

ExxonMobil Pipeline Company

**SCAT Area Transition Report
for B19**

Silvertip Pipeline Incident
Laurel, Montana

October 27, 2011



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Laurel, Montana

Prepared for:
ExxonMobil Pipeline Company

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Our Ref.:
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Date:
October 27, 2011

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

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

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 B19, 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 B19. 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 B19, 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 B19 is 29.2. There were no access issues associated with the right bank; however, there were access issues associated with portions of the left bank and island.

1.2 Cultural, Historic, and Natural Resource Constraints

No historic properties or cultural resources have been identified on the right bank or island within this segment 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 B19. One oiled western terrestrial garter snake (*Thamnophis elegans*) was captured, cleaned, and released. Four deceased oiled bigmouth Buffalo fish (*Ictiobus cyprinellus*) and deceased oiled fry were identified and retained. One deceased Leopard frog (*Rana pipiens*) and a bird egg with no visible oiling were identified and retained. A Wildlife Priority Cleanup Area (WPCA) was identified. The WPCA consisted of a 'bathtub ring' of oiled vegetation on B19 Island. The WPCA was treated to reduce the potential for wildlife oiling and is no longer considered a wildlife hazard. No active migratory bird nests were identified in Area B19.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area B19. 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 B19 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	BIMT0714DW302	7/14/11	Water_Drinking	BIMT_365	45.734159	-108.56425
EPA	SPDW208_071411	7/14/11	Water_Drinking	SPDW208	45.7341375	-108.5642923

Appendix A contains a summary of sample results with detections for this sample set. Detections with a result above the screening level are highlighted; for this set, there were no detections and therefore no exceedances.

1.4 Summary of Initial SCAT Surveys

The SCAT teams used systematic evaluation criteria and treatment method tables approved by the National Oceanic and Atmospheric Administration to provide a standard approach for data collection and conducting field surveys. The forms and sketches from the initial SCAT surveys performed along the river bank (water edge) and floodplain within Area B19 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area B19.

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. 18](#), [CTR No. 24](#), and [CTR No. 43](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area B19 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 B19 and developed a Pre-Inspection Survey Transmittal (PIST) associated with the right bank within Area B19, 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 B19 and developed a Post-Inspection Survey Transmittal (POST) associated with the island (south) within Area B19, which is presented in Appendix D.

1.9 Summary of Final SCAT Surveys

Figure 5 shows the oiling conditions within Area B19 following completion of oil removal activities. The SCAT team performed final surveys of the right bank and island areas within SCAT Area B19 to confirm the agreed-upon cleanup endpoints identified in the applicable CTRs had been achieved. The final SCAT survey documentation is presented in Appendix E.

1.10 SCAT Area Conclusions

Based on the initial SCAT surveys, no oiling was observed on the left bank and therefore no further treatment is recommended. Based on the final SCAT surveys performed on the right bank and island areas within Area B19, no further treatment is recommended for these areas. A SCAT Segment Sign-Off Sheet is included as Appendix F.

A Wildlife Exception Memo was created to identify a wildlife hazard in B19. The area identified in the Wildlife Exception Memo was treated and is no longer considered a wildlife hazard. No additional work is required in this area and details of the action taken are described in Appendix G.



**SCAT Area Transition
Report for B19**

Silvertip Pipeline Incident
Laurel, Montana

2. Transition Sign-Off Form

SCAT Area Transition Report for B19

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
Report for B19**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for B19

Prepared for:

Unified Command

10/11/2011
Date

 S. NEERSON
Unified Command – FOSC



**SCAT Area Transition
Report for B19**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for B19

Prepared for:

