field	Product_Oil	EPA 8270	Benzo(g,h,i)perylene	Y	1.2		J	mg/kg	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	EPA 8270	Fluoranthene	Y	1.2		J	mg/kg	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	EPA 8270	Indeno(1,2,3-cd)pyrene	Y	2		J	mg/kg	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	EPA 8270	Phenanthrene	Y	1		J	mg/kg	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	EPA 8270	Pyrene	Y	1.6		J	mg/kg	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C12-C13	Y	0.21			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C13-C14	Y	1.68			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C14-C15	Y	3.49			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C15-C16	Y	4.31			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C16-C17	Y	4.81			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C17-C18	Y	4.89			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C18-C19	Y	5.13			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C19-C20	Y	5.11			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C20-C21	Y	4.45			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C21-C22	Y	4.48			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C22-C23	Y	4.49			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C23-C24	Y	3.84			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C24-C25	Y	4.07			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C25-C26	Y	3.96			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C26-C27	Y	3.57			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C27-C28	Y	3.84			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C28-C29	Y	3.51			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C29-C30	Y	3.91			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C30-C32	Y	7.16			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C32-C34	Y	6.53			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C34-C36	Y	6.21			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C36-C38	Y	5.6			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C38-C40	Y	4.14			Vol %	no
SPPR02_070411	04-Jul-11	Field	Product_Oil	SimDist	C40+	Y	0.63			Vol %	no



Appendix B

Initial SCAT Survey Forms and
Sketches

DB 10/50

MM

1 GENERAL INFORMATION				Date (dd/mm/yy)	Time (24h): std / daylight	Water Level																
Segment/Reach ID: Left Bank / Right Bank / Island		A-7		7/5/2011	13:00 hrs to 14:00 hrs	low - mean - bankfull - overbank falling - steady - rising																
Operations Division:		A-7		Survey by: (Foot) ATV / Boat / Helicopter / Overlook / (Sun) Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- 90 deg C																
2 SURVEY TEAM #				name	organization	contact phone number																
Tom Freeman		Polaris		284-630-9004																		
Andrew Johnson		USCG		609-351-8517																		
Larry Padden		BLM		406-671-4155																		
3 SEGMENT				Total Segment/Reach Length	536 m	Segment/Reach Length Surveyed	287 m															
Start GPS: LATITUDE		45°38' deg. 59.47" min.		LONGITUDE		108°43' deg. 34.36" min.		Datum:														
End GPS: LATITUDE		45°38' deg. 59.44" min.		LONGITUDE		108°43' deg. 47.64" 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		Wetland: Swamp		Bog/Fen Marsh												
Sediment Bank: Clay/Mud		Sand		Mixed		X		Pebble/Cobble		Boulder												
Sediment Flat: Clay/Mud		Sand		Mixed/Coarse		Other:		Vegetated Bank: (P)		Wooded Upland:												
4B RIVER VALLEY CHARACTER				select as appropriate							complete for primary											
Cliff or Bluff: Est Height		m		canyon		manmade		meander		confined or leveed												
Sloped: (>5°)(15°)(30°)		straight		braided		oxbow		flood plain valley		X												
										Substrate Type: Vegetated												
										Forested / Vegetated / Bare												
4C RIVER CHANNEL CHARACTER				circle or select as appropriate																		
est. width:		<1m 1-10m		10-100m		>100m		est. water depth:		<1m 1-3m												
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 (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:		Using closed road for staging and access														
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	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
A			X	X	287	5	100			X			X									Veg
B				X	287	3	100			X			X									Veg
7 SUBSURFACE OILING CONDITIONS				use letter for ZONE location plus Number of pit or trench - e.g., "A1"																		
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH	OILED ZONE	SUBSURFACE OIL CHARACTER						WATER TABLE	SHEEN COLOUR	CLEAN BELOW	SUBST. TYPE(S)						
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO					
					cm	cm-cm								cm	B, R, S, N	Yes / No						
8 COMMENTS				ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations																		
<p>1) Zone A = Grassy / River bank on N side Theil Rd. 2) Zone B = Grassy Drainage ditch S side of Theil Rd. 3) Operations active on site w/ Sorbent boom/pads</p> <p>NOTE: NO GPS Track for Zones A & B, Observations recorded during afternoon photo stops for BLM Rep,</p>																						

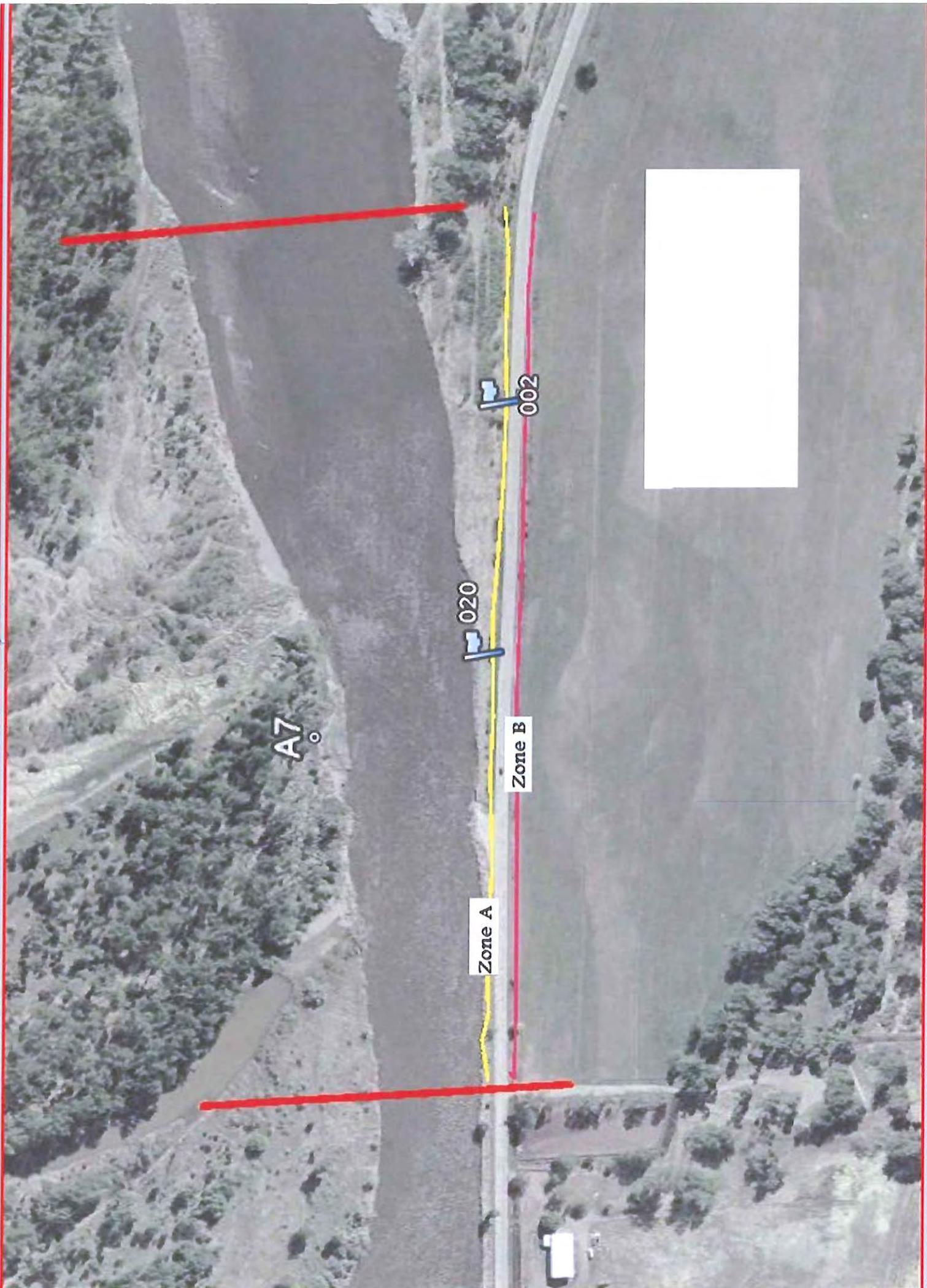
19

Staging Y or N answer all

Check A dominant

12

(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)
Sketch Yes/No Photos Yes/No (Roll # _____ Frames 2-5) Video Tape Yes/No (tape# _____)



A7

020

Zone B

Zone A

002

1 GENERAL INFORMATION		Date (dd/mm/yy) 11-Jul-2011	Time (24h): std / daylight 1103 hrs to 1104 hrs	Water Level low - mean - bankfull - <u>overbank</u> falling - steady - rising
Segment/Reach ID: A7 Left Bank / <u>Right Bank</u> / Island				
Operations Division: A				
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>29.4</u> deg C

2 SURVEY TEAM # 2 & 4	name	organization	contact phone number
Andrew Milanes		Polaris	
Tom Freeman		Polaris	
Andrew Johnson		USCG	
Travis Olson		USCG	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 541 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 S (type) riprap _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

Sloped: (>5°)(15°)(30°) straight P braided X 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 0.5 trucks access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
	m	m	%	m	m	%																
<u>102</u> A			X		307	1	95			X	X		X									Grass, trees, debris, rocks
<u>103</u> B			X		38	1	100		X	X	X		X									Grass, trees, debris
<u>104</u> C			X		47	1	95			X	X		X									Grass, trees, debris, rocks
<u>105</u> D			X		114	1														X		Grass, trees, debris
<u>106</u> E			X		35	1	95			X	X		X									Grass, trees, debris