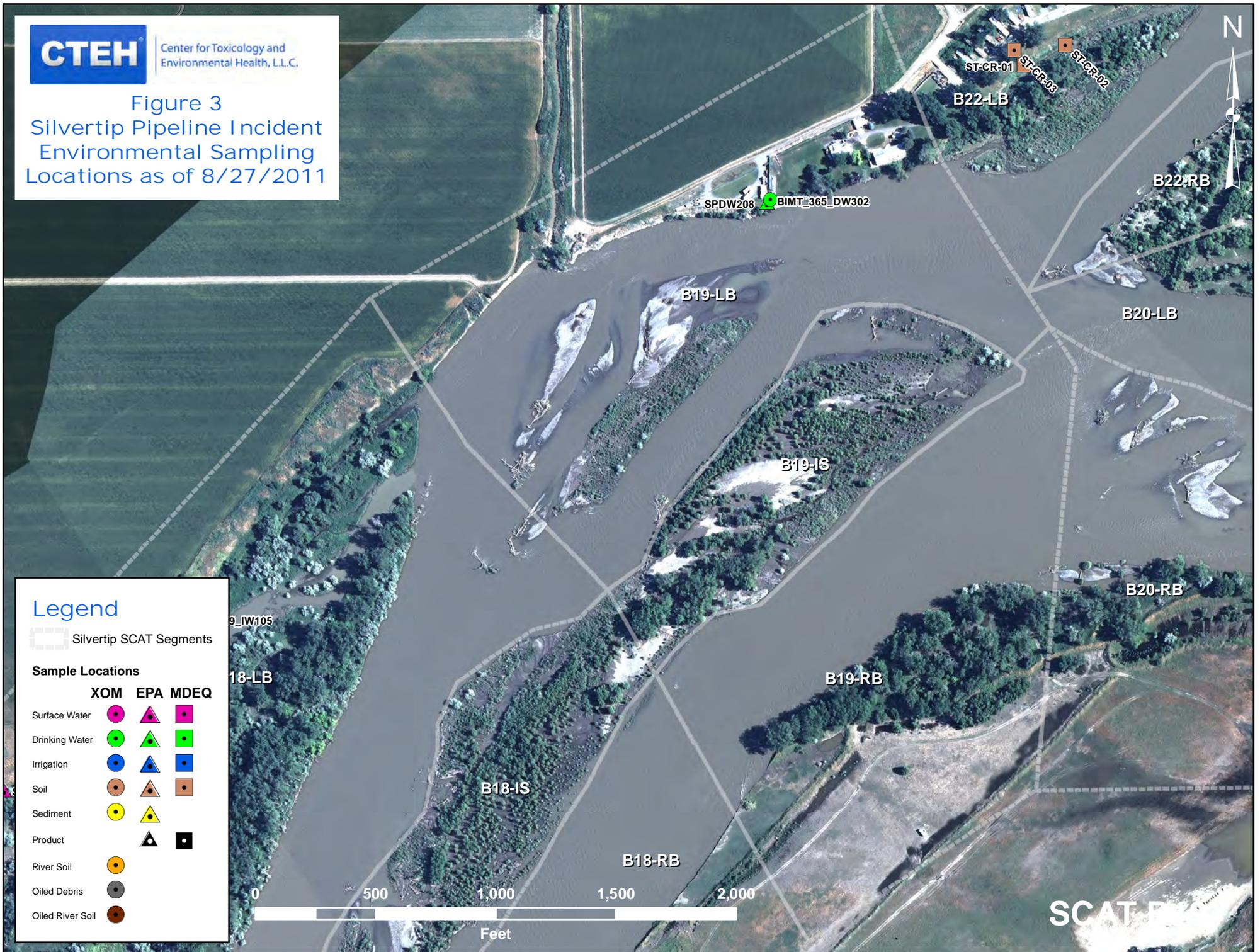
Unified Command

Date

Unified Command – MDEQ



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



Legend

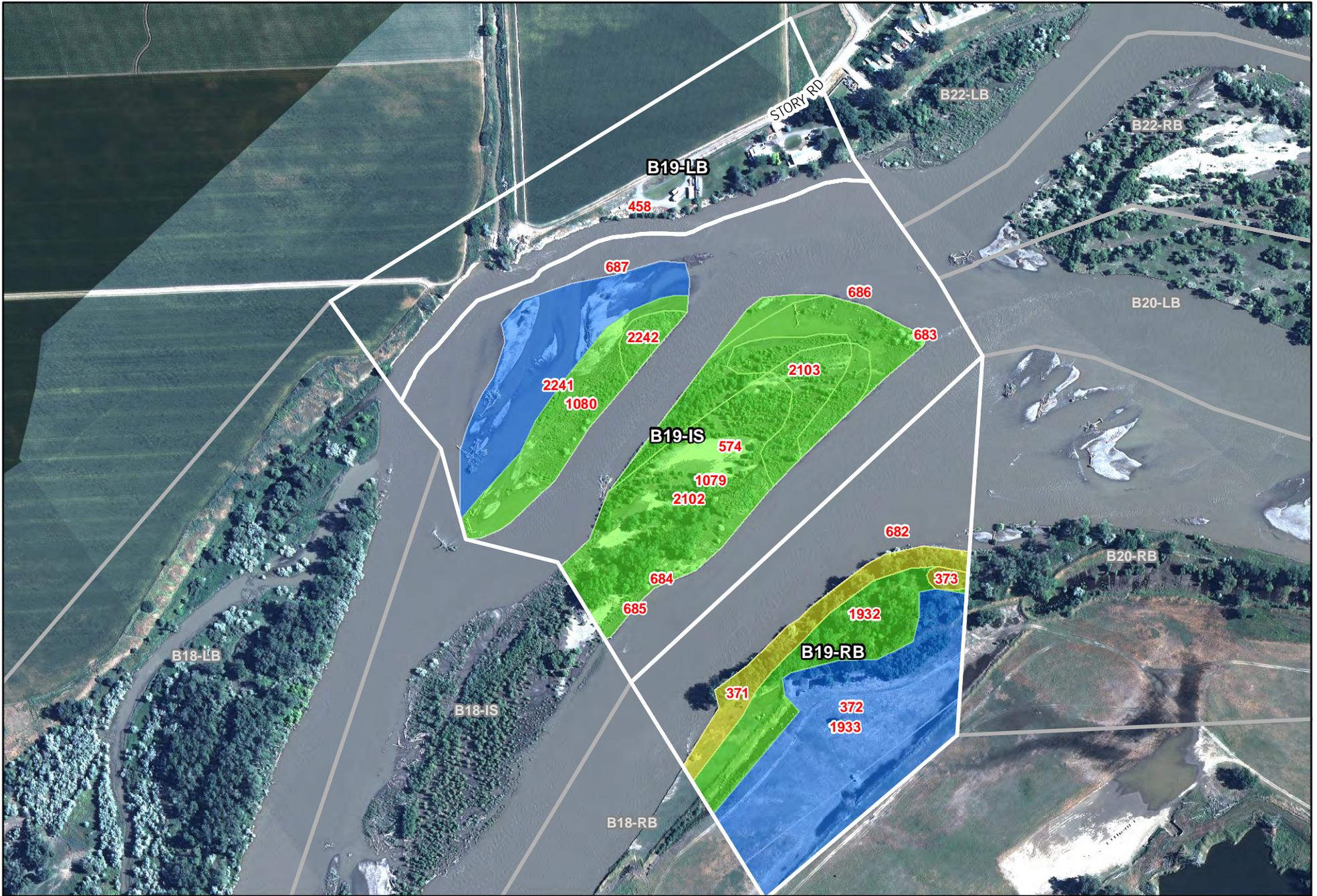
Silvertip SCAT Segments

Sample Locations

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

0 500 1,000 1,500 2,000
 Feet

SCAT



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

Figure 4 - Maximum SCAT Observations For SCAT Area: B19





- 9999 Oiling Zone ID
- Heavy Oiling
- Moderate Oiling

- Light Oiling
- Very Light Oiling
- No Oil Observed



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





Appendix A

Sample Detections Summary



Detections in Samples Collected in SCAT Area B19

NA - Not Available

Detected Above Screening Level

Sample Number	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Result Qualifier	Units	Above?
---------------	-------------	--------	-------------------	---------	----------	--------	-----------------	------------------	-------	--------

No Detections in Field Samples



Appendix B

Initial SCAT Survey Forms
and Sketches

DB/G/S

RIVER BANK OILING SUMMARY FORM for **Silvertip Pipeline Incident**

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>B19</u>	Left Bank/Right Bank/Island	<u>19/07/11</u>	<u>1157</u> hrs to <u>1158</u> hrs	low - mean <u>bankfull</u> - overbank
Operations Division: <u>B</u>				<u>falling</u> steady - rising
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		<u>Sun</u> Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>35</u> deg C