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

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

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

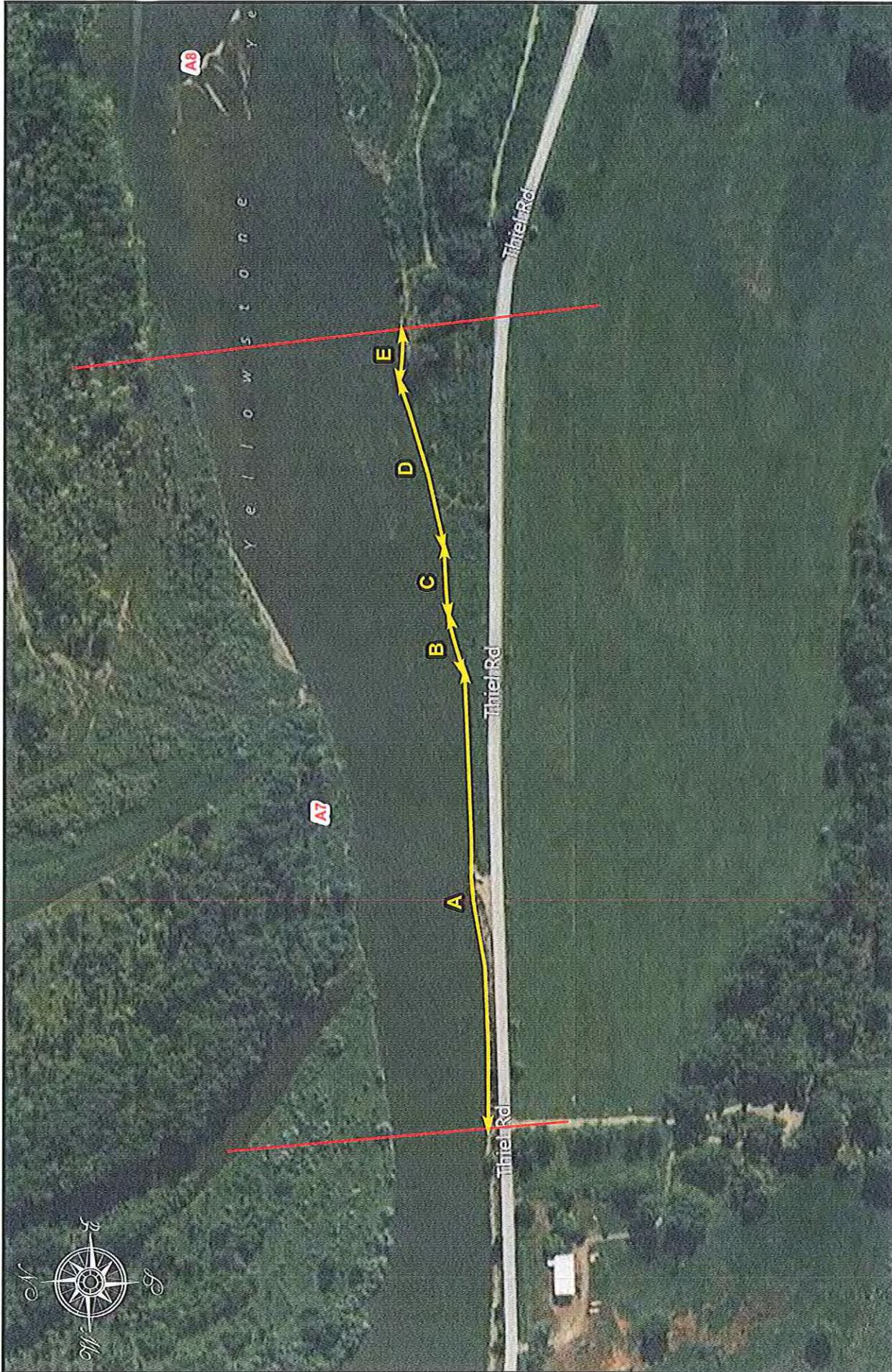
Oiled Band Heights: Zone A - 40cm; Zone B - 80cm; Zone C - 40cm; Zone E - 40cm

Due to survey platform (jet-drive boat) oil band width and heights are estimates. Unable to verify by foot.

Cleanup Recommendations: Trim oiled vegetation; wipe large oiled debris; remove small oiled debris; wipe oiled trees; wipe rocks (if can be performed safely).

(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# _____)



Legend

-  Oil Zones
-  Segment Boundaries



SCAT Teams 2 & 4 Survey

Segment A7 Right Bank

11-Jul-2011

DB / 6

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>A7</u>	Left Bank / <u>Right Bank</u> / Island	<u>23/01/11</u>	<u>0947</u> hrs to <u>0913</u> hrs	low - mean - <u>bankfull</u> - overbank
Operations Division: <u>A</u>				<u>falling</u> - steady - rising
Survey by: <u>(Foot) / ATV / Boat / Helicopter / Overlook /</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp + / - <u>24</u> deg C	

2 SURVEY TEAM # <u>2</u>	Name	Organization	Signature
<u>Chelsea Murphy</u>	<u>Cardno ENTRIX</u>	<u>MT DEP</u>	<u>[Signature]</u>
<u>Darragh Turley</u>	<u>Cardno ENTRIX</u>	<u>USCG</u>	<u>[Signature]</u>
<u>Steve Kennedy</u>			
<u>Ron Lynn, Jr</u>			

3 SEGMENT Total Segment/Reach Length ~540m m Segment/Reach Length Surveyed ~540m m

Start GPS: LATITUDE 45.104984 deg. min. LONGITUDE 108.729937 deg. min. Datum: WGS84

End GPS: LATITUDE 45.65055 deg. min. LONGITUDE 108.72324 deg. min.

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

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

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

Sediment Flat: Clay/Mud (S) Sand S Mixed/Coarse S Other: (S) Rip-Rap If snow and ice use Winter River SOS

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m (S) >100m 160m ~200 est. water depth: <1m 1-3m (S) 3-10m >10m S m

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

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

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

Debris: (S) Y/N oiled (S) Y/N amount S bags or S trucks access restrictions Roadway Penning next to Seg

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

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>S</u>	<u>S</u>	<u>P</u>	<u>540</u>	<u>30</u>	<u>15</u>			<u>P</u>	<u>S</u>		<u>P</u>		<u>S</u>						<u>mud</u>

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

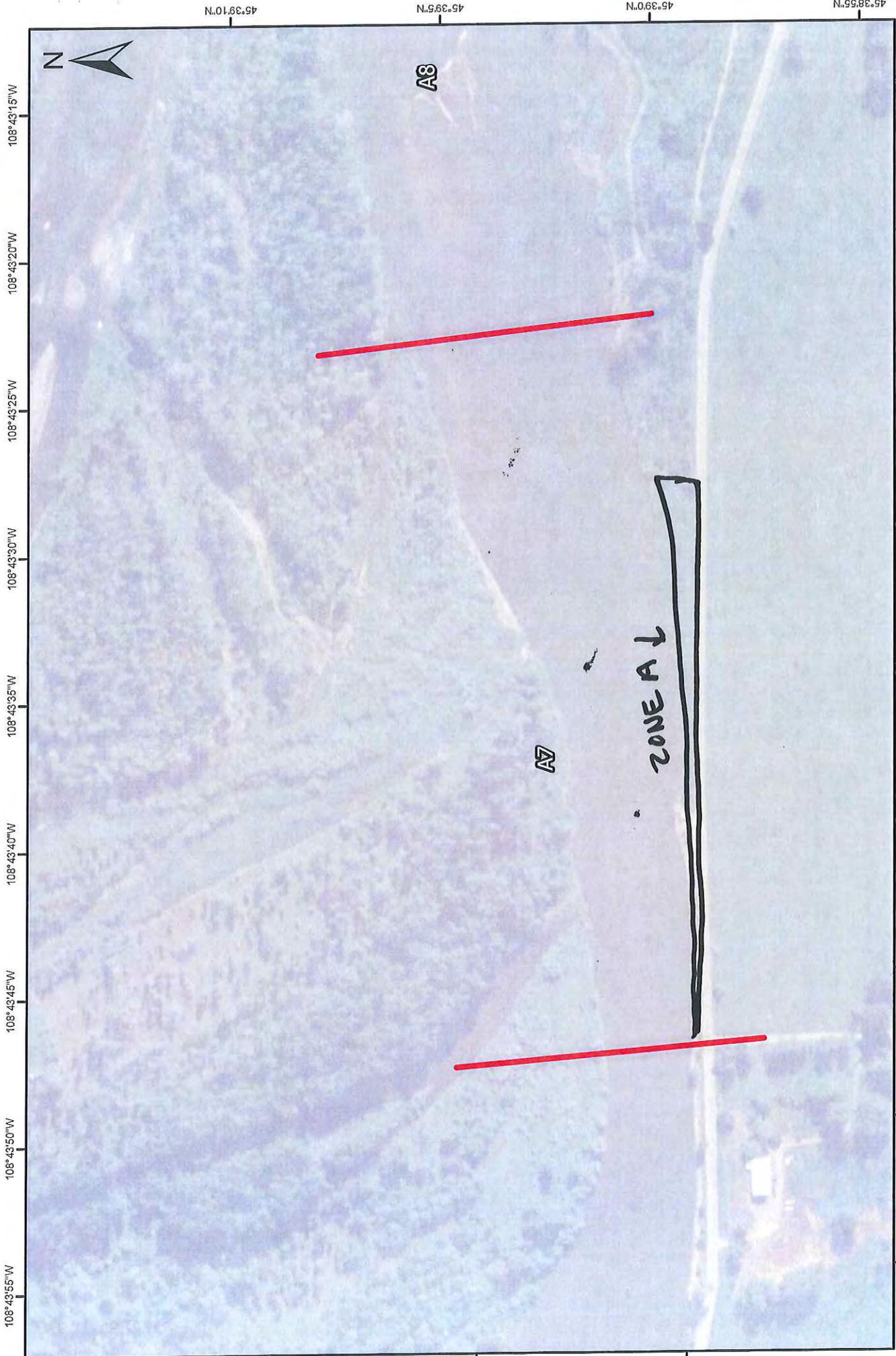
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER					WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF				

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

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

Zone A Recommendations - Cut veg along Bank + in overbank -
@ end of Zone - lots of woody debris - needs to be removed
- Heavy equipment ok for this area. Sorbent pads to get
the out of pools of water. Use of hand tools for removal of
oiled sed. Sorbent pad use for absorbing oil off live trees + rip-rap.
Methods: #1, #2, #3, #4 + #5

Sketch Yes/No Photos (S) Yes/No Frames 14-18 Photographer Chelsea Murphy



108°43'55"W 108°43'50"W 108°43'45"W 108°43'40"W 108°43'35"W 108°43'30"W 108°43'25"W 108°43'20"W 108°43'15"W

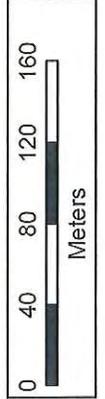
45°39'10"N 45°39'5"N 45°39'0"N 45°38'55"N



A8

A7

ZONE A ↓



COMMENTS:

DATE: 7/23/11

TEAM: #6

A07 - A (L/R)??

DB/G

R

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (20/08/11)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A7(part) Left Bank / Right Bank / Island				low - <u>mean</u> bankfull - overbank
Operations Division: A			8h30 hrs to 10h00 hrs	falling steady - rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun/ Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp + / - 20 deg C	

2 SURVEY TEAM # 5	name	organization	contact phone number
Merlo Gauvreau		Polaris	
Bob Nailon		CardnoEntrix	
Linda Watson		EPA	
Besty Hovda		DEQ	

3 SEGMENT Total Segment/Reach Length 530 m Segment/Reach Length Surveyed 530 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 S Sand S Mixed S Pebble/Cobble S Boulder _____ Peat/Organic _____ Vegetated Bank P Wooded Upland: S

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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 64 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	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
					Length	Width	Distrib.	THICKNESS					CHARACTER									
	ID	MS	LB	UB	OB	m	m	%	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO
A				X	2	2	<1%					X	FR									DB, LG
B				X	530	30	<1%				X							X				DB, VG, LG

1712
1713

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: Oil leaching from debris pile on river sheen RB, flushing and containment boom, Ops have been informed.

B: ReSCAT of segment A7; Stain on the trees and vegetation and larges debris, meet the conditions of the CTR, NFT.

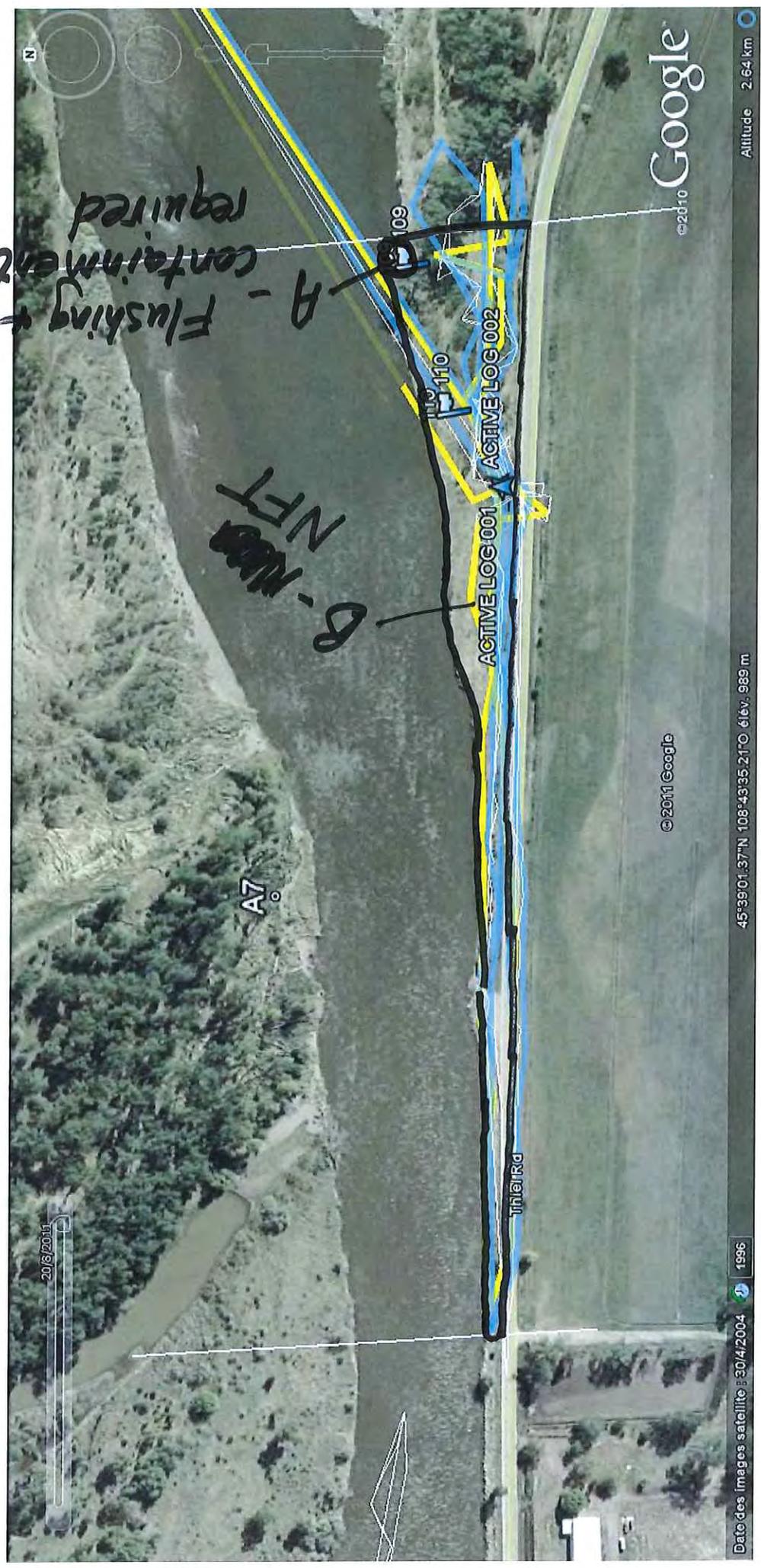
(for ALL sub-segments record: sub-segment ID, length, length surveyed, and GPS start/end fixes)

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

20 August Team #5 A7

P. 2 of 2

R



Date des images satellite : 30/4/2004

45°39'01.37"N 108°43'35.21"W élv. 989 m

Altitude 2.64 km

Google

©2011 Google

20/8/2015

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 11-Jul-2011	Time (24h): std / daylight 1103 hrs to 1104 hrs	Water Level low - mean - bankfull - <u>overbank</u> <u>falling</u> - steady - rising
Segment/Reach ID: A7 <u>Left Bank / Right Bank / Island</u>				
Operations Division: A				
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook / _____		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>29.4</u> deg C

2 SURVEY TEAM # 2 & 4	name	organization	contact phone number
Andrew Milanes		Polaris	
Tom Freeman		Polaris	
Andrew Johnson		USCG	
Travis Olson		USCG	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 416 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

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

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

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

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

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

Debris: Y / N oiled Y / N amount _____ 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		416	1															X	Grass, trees, debris	

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

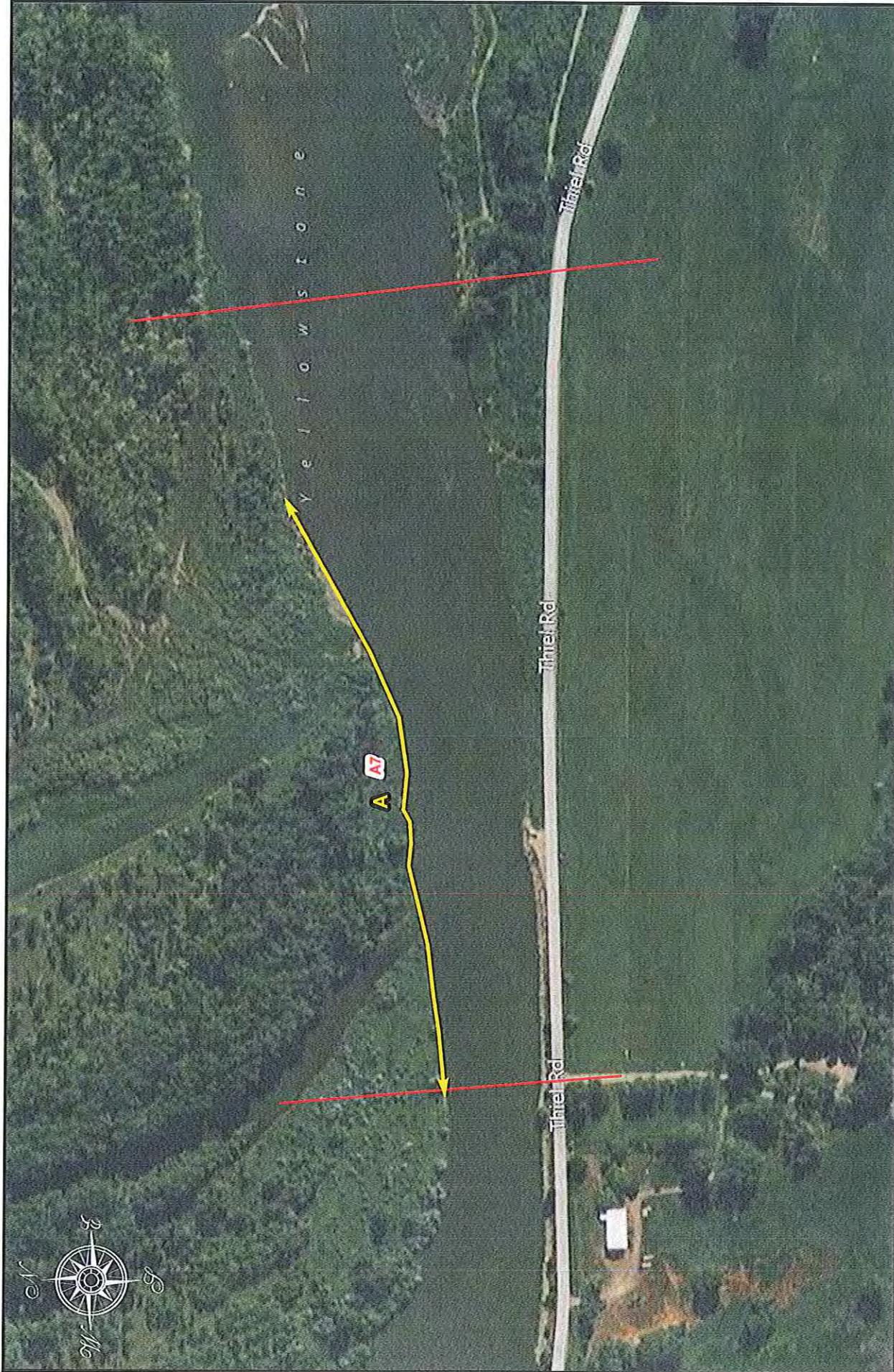
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER							WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)							
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR	NO											