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

3 SEGMENT Total Segment/Reach Length 447 m Segment/Reach Length Surveyed 447 m

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

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

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

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

Sediment Bank: Clay/Mud _____ Sand S Mixed 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 X 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 200-400 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: river access only

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	
682 A				X	447		25				P		✓									dry 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

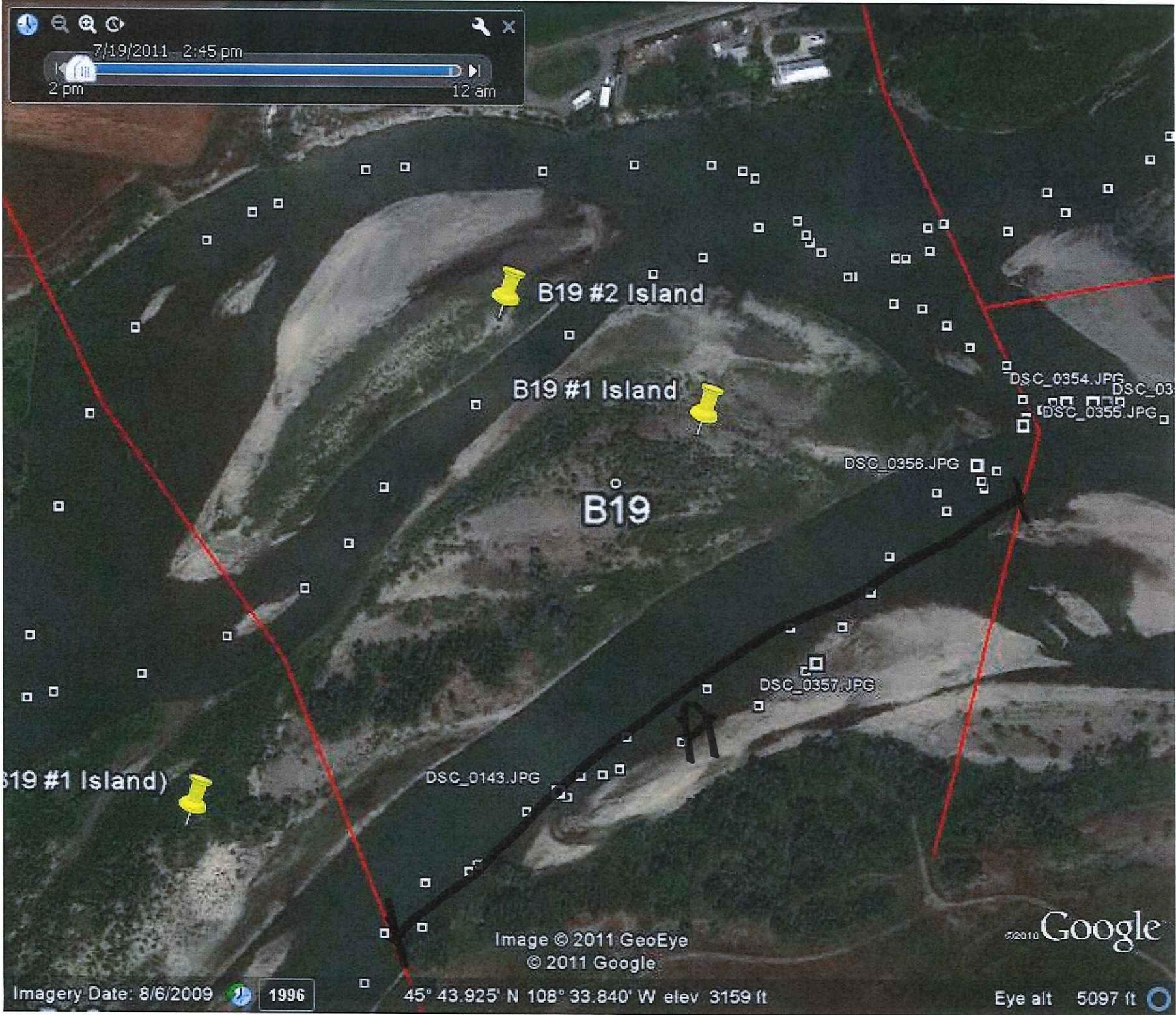
OSR = 4 OSC = unk SSC = unk

5266-5276

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

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

7/19/2011 - 2:45 pm
2 pm 12 am



B19 #2 Island

B19 #1 Island

B19

B19 #1 Island)

Image © 2011 GeoEye
© 2011 Google

© 2011 Google

Imagery Date: 8/6/2009 1996

45° 43.925' N 108° 33.840' W elev 3159 ft

Eye alt 5097 ft

DB/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>B19</u>	Left Bank / Right Bank / Island	<u>19/07/11</u>	<u>0930</u> hrs to <u>1026</u> hrs	low - mean - <u>bankfull</u> - overbank
Operations Division: <u>B</u>				<u>falling</u> - steady - rising
Survey by: <u>Foot/ATV/Boat/Helicopter/Overlook/</u>	<u>Sun/Clouds/Fog/Rain/Snow/Windy/Calm</u>			Air Temp + / - <u>22</u> deg C

2 SURVEY TEAM # <u>4</u>	name	organization	contact phone number
	<u>John Williams</u>	<u>Casno ENTRIX</u>	<u>361 676 8138</u>
	<u>Connor Kobeski</u>	<u>Casno ENTRIX</u>	<u>847 922 5300</u>
	<u>Courtney Tyre</u>	<u>FWP</u>	<u>406 860 7814</u>
	<u>Gary Riley</u>	<u>EPA</u>	<u>415 215 0690</u>

3 SEGMENT	Total Segment/Reach Length <u>330</u> m	Segment/Reach Length Surveyed <u>740</u> m
Start GPS: LATITUDE <u>45</u> deg. <u>43.745</u> min.	LONGITUDE <u>108</u> deg. <u>33.870</u> min.	Datum: <u>WGS 84</u>
End GPS: LATITUDE <u>45</u> deg. <u>43.855</u> min.	LONGITUDE <u>108</u> deg. <u>33.862</u> 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 <u>Shelf</u>	Manmade: Solid <u>Permeable</u> (type)	Wetland: Swamp <u>Bog/Fen</u> Marsh <u>S</u>	
Sediment Bank: Clay/Mud <u>Sand</u> <u>S</u> Mixed <u>Pebble/Cobble</u> Boulder <u>Peat/Organic</u>	Vegetated Bank: <u>P</u>	Wooded Upland: <u>S</u>	
Sediment Flat: Clay/Mud <u>Sand</u> Mixed/Coarse <u>Other:</u>	If snow and ice use Winter River SOS		