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

Cleanup Recommendations: No oil observed along river channel margin

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

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



Legend
Oil Zones
Segment Boundaries



SCAT Teams 2 & 4 Survey
Segment A7 Left Bank
11-Jul-2011

DTB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 18-Jul-2011	Time (24h): std / daylight 1021 hrs to 1022 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: A07 <u>Left Bank</u> / Right Bank / Island		Operations Division: A		
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>32</u> deg C

2 SURVEY TEAM # 1 & 2	name	organization	contact phone number
Andrew Milanes		Polaris	
Bruce Kvam		Polaris	
Pete Lee		Polaris	
Andy Johnson <i>AS</i>		USCG	
Travis Olson		USCG	
Aaron Anderson		MTDEQ	
Larry Elheim		MTDEQ	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 141 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) riprap _____ Wetland: Swamp _____ Bog/Fen _____ Marsh _____

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 160m est. water depth: <1m 1-3m 3-10m >10m _____ m

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

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

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

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

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
	m	m	%																			
324 A			X		141	1															X	Grass, trees

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

TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH 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

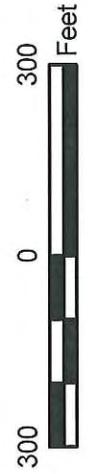
Treatment Recommendations:
 Zone A: No oil observed along the shoreline. No treatment required along shoreline.

Sketch Yes / No Photos Yes / No Frames _____



Legend

- Segment Boundaries
- Oiling Zones



SCAT Teams 1 & 2 Survey

Segment A07 - Left Bank

18 July 2011

1 GENERAL INFORMATION

Segment/Reach ID: A7 Left Bank / Right Bank / Island

Operations Division: A

Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____

Date (dd/mm/yy) 20/07/11

Time (24h): std / daylight 1000 hrs to 1400 hrs

Water Level full - low - mean - bank - overbank

falling - steady - rising

(Sun) Clouds / Fog / Rain / Snow / Windy / Calm

Air Temp +/- 20 deg C

2 SURVEY TEAM

name	organization	contact phone number
<u>John Williams</u>	<u>Cardno ENTRIX</u>	<u>361 676 8138</u>
<u>Joe Boyle</u>	<u>Cardno ENTRIX</u>	<u>386 214 6558</u>
<u>Courtney Tyree</u>	<u>FNP</u>	<u>406 860 7814</u>
<u>Mike Ruggles</u>	<u>FNP</u>	<u>406 671 8863</u>
<u>Colin Riley</u>	<u>EPA</u>	<u>415 215 0690</u>

3 SEGMENT

Total Segment/Reach Length 550 m Segment/Reach Length Surveyed _____ m

Start GPS: LATITUDE 45.65198 deg. _____ min. LONGITUDE 108.72998 deg. _____ min. Datum: WGS84

End GPS: LATITUDE 45.65198 deg. _____ min. LONGITUDE 108.72325 deg. _____ min.

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate

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

Sloped: (>5°)(15°)(30°) 45° straight _____ braided P oxbow _____ flood plain valley _____

Substrate Type: mud Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

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

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

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

5 OPERATIONAL FEATURES

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

Debris: Y oiled Y amount _____ bags or _____ trucks access restrictions silt mud, dense vegetation

Oiled trees/shrubs Y River Current strong Y 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	CP	ST	IFL	FR	MS	TB	PT	TC			SR	AP	NO
A			<u>S</u>	<u>P</u>	<u>200</u>	<u>50</u>	<u>150</u>			<u>P</u>	<u>S</u>										<u>P</u>	<u>mud</u>
B			<u>P</u>	<u>S</u>	<u>20</u>	<u>5</u>	<u>15</u>			<u>P</u>	<u>S</u>											<u>mud</u>
C			<u>S</u>	<u>P</u>	<u>15</u>	<u>15</u>	<u>15</u>			<u>P</u>	<u>S</u>											<u>mud</u>

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

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

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

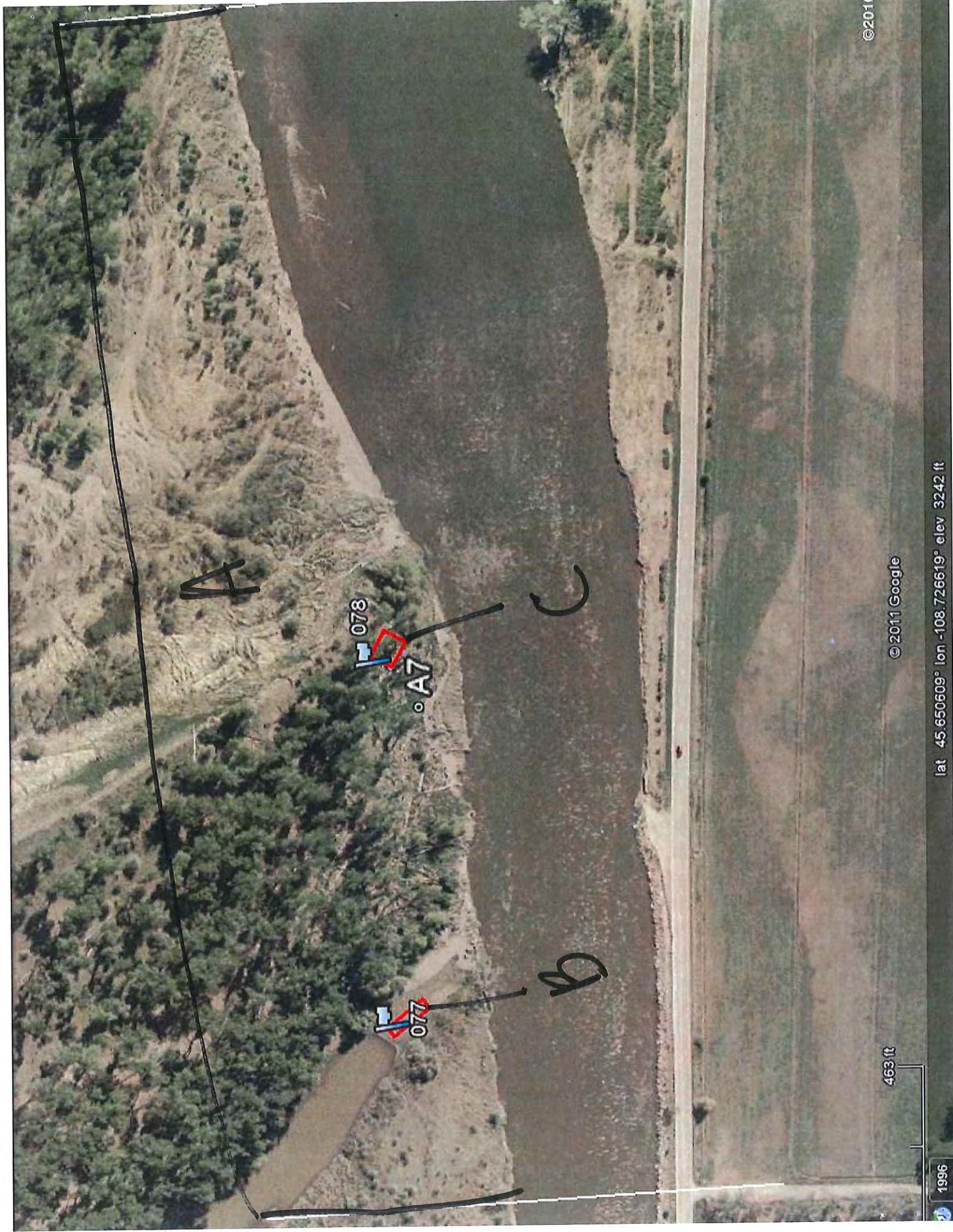
name Janice Witul organization EPA contact phone number 415 816 6582

Zone B recommendation: remove oil by absorbent / boom / snare

Zone C recommendation: remove oil by absorbent / boom / snare

(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 Yes/No (tape # _____)



A

078

A7

C

077

B

463 ft

© 2011 Google

© 2010

lat 45.650609° lon -108.726619° elev 3242 ft

1996

left bank
AM 10/11/11

DB/9

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION

Segment/Reach ID: A07 Left Bank / Right Bank / Strand

Operations Division: 20108111

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

Date (dd/mm/yy): 10/11/11 Time (24h): std / daylight 1130 hrs to 1150 hrs

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

Air Temp + / - deg C

2 SURVEY TEAM # 3

Name	Organization	Signature
Todd Farvar	Polaris	<i>Todd Farvar</i>
Lisa Geremcher	Entrix	<i>Lisa Geremcher</i>
Jeffrey Herriek	DEQ	<i>Jeffrey Herriek</i>
Rachelle Thompson	EPA	<i>Rachelle Thompson</i>
Ethan Stapp	DNRC	<i>Ethan Stapp</i>

3 SEGMENT Total Segment/Reach Length m Segment/Reach Length Surveyed 82 m

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

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

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

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

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

Sediment Flat: Clay/Mud Sand S Mixed/Coarse Other: 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 Forested Vegetated Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10 m 10-100 m >100m 160m est. water depth: <1m 1-3 m 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

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER					SUBST. TYPE(S)				
	MS	LB	UB	OB	Length	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
	m	m	%																			
1743 A		X			82	69																K

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

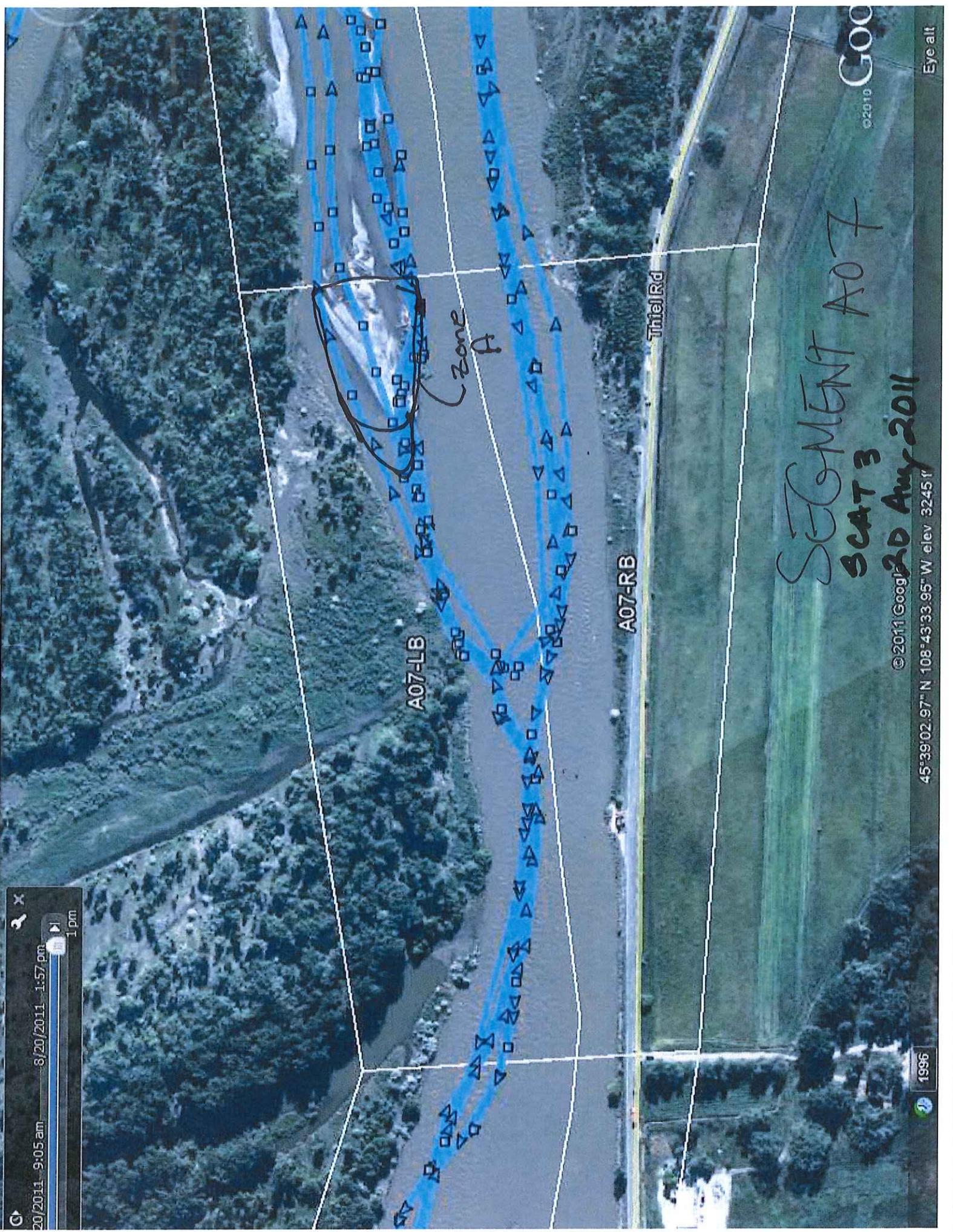
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER					WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF					TR

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

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

Zone A - NOO . NFT

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



SEGMENT A07
SCAT 3
20 Aug 2011

©2010 Goo

© 2011 Google
45°39'02.97" N 108°43'33.96" W elev 3245 ft

1996

Eye alt

D13/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 03/09/11	Time (24h): std / daylight 1000 hrs to 1330 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: A <u>7</u> Left Bank / Right Bank / Island		Operations Division: A		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>22</u> deg C
2 SURVEY TEAM # 2		Name	Organization	Signature
Pete Lee		Polaris		<i>P. Lee</i>
Larry Alheim		MTDEQ		<i>L. Alheim</i>
Stephen Ball		USEPA		<i>S. Ball</i>

3 SEGMENT Total Segment/Reach Length 540 m Segment/Reach Length Surveyed 540 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 XP 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: Boat only

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>540</u>	<u>100</u>															<u>X</u>	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	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

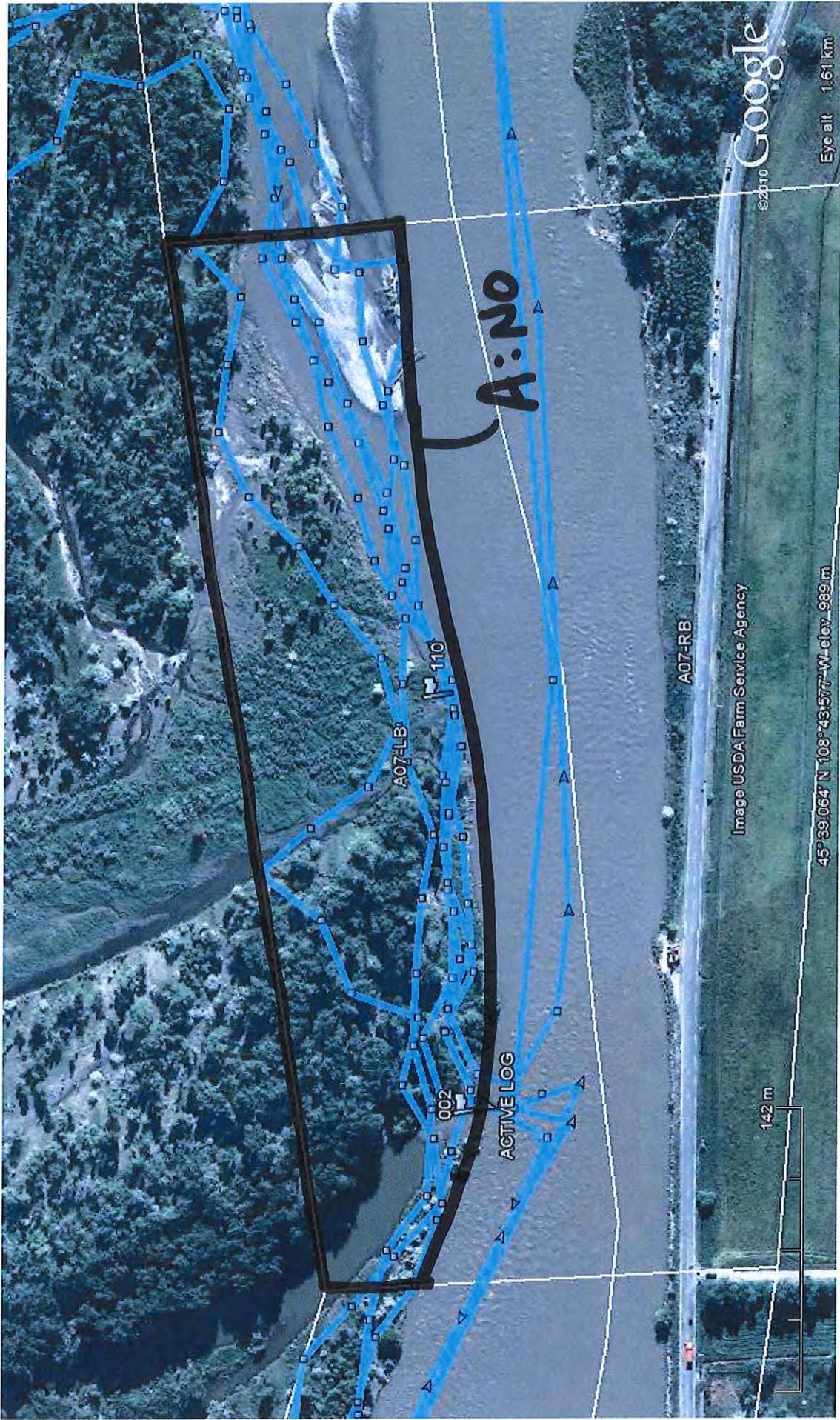
Overbank Survey Required Y N Overbank Survey Completed Y N Shoreline Survey Completed Y N

Oil height: _____

Treatment recommendations:
 Zone A : No oil; no treatment required
 Zone : _____

Private landowner

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



A7 LB
T2 9/3/11



Appendix C

Pre-Inspection Survey Transmittal

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 8/18/11

Segment: A7 RB

Team: SCAT Liaison Ray McKelvey

Signed: 

Observer Gary Reiter

Signed: 

Observer _____

Signed: _____

Observer _____

Signed: _____

X
Segment meets criteria? YES X NO _____

RBOS attached? YES X NO _____

If NO:
Location Sketch attached? YES _____ NO X

CTR continue? YES _____ NO X

Comments: **This segment does not have any know claims and is ready for RE-SCAT.**

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 19 AUG 2011

Segment: A07 LB

Team: SCAT Liaison LAUREN GLUSTIK Signed: [Signature]

Observer Ray McKelvey Signed: [Signature]

Observer Fred Stroud Signed: [Signature]

Observer _____ Signed: _____

Segment meets criteria? YES X NO _____

RBOS attached? YES _____ NO X

If NO:

Location Sketch attached? YES _____ NO X

CTR continue? YES _____ NO X

Comments:

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 8/20/11
Segment: A7-RB

Team: SCAT Liaison _____ Signed: _____
Observer Robert Nailon Signed: Robert Nailon
Observer Gerlo Gauran Signed: Gerlo Gauran
Observer Betsy Honda Signed: Betsy Honda
Linda R 31st Linda R 31st

Segment meets criteria? YES ___ NO

RBOS attached? YES NO ___

If NO:
Location Sketch attached? YES NO ___

CTR continue? YES NO ___

Comments:

- Continue flushing oiled debris pile @ river's edge at
45° 39' 0.74" N
108° 43' 23.54" W
- Placement of containment boom for collecting
flushed oil.