4B RIVER VALLEY CHARACTER select as appropriate				complete for primary
Cliff or Bluff: <u>Est Height</u> <u>1</u> m	canyon <u>manmade</u> meander <u>confined or leveed</u> <input checked="" type="checkbox"/>	Substrate Type: <u>Sand</u>		
Sloped: <u>>5°(15°)(30°)</u>	straight <u>braided</u> oxbow <u>flood plain valley</u>	Forested / <u>Vegetated</u> / Bare		

4C RIVER CHANNEL CHARACTER circle or select as appropriate			
est. width: <u><1m</u> <u>1-10m</u> <u>10-100m</u> <u>>100m</u> m	est. water depth: <u><1m</u> <u>1-3m</u> <u>3-10m</u> <u>>10m</u> m		
shoal(s) present <u>Y/N</u> point bar present <u>Y/N</u>	bar-shoal substrate: silt / sand / <u>gravel</u> / <u>cobble</u> / boulder / bedrock / debris		
seasonal water level: low / mean / <u>bank full</u> / overbank flow	est. change over next 7 days: <u>falling</u> - same - rising		

5 OPERATIONAL FEATURES			
Suitable backshore staging Y/N	Access: Direct from backshore <u>Y/N</u> Alongshore from next segment <u>Y</u> N		
Debris <u>Y/N</u> oiled <u>Y/N</u> amount <u>bags</u> or <u>trucks</u>	access restrictions		
Oiled trees/shrubs Y/N	River Current strong <u>Y/N</u> 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	%																		
<u>A</u>	<u>S</u>	<u>P</u>	<u>S</u>	<u>330</u>	<u>15</u>	<u>40</u>			<u>S</u>	<u>P</u>							<u>P</u>				<u>veg</u>
<u>B</u>			<u>P</u>	<u>330</u>	<u>160</u>	<u>0</u>														<u>P</u>	<u>veg</u>
<u>C</u>			<u>P</u>	<u>30</u>	<u>20</u>	<u>20</u>		<u>S</u>	<u>S</u>	<u>P</u>							<u>P</u>				

7 SUBSURFACE OILING CONDITIONS use letter for ZONE location plus Number of pit or trench - e.g., "A1"																
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes/No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR				

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

Zone A: Amount of oiled vegetation does not warrant removal - no treatment recommended.

Zone B: No oiling - no treatment recommended.

Zone C: Area of breached shoreline. Hand cutting and bagging removal of oiled vegetation and debris. Access via dirt road. No heavy machinery.

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

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

7/19/2011

B19.

B20



© 2011 Google

© 2010

Image USDA Farm Service Agency

45° 43.887' N 108° 33.661' W elev 3156 ft

1996

1 GENERAL INFORMATION		Date (dd/mm/yy) 19-Jul-2011	Time (24h): std / daylight 8 40 1030 hrs to 1030 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: <u>B319</u> Left Bank / Right Bank / Island		Operations Division: B		
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / <u>Windy</u> / Calm		Air Temp + / - <u>31</u> deg C

2 SURVEY TEAM # 1	name	organization	contact phone number
Pete Lee		Polaris	
Larry Alheim		MTDEQ	
Andy Johnson		USCG	
			519

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 362 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 _____ 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 30 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: X(N) oiled X(N) amount 20 bags or _____ trucks access restrictions

Oiled trees/shrubs X(N) River Current strong Y/N Other Features: Shoal Rd. to north

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER						SUBST. TYPE(S)				
					Length	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO		
	MS	LB	UB	OB	m	m	%																
A				X	82	1	100			X	X		X										Grass, trees, debris
<u>B</u>				X	203	1																	X Grass, trees, debris
<u>C</u>				X	20	1	100			X	X		X										
<u>D</u>				X	57	1																	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 band heights: ~~Zone B - 30cm~~ NO

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

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

None

Sketch Yes / No Photos Yes / (No) Frames 1201-1205 (Lee)

A = 376 + 143



B19

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 19-Jul-2011	Time (24h): std / daylight 1049 hrs to 1051 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: B <u>19</u> Left Bank / Right Bank <u>Island</u>		Operations Division: B		
Survey by: Foot / ATV / <u>Boat</u> / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / <u>Windy</u> / Calm		Air Temp + / - <u>31</u> deg C

2 SURVEY TEAM # 1	name	organization	contact phone number
Pete Lee		Polaris	
Larry Alheim		MTDEQ	
Andy Johnson		USCG	
<u>Bob Nailon</u>		<u>Cardno ENTREX</u>	
<u>John Beach</u>		<u>US EPA</u>	
<u>Ken Frazer</u>		<u>MT FWP</u>	

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

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

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

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m (10-100m) >100m 50 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 15 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

683
684
685
686
687

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	%																
A				X	400	1															X	Grass, trees, debris
B				X	45	1	100			X	(X)		X									"
C				X	20	1															X	"
D				X	280	1	30			P	S		X									"
E				X	310	1															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

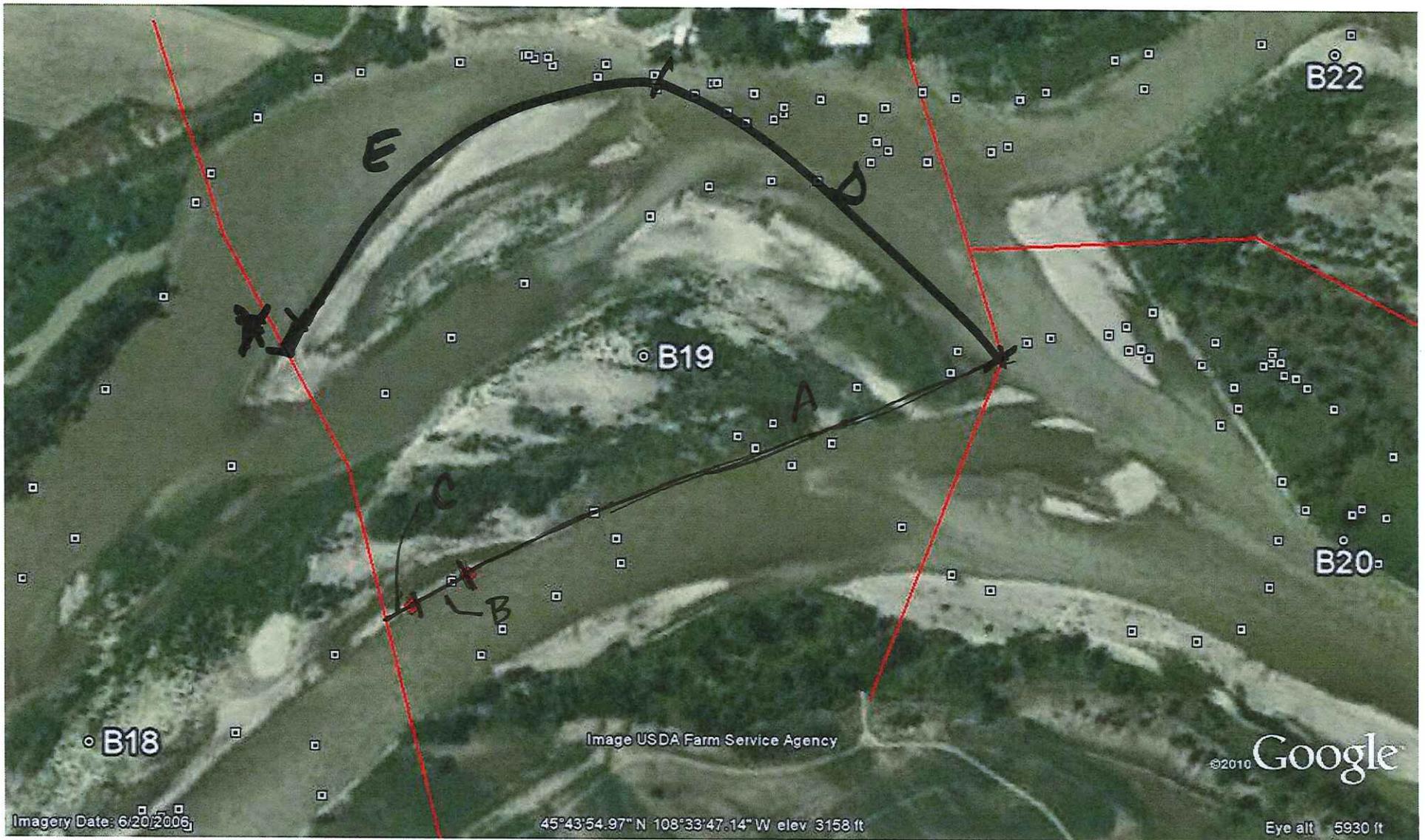
Oil band heights: 40 cm

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

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

Sketch Yes / No Photos (Yes) / No Frames 1226-1227
5235-5246

Lee
Nailon



B19I
Zones - A, B, C, D + E

Team #1
19/07/11

06/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>B19</u>	Left Bank / Right Bank / Island	<u>23/07/11</u>	<u>C900</u> hrs to <u>1600</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>B</u>				falling - steady - rising
Survey by: <u>(Foot) ATV / Boat / Helicopter / Overlook /</u>	<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm			Air Temp + <u>1-27</u> deg C

2 SURVEY TEAM # <u>293</u>	Name	Organization	Signature
	<u>Joe Boyle</u>	<u>Carolina ENTRIX</u>	<u>[Signature]</u>
	<u>ED KIELY</u>	<u>MTDEQ 906-841-3857</u>	<u>[Signature]</u>
	<u>Chad Poy</u>	<u>Carolina ENTRIX</u>	<u>[Signature]</u>
	<u>JANICE MITCHELL</u>	<u>US EPA</u>	<u>[Signature]</u>
	<u>AUSTIN WEST</u>	<u>USCG</u>	<u>[Signature]</u>
	<u>John Taylor</u>	<u>FLP</u>	<u>[Signature]</u>
	<u>JOHN BAKER</u>	<u>POLARIS</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length 410 m Segment/Reach Length Surveyed 410 m

Start GPS: LATITUDE 45 deg. 43° 59.28' min. LONGITUDE 108 deg. 33' 42.98" min. Datum: WGS 84

End GPS: LATITUDE 45 deg. 43° 50.36' min. LONGITUDE 108 deg. 33' 57.05" min.

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

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

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

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: med

Sloped: (>5°)(15°)(30°) 25 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 160m 190m est. water depth: <1m 1-3m 3-10m >10m

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

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

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

Debris: Y / N oiled Y / N amount bags or trucks access restrictions island soft mud dense veg

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>S</u>	<u>P</u>	<u>410</u>	<u>120</u>	<u>1</u>			<u>S</u>	<u>P</u>	<u>S</u>	<u>P</u>								<u>med/coar/veg</u>

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

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

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

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

Zone A: light oil staining of vegetation (both tub veg)
 recommendations: cut/trim oil stained vegetation where practical

Sketch Yes / No Photos Yes / No Frames Photographer

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>B19</u>	Left Bank / Right Bank / Island	<u>23/07/11</u>	<u>0900</u> hrs to <u>1600</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>B</u>				falling - steady - rising
Survey by: <u>(Foot) ATV / Boat / Helicopter / Overlook /</u>		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>27</u> deg C

2 SURVEY TEAM # <u>293</u>	Name	Organization	Signature
	<u>Joe Boyle</u>	<u>Cardno ENTRIX</u>	<u>[Signature]</u>
	<u>ED KIELY</u>	<u>MTDCO 706-841-357</u>	<u>[Signature]</u>
	<u>Nick Taylor</u>	<u>FUP</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length 410 m Segment/Reach Length Surveyed 410 m

Start GPS: LATITUDE 45 deg. 43° 59.78' min. LONGITUDE 108 deg. 33' 42.57" min. Datum: WGS 84

End GPS: LATITUDE 45 deg. 43° 50.36' min. LONGITUDE 108 deg. 33' 57.05" 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 S Boulder Peat/Organic Vegetated Bank: (P) Wooded Upland:

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

Sloped: (>5°)(15°)(30°) 45 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 160m 190m est. water depth: <1m (1-3m) 3-10m >10m m

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

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

5 OPERATIONAL FEATURES

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

Debris: Y / N oiled Y / N amount bags or trucks access restrictions island soft mud dense veg

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>S</u>	<u>P</u>	<u>410</u>	<u>120</u>	<u>1</u>			<u>S</u>	<u>P</u>	<u>S</u>	<u>P</u>									<u>med/coarse veg</u>

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

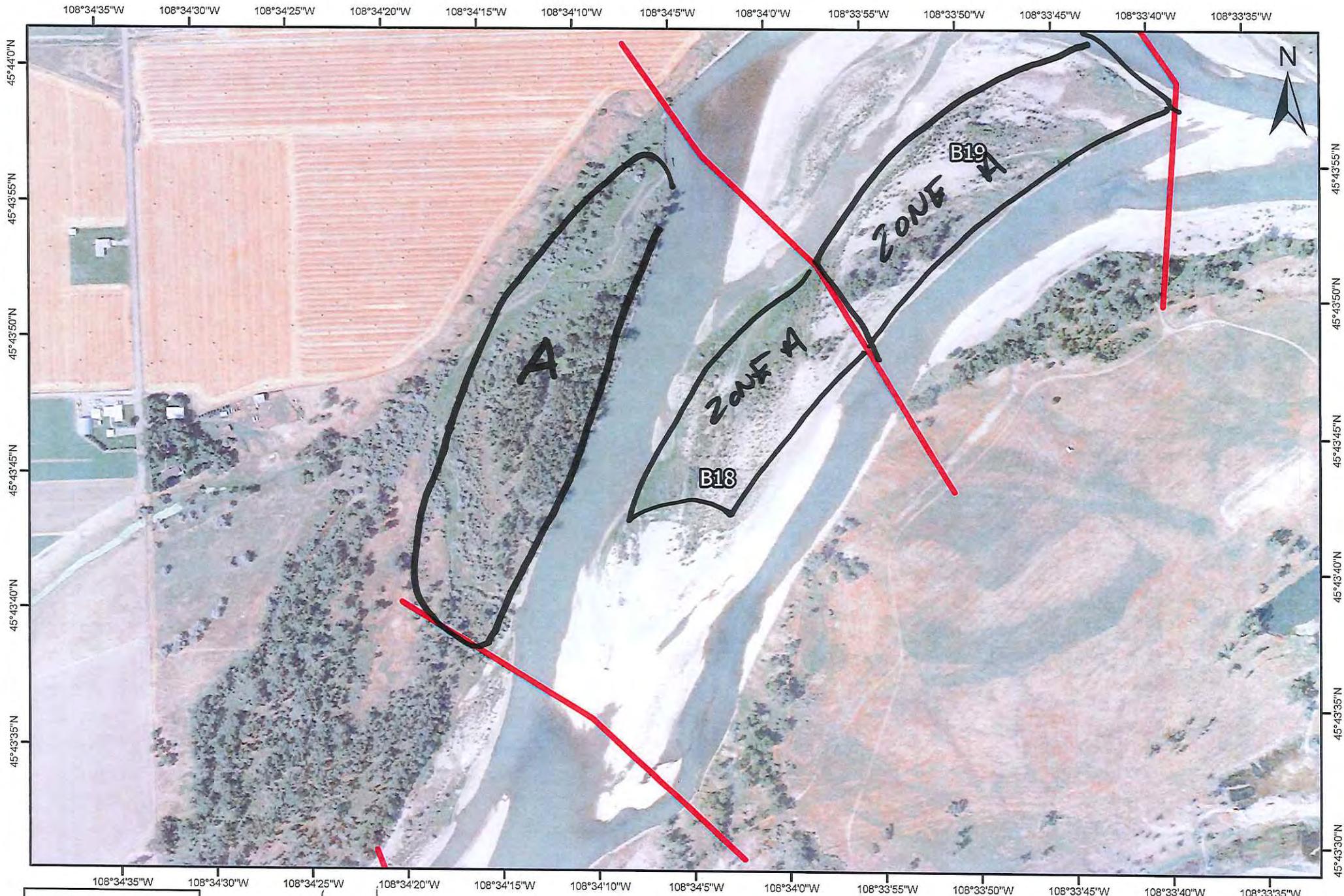
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes/No	SUBST. TYPE(S)	
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR					NO

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

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

Zone A: light oil staining of vegetation (both sub veg)
 recommendations: cut/trim oil stained vegetation where practical

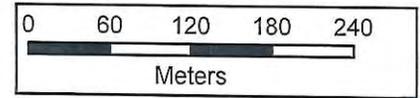
Sketch Yes/No Photos Yes/No Frames _____ Photographer _____



~~B18 - 19~~
 B19-I (LR)??

DATE: 7/23/11
 TEAM: JTB Zone A

COMMENTS:



DB1615

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 29/07/11	Time (24h): std / daylight 0900 hrs to 0930 hrs	Water Level low - mean - <u>bankfull</u> - overbank falling - steady - rising
Segment/Reach ID: B <u>19</u> Left Bank / Right Bank / Island		Operations Division:		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>2.8</u> deg C

2 SURVEY TEAM # 1	Name	Organization	Signature
Pete Lee <u>PBL</u>		Polaris	225.892.6459
Janice Witul		US EPA	415.816.6582
Mark Peterson <u>MP</u>		MT DEQ	406.498.4835
Nathan Hammond <u>NH</u>		Cardno Entrix	513.256.2479

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 600 m

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

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

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 50 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 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												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	350	40	10			X	X		X									Grass, trees, debris
B				X	250	40	10			X	X		X									"

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

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

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

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

Oil height:

Treatment recommendations:

Zone : No oil observed; no treatment required.