Appendix D

Post-Inspection Survey Transmittal

POST

Post Inspection Survey Transmittal

Created by Connor Kobeski / Carolina ENTREX on 9/5/11

Segment A07-RB

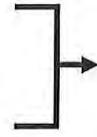
Date of Survey 8/20/2011

SCAT Team Member Robert Nailon Signed: (see attached PIST)

SCAT Team Member Merlo Gauvreau Signed: (see attached PIST)

SCAT Team Member Betsy Honda Signed: (see attached PIST)
Linda Watson Signed: (see attached PIST)

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.

Continue flushing oiled debris pile at river's edge. Use
containment boom to collect flushed oil.

Zone Dimensions: Length 2m Width 2m GPS Waypoint: Lat. N 45°39' 0.74" Long. W 108° 43' 23.54"
(required) (center of zone)

Estimated Work Effort: Number of People _____ Hours of Work _____ CTR Access-Issues? 6
(required)

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

Sign Name _____ Print Name/ Affiliation _____ Date _____

Sign Name _____ Print Name/ Affiliation _____ Date _____
Silvertip Pipeline Response Updated: 8/29/2011



Appendix E

Final SCAT Survey Forms and
Sketches

DB/6

1 GENERAL INFORMATION		Date (dd/mm/yy) 21/09/11	Time (24h): std / daylight 1100 hrs to 1200 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: A <u>7</u> Left Bank / <u>Right Bank</u> / Island				
Operations Division: A				
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - _____ deg C

2 SURVEY TEAM # 3	Name	Organization	Signature
Pete Lee		Polaris	<i>Pete Lee</i>
Jay Watson		MTFWP	<i>Jay Watson</i>

3 SEGMENT Total Segment/Reach Length 540 m Segment/Reach Length Surveyed 540 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 5 (type) Piprap 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 X meander _____ confined or leveed _____ Substrate Type: _____

Sloped: (>5°)(15°)(30°) straight _____ braided X oxbow _____ flood plain valley P 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: Adjacent to Thiel Rd.

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

2359
2360

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)			
	ID	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
A				X		170	1	21				P						X					Grass, trees, debris
B					X	370	20	21				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

Oil height: 60-90 cm

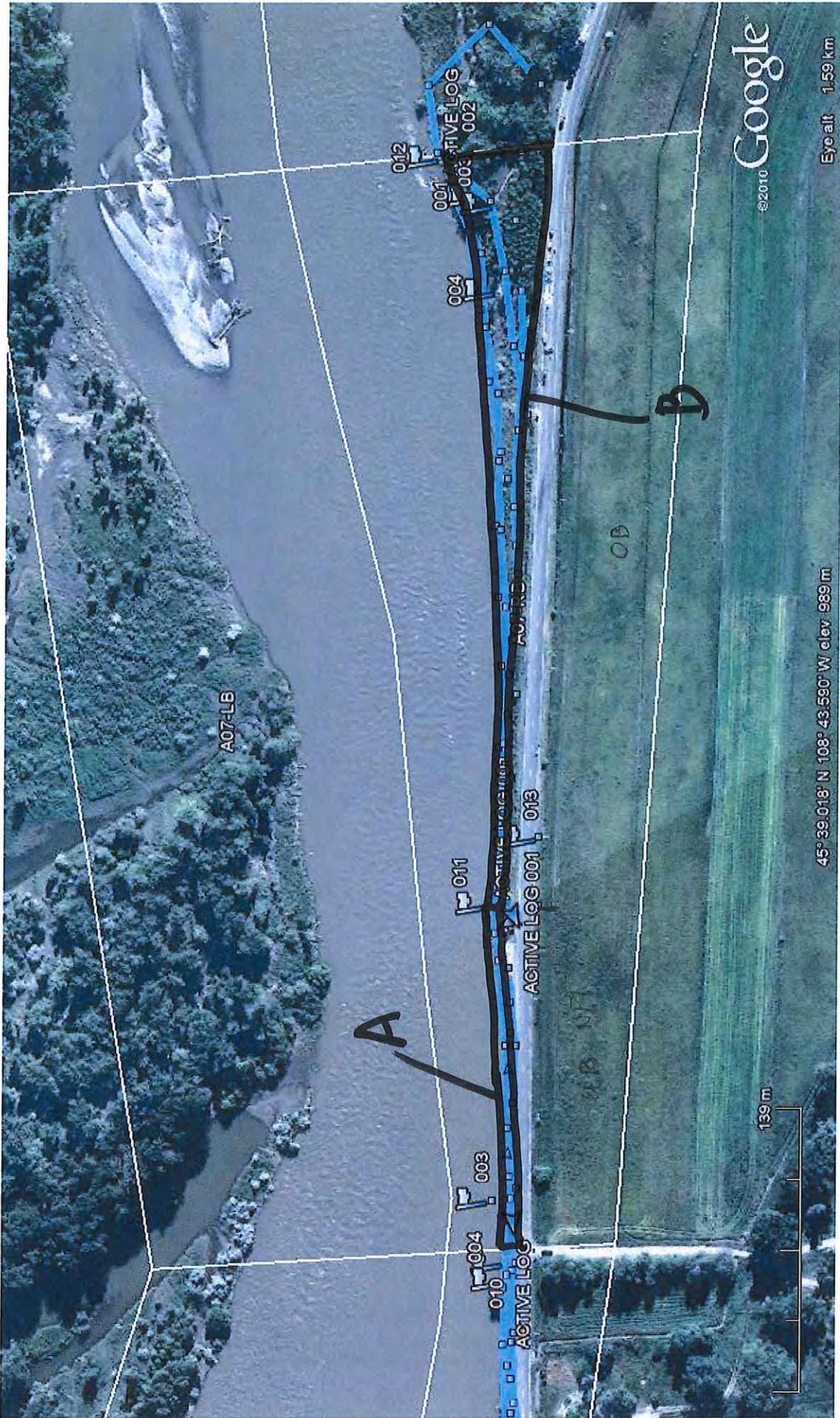
Treatment recommendations:

Zone A, B : Previously treated by Ops and also with Hot shot crew;

Zone DEBRIS PILE NEAR DOWN STREAM BOUNDARY HAD BOOMS & PADS, STRONG SMELL OF OIL W/ ONLY SMALL AMOUNTS VISIBLE. RECOMMEND FOLLOW UP ASSESSMENT no further treatment

Ops Hot shot crew (Jose Estrada)

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



T3 9/21/11
Zone A is 1m

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

DB/6

R

1 GENERAL INFORMATION		Date (24/08/11)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A7 <u>Left Bank</u> / Right Bank / Island				low - <u>mean</u> bankfull - overbank
Operations Division: A			09h00 hrs to 11h00 hrs	<u>falling</u> steady - rising
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		<u>Sun</u> Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 3-5 deg C

2 SURVEY TEAM # 3	name	organization	contact phone number
Merlo Gauvreau		Polaris	
Rich Marty		Polaris	<i>Rich Marty</i>
Rachelle Thompson		EPA	<i>Rachelle Thompson</i>
Mark Ewanic		DEQ	<i>Mark Ewanic</i>

3 SEGMENT Total Segment/Reach Length 530 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 S _____ Sand S _____ Mixed S _____ 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°(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 119 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	263	217															X
B				X	123	200															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

A: ReSCAT segment A07 LB; NOO. The propriety of James Edwards was not ReSCAT, no access granted.

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

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



Appendix F

Completed SCAT Segment Sign-Off
Forms

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment A 7 RB Date of Survey 9/21/11

Dates of Initial SCAT Assessments 05 Jul 2011
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 6

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)

Jay Watson JAY WATSON FWP 9/22/11
Sign Name _____ Print Name/ Affiliation _____ Date _____
State Representative (DEQ/FWP)

P. Lee Pete Lee / Polaris 9/21/11
Sign Name _____ Print Name/ Affiliation _____ Date _____
RP Representative (SCAT RP Representative)

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

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



Appendix G

Exception Memos

GENERAL MESSAGE

TO: Greg Weigel

POSITION: EPA Operations

FROM: JoAnn Eskelsen
Gary Reiter, Ray McKelvey

POSITION: SCAT/Ops Liaison

SUBJECT: Remediation of A-7 and A-8 RB Log Depressions

DATE: 8/26/2011

TIME: 1130

MESSAGE:

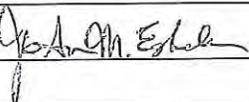
We visited the two log depression sites located at A-7 and A-8 respectively today to observe the success of the present treatment methods. We concluded that they have reached the end of their effectiveness and that the NEB may be better served by removing the sorbents from both locations and allowing the air, wind and sun to more readily attenuate the minor amount of oil still left in the depressions, and the minor sheen that may continue to emanate from them.

We recommend that at A-7 the flushing operations be stopped and it be allowed to sheen naturally if it does so. The boom should be maintained, but at a distance away from the depression to allow any sheen that may emanate from the depression to disperse and degrade from sun exposure. Once flushing is stopped, locally obtained dirt should be used to immediately dust the depression area and exposed roots while still damp to minimize possibility of oil being transferred to any wildlife that may enter the depressions.

As recommended for A-7, we also recommend that the sorbents at both A-8 depressions be removed to facilitate natural evaporation and drying of sediment and wood in the depression. If possible, oiled roots that can be safely reached should be trimmed to extent possible. The sorbent boom should be maintained at a distance from the depressions to allow sheen to disperse and degrade from sun exposure, but to also ensure sheen does not escape from site and into the river.

Please contact us if you have any questions regarding these suggested changes to the treatment plan.

SIGNATURE: JoAnn Eskelsen

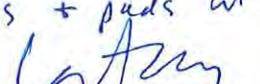


POSITION: EPA SCAT/Ops Liaison

REPLY:

Boom maintenance no longer required at current river water level.

these log depressions will now transition into long term monitoring + maintenance. Site will be inspected when water level rises to ensure "no sheen" continues. If sheen is found, booms + pads will be placed as appropriate.

STATE REP:  Laura Alvey / MT DEQ 27 Sept 11

RD REP:  LAUREN GLUSHKO / POLARIS 27 SEPT 11

DATE:

TIME:

SIGNATURE/POSITION:

GENERAL MESSAGE - SCAT AND OPERATIONS GUIDANCE FOR A7RB & A8RB EMBEDDED DEBRIS PILE SHEENING

TO: Jimmie James, RPIC Mike Trombetta, SOSC Steven Merritt, FOSC	POSITION: ExxonMobil Montana DEQ State On-Scene Coordinator EPA Federal On-Scene Coordinator
---	---

FROM: JoAnn Eskelsen, Gary Reiter, Ray McKelvey	POSITION: SCAT/Ops Liaisons
--	------------------------------------

SUBJECT: Remediation of A7RB and A8RB Depressions	DATE: 8/26/2011	TIME: 1130
--	------------------------	-------------------

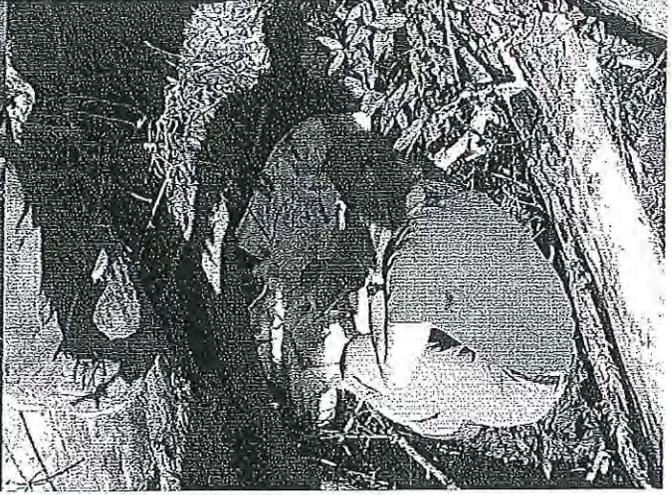
MESSAGE:

We visited the two log depression sites located at A-7 and A-8 respectively today to observe the success of the present treatment methods. We concluded that they have reached the end of their effectiveness and that the NEB may be better served by removing the sorbents from both locations and allowing the air, wind and sun to more readily attenuate the minor amount of oil still left in the depressions, and the minor sheen that may continue to emanate from them.

We recommend that at A-7 the flushing operations be stopped and it be allowed to sheen naturally if it does so. The boom should be maintained, but at a distance away from the depression to allow any sheen that may emanate from the depression to disperse and degrade from sun exposure. Once flushing is stopped, locally obtained dirt should be used to immediately dust the depression area and exposed roots while still damp to minimize possibility of oil being transferred to any wildlife that may enter the depressions.

As recommended for A-7, we also recommend that the sorbents at both A-8 depressions be removed to facilitate natural evaporation and drying of sediment and wood in the depression. If possible, oiled roots that can be safely reached should be trimmed to extent possible. The sorbent boom should be maintained at a distance from the depressions to allow sheen to disperse and degrade from sun exposure, but to also ensure sheen does not escape from site and into the river.

Please contact us if you have any questions regarding these suggested changes to the treatment plan.

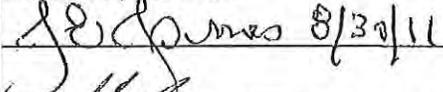
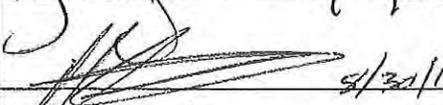


SIGNATURE: *JoAnn Eskelsen* JoAnn Eskelsen, EPA ERT

POSITION: EPA SCAT/Ops Liaison

REPLY: SCAT and Operations

The Unified Command is aware of this area within SCAT Segments A7RB and A8RB and that operations within these segments are now complete with the exception of this area by the Pre-Inspection Survey Teams and Re-SCAT efforts. We agree with the recommended treatment proposed above for this area, but request that water-based operations crews or wildlife branch personnel continue to monitor these areas from the river to ensure that sheen is not released from saturated substrates, as pictured above. ExxonMobil will coordinate any future remediation activities at this site with MTDEQ. In the meantime, this segment will be flagged and excised within GIS maps from the Re-SCAT report that will be produced to close-out the segment. This document will be included as an attachment to the Area Transition Report to document the need for additional work and monitoring within this segment.

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



Laurel-20110824-00038.jpg



Laurel-20110824-00041.jpg



Laurel-20110824-00042.jpg



Laurel-20110824-00044.jpg



South Yellowstone-20110824-00043.jpg



South Yellowstone-20110824-00039.jpg



DSC_0455.JPG

GENERAL MESSAGE – SCAT AND OPERATIONS GUIDANCE FOR A6RB/A7RB RIP RAP SHEENING

TO: Jimmie James, RPIC Mike Trombetta, SOSC Steven Merritt, FOSC	POSITION: ExxonMobil Montana DEQ State On-Scene Coordinator EPA Federal On-Scene Coordinator
FROM: JoAnn Eskelsen, Gary Reiter, Ray McElvey	POSITION: SCAT/Ops Liaisons
SUBJECT: A6RB and A7RB Rip Rap	DATE: 8/26/2011 TIME: 1130

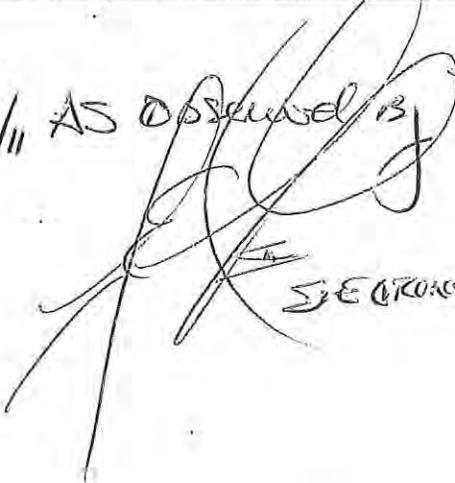
MESSAGE:

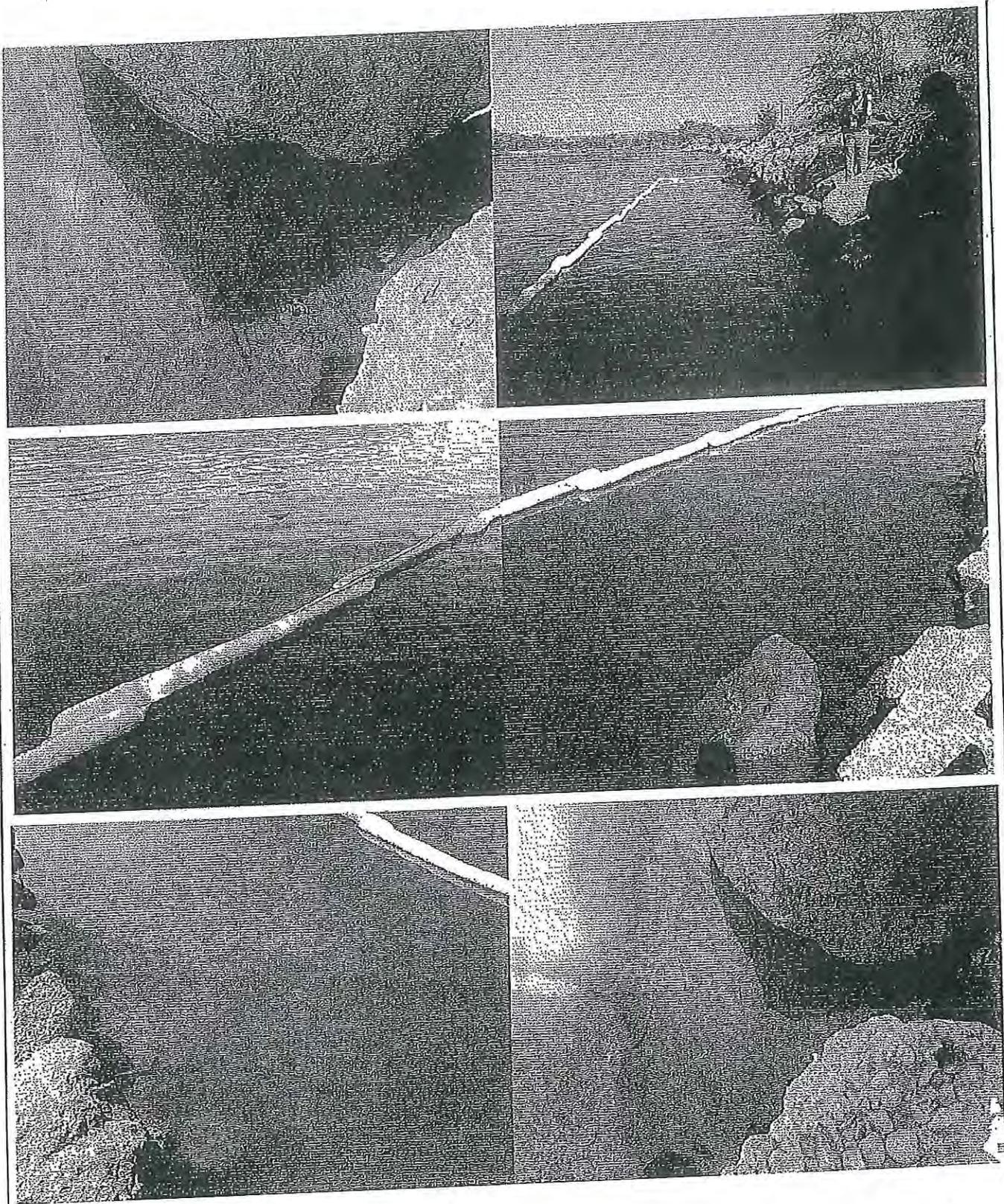
We visited the area of riprap at A-6 RB where visible sheen has been noted emanating from the shore over past several weeks, especially when wakes from passing boats are breaking on the shoreline. The site presently has sorbent boom anchored offshore to contain and recover oil that leaches out of the riprap. The A-6 RB segment is not accessible at this time due to the owner denying his permission to either SCAT or conduct cleanup operations on his property. Therefore, at this time operations have been limited to booming from the river side by boat.

We have been told that agency representatives have recommended that the riprap be flushed with water to ensure that all oil is released, contained and recovered prior to closure of the site. The only flushing that could safely be conducted from the water side would be high pressure flushing using a portable pump. Our recommendation to flush the riprap would be limited to a high volume/low pressure flushing operation. Our preference for this operation would be to use a blanked off plastic or aluminum pipe with 1" holes drilled into the casing every four or five inches. A high volume of water would then be pumped into the pipe at low pressure and the water directed through pipes as described to flush the riprap area to release any oil held in the void spaces and collect it within sorbent boom in the river. Length of pipe would be defined by the pumps GPM capacity. However, this would require access to the shore to install the pipe and pump equipment as well as personnel for operation.

Until access to the shore is approved or negotiated with the landowner(s), we recommend no further action beyond maintenance of the present sorbent boom, which can be continued from the river.

Photos from a site visit conducted on 8/24/2011 are enclosed within the following page.

8/19/11 AS observed by J.E. GIRONCECK / SHAWN CADRON

 J.E. GIRONCECK



SIGNATURE:

JoAnn Eskelsen
JoAnn Eskelsen, EPA ERT

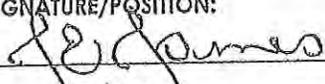
POSITION:

EPA SCAT/Ops Liaison

NFES 1336

REPLY: SCAT and Operations

The Unified Command is aware of this area within SCAT Segments A6RB and A7RB and that operations within these segments have been marked complete with the exception of this area by the Pre-Inspection Survey Teams and Re-SCAT efforts. We agree with the recommended treatment proposed by the SCAT/Operations Liaisons for this area, which is on BLM land and not private property, according to the Arcadis and Yellowstone County Parcel maps. Recommend consultation with BLM and the county roads department regarding the recommended treatment. Request that water-based operations crews continue to maintain a secure sorbent boom perimeter around these areas from the river to ensure that sheen is not released from saturated sorbents, as seen pictured above. Once coordination with the BLM or other easement property owner has been conducted, ExxonMobil will execute the recommended flushing operation under the direction of MDEQ. In the meantime, this segment will be flagged and exclded within GIS maps from the Re-SCAT report that will be produced to close-out the segment. This document will be included as an attachment to the Area Transition Report to document the need for additional work within this segment.

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



Laurel-20110824-00045.jpg



Laurel-20110824-00046.jpg



South Yellowstone-20110824-00051.jpg



South Yellowstone-20110824-00050.jpg



South Yellowstone-20110824-00048.jpg



Laurel-20110824-00049.jpg

GENERAL MESSAGE – SCAT AND OPERATIONS GUIDANCE FOR A6RB/A7RB RIP RAP SHEENING

TO: Jimmie James, RPIC Mike Trombetta, SOSC Steven Merritt, FOSC	POSITION: ExxonMobil Montana DEQ State On-Scene Coordinator EPA Federal On-Scene Coordinator
FROM: JoAnn Eskelsen, Gary Reiter, Ray McElvey	POSITION: SCAT/Ops Liaisons
SUBJECT: A6RB and A7RB Rip Rap	DATE: 8/26/2011 TIME: 1130

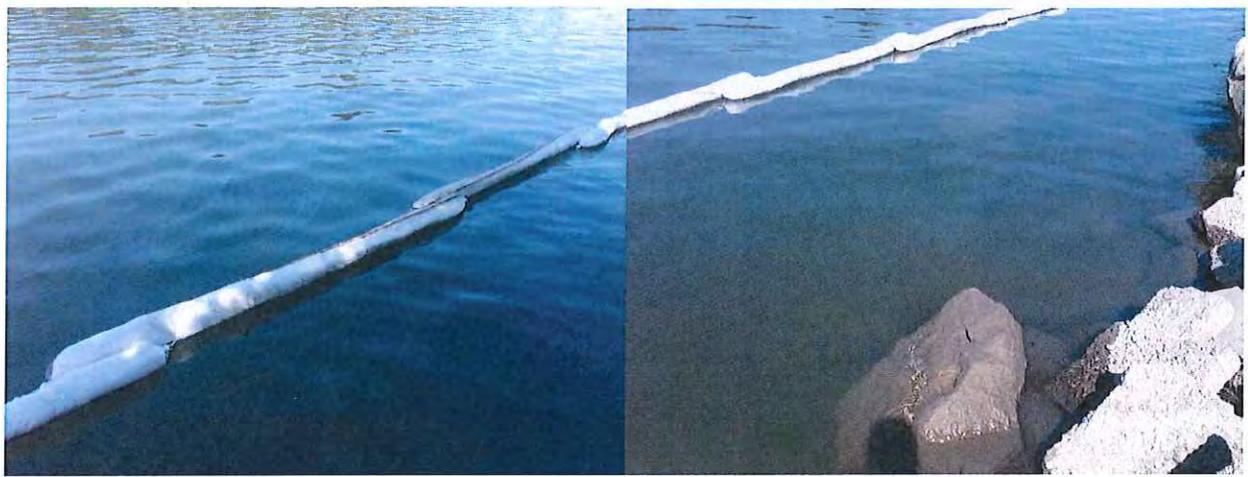
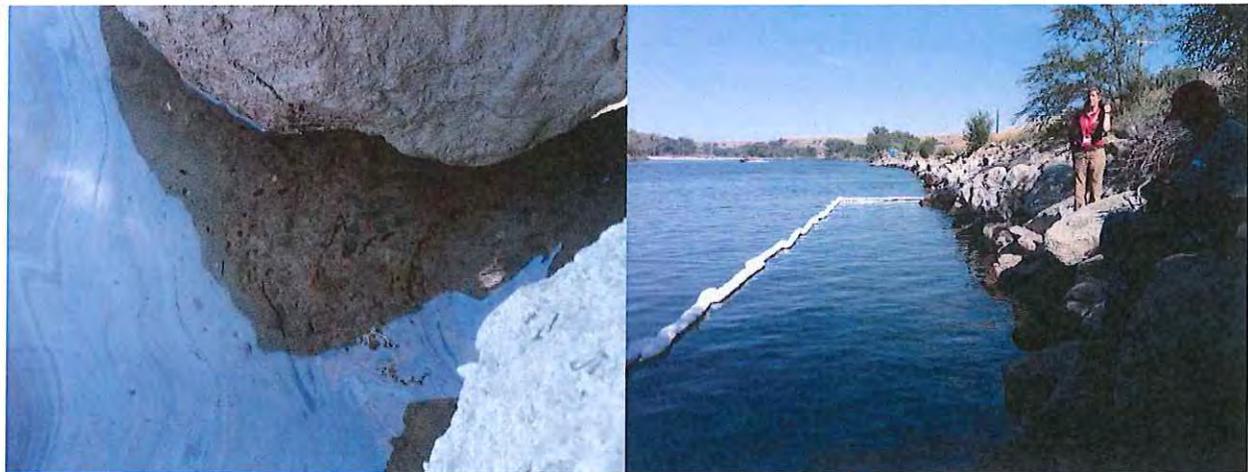
MESSAGE:

We visited the area of riprap at A-6 RB where visible sheen has been noted emanating from the shore over past several weeks, especially when wakes from passing boats are breaking on the shoreline. The site presently has sorbent boom anchored offshore to contain and recover oil that leaches out of the riprap. The A-6 RB segment is not accessible at this time due to the owner denying his permission to either SCAT or conduct cleanup operations on his property. Therefore, at this time operations have been limited to booming from the river side by boat.

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Photos from a site visit conducted on 8/24/2011 are enclosed within the following page.



SIGNATURE:

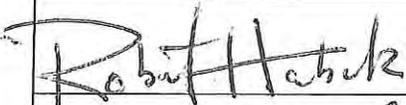
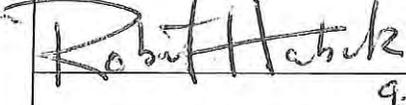
JoAnn Eskelsen, EPA ERT

POSITION:

EPA SCAT/Ops Liaison

REPLY: SCAT and Operations

The Unified Command is aware of this area within SCAT Segments A6RB and A7RB and that operations within these segments have been marked complete with the exception of this area by the Pre-Inspection Survey Teams and Re-SCAT efforts. We agree with the recommended treatment proposed by the SCAT/Operations Liaisons for this area, which is on BLM land and not private property, according to the Arcadis and Yellowstone County Parcel maps. Recommend consultation with BLM and the county roads department regarding the recommended treatment. Request that water-based operations crews continue to maintain a secure sorbent boom perimeter around these areas from the river to ensure that sheen is not released from saturated sorbents, as seen pictured above. Once coordination with the BLM or other easement property owner has been conducted, ExxonMobil will execute the recommended flushing operation under the direction of MTDEQ. In the meantime, this segment will be flagged and excised within GIS maps from the Re-SCAT report that will be produced to close-out the segment. This document will be included as an attachment to the Area Transition Report to document the need for additional work within this segment.

DATE:	TIME:	SIGNATURE/POSITION:
8/30/2011	1030	 Jimmie James, RPIC
		 Bob Habek Mike Trombetta, SOSOC
		9-28-11
		Steven Merritt, FOSC

-  Laurel-20110824-00045.jpg
-  Laurel-20110824-00046.jpg
-  South Yellowstone-20110824-00051.jpg
-  South Yellowstone-20110824-00050.jpg
-  South Yellowstone-20110824-00048.jpg
-  Laurel-20110824-00049.jpg


J.E. GROENEK
EMPCO

Flushing was performed until no sheen was found. Booms remained in place + did not catch sheen for a period of time. Flushing was again performed. No sheen developed. No additional work required.

 Laura Alvey MT DEQ (SOSC) 9-27-11
 LAUREN GLUSHIK POLARIS 9-27-11