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

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

Sketch Yes / No Photos Yes / No Frames 2315-2332 (DeForsm) Photographer _____

0240-0258 (Lee)

DB/6/5

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 29/07/11	Time (24h): std / daylight 0900 hrs to 0930 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: B 19 Left Bank / Right Bank / Island		Operations Division:		
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 2 B deg C
2 SURVEY TEAM # 1	Name	Organization	Signature	
	Pete Lee	Polaris	225.892.6459	
	Janice Witul	US EPA	415.816.6582	
	Mark Peterson	MT DEQ	406.498.4835	
	Nathan Hammond	Cardno Entrix	513.256.2479	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 600 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) _____ (S) _____ 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: _____

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 50 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 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

1079
1040

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS										SUBST. TYPE(S)				
	MS	LB	UB	OB	Length m	Width m	Distrib %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR	AP	NO	
A				X	350	40	10			X	X		X									grass, trees, debris
B				X	250	40	10			X	X		X									"

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

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

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

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

Oil height:

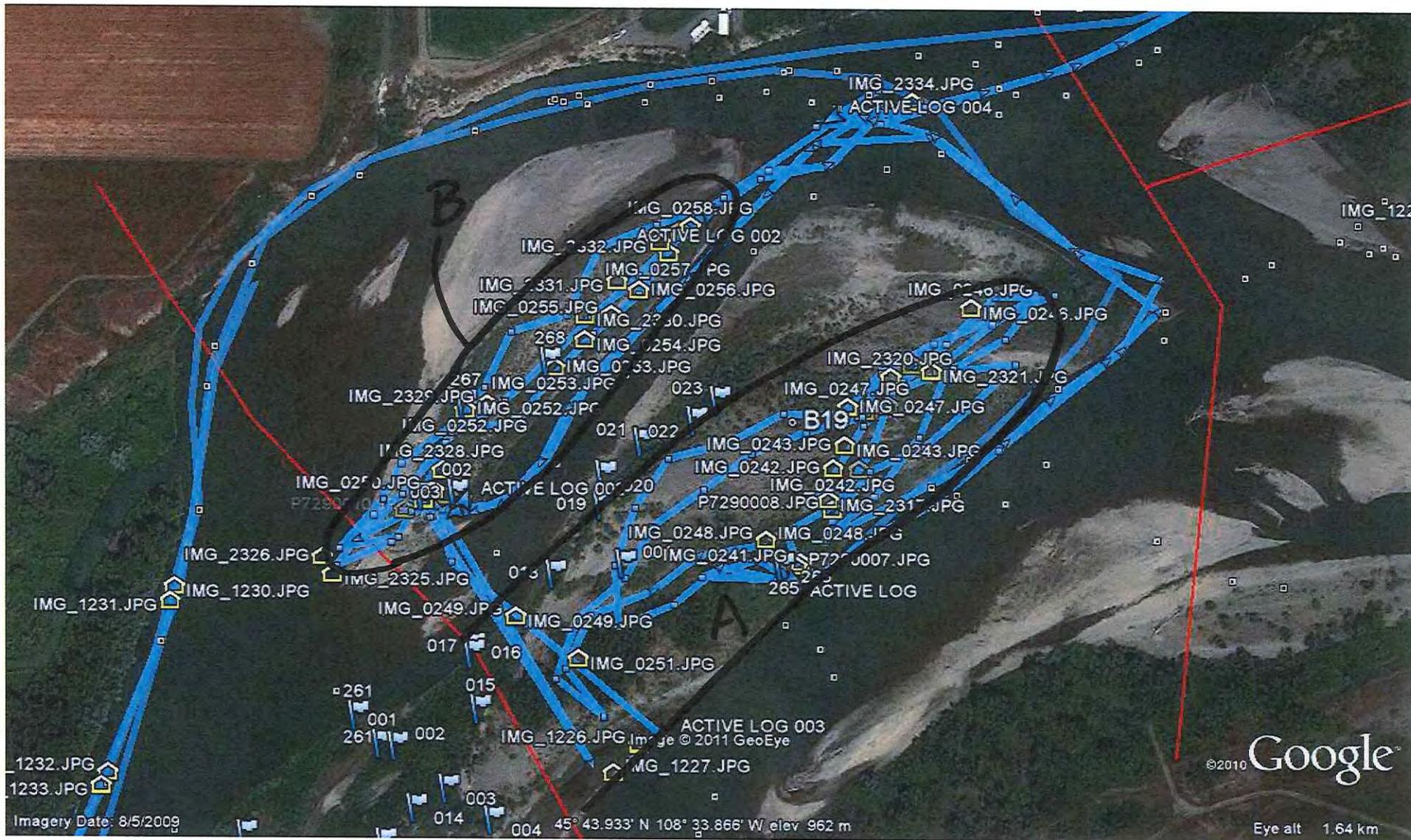
Treatment recommendations:

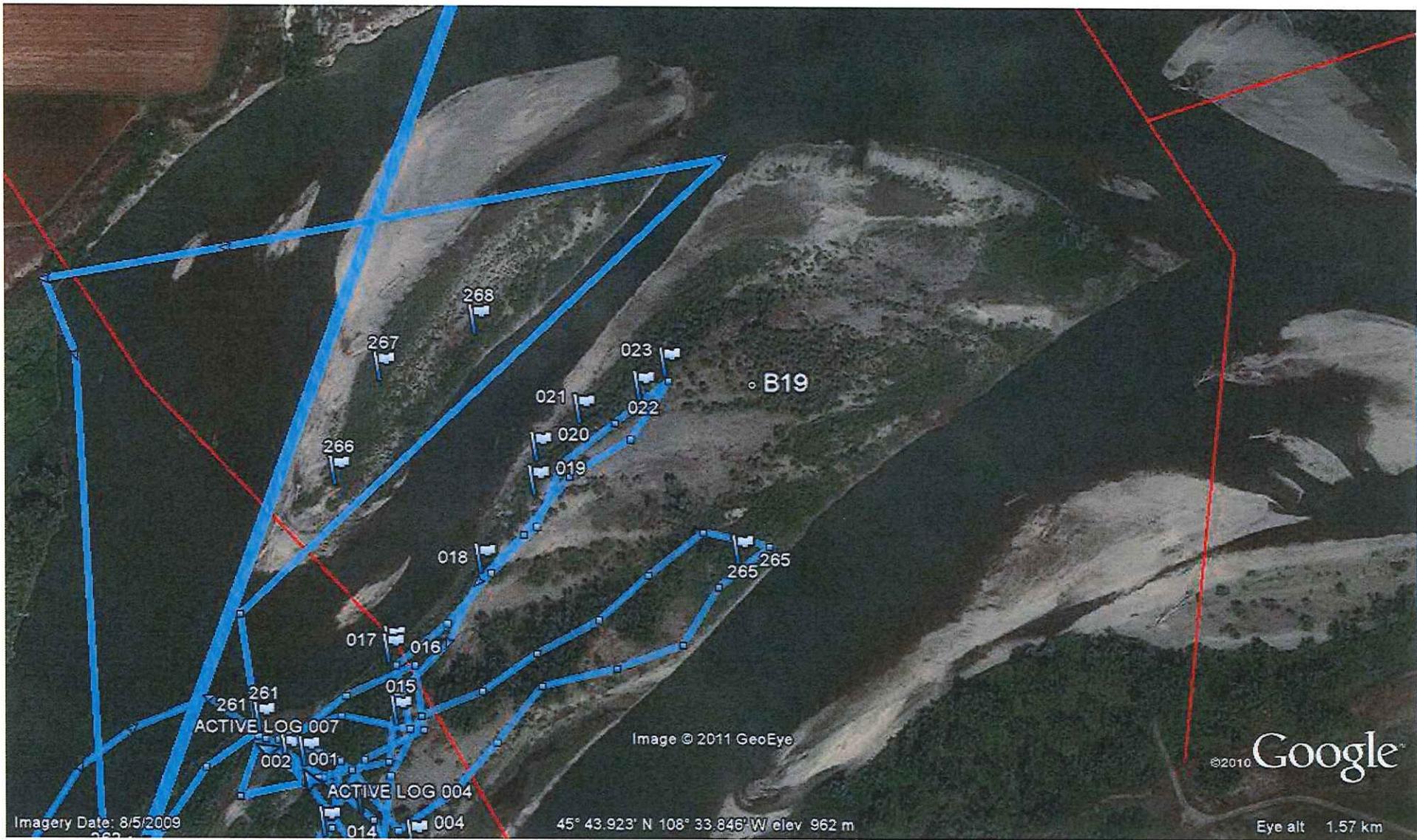
Zone : No oil observed; no treatment required.

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

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

Sketch Yes / No Photos Yes / No Frames 2315-2332 (Peterson) Photographer _____
0240-0258 (Lee)







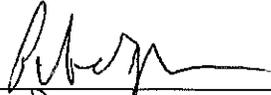
Appendix C

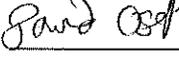
Pre-Inspection Survey Transmittal

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 26 AUG 2011

Segment: B-19 RB

Team: SCAT Liaison PETE PRITCHARD Signed: 

Observer DAVID OGE' Signed: 

Observer _____ Signed: _____

Observer _____ Signed: _____

X
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:



Appendix D

Post-Inspection Survey Transmittal

POST

Post Inspection Survey Transmittal

Segment B-19 Island (South)

Date of Survey Sept 3, 2011

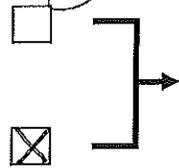
SCAT Team Member Tom Freeman Signed: Tom Freeman

SCAT Team Member Griff Miller Signed: Griff Miller

SCAT Team Member Jeffrey Herrick Signed: Jeffrey Herrick

Segment FAILED ReSCAT

Segment Conditionally PASSES ReSCAT



Referred to Ops
For Further Treatment

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.

The area designated as Zone B on the map requires treatment. Transerrable product remains along with stain in the branches of small willows. A 10 man crew will probably be able to reach WFT in less than a day. Treat transerrable only!

Zone Dimensions: Length 145 Width 50 GPS Waypoint: Lat. 45.732604° Long. -108.563133°
(required) (center of zone)

Estimated Work Effort: Number of People 10 Hours of Work 8 Applicable CTR(s) CTR 18
(required)

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

LAUREN GLUSHIK
Sign Name

LAUREN GLUSHIK / POLARIS
Print Name/ Affiliation

9-SEP-2011
Date

Robert Ashton
Sign Name

Robert Ashton / MDEQ
Print Name/ Affiliation

9/9/2011
Date

* PORTION OF ISLAND ON KLIAR PROPERTY WAS NOT TREATED BY OPS OR INSPECTED BY



Appendix E

Final SCAT Survey Forms
and Sketches

DBIG

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 28/08/11	Time (24h): std / daylight 1000 hrs to 1130 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: <u>B19</u> Left Bank / <u>Right Bank</u> / Island		Operations Division: B		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- <u>30</u> deg C

2 SURVEY TEAM # <u>2</u>	Name	Organization	Signature
Pete Lee	Polaris		<i>P. Lee</i>
Eric Harlow	Cardno ENTRIX		<i>Eric Harlow</i>
Griff Miller	USEPA		
Marcile Sigler	MTDEQ		<i>Marcile Sigler</i>
Dave Hergenrider	MTFWP		<i>Dave Hergenrider</i>

3 SEGMENT Total Segment/Reach Length 330 m Segment/Reach Length Surveyed 330 m

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

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

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

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

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

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

5 OPERATIONAL FEATURES

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

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

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

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

OIL ZONE 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	
1932 1933 A				<u>X</u>	330	60	<1				<u>X</u>						<u>X</u>					Grass, trees, debris
B				<u>X</u>	300	85															<u>X</u>	"

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

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

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

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

Oil height: 30-90 cm

Treatment recommendations: RESCAT

Zone A : No further treatment required.

Zone B : NOO

Ops Hot Shot (Rich Jessup)

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



RESCAT

B19 RB

TZ- 8/28/11

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 13:30 hrs to 15:00 hrs	Water Level low - MEAN - bankfull - overbank falling - STEADY - rising
Segment/Reach ID: <u>B 19</u> Left Bank / Right Bank <u>(Island)</u>				
Operations Division:				
Survey by: <u>(Foot)</u> ATV / Boat / Helicopter / Overlook / _____ <u>(Sun)</u> Clouds / Fog / Rain / Snow / Windy / Calm				Air Temp +/- <u>26</u> deg C

2 SURVEY TEAM # <u>1</u>	name	organization	contact phone number
	Tom Freeman	Polaris Applied Sci.	<i>Tom Freeman</i>
	Jeffrey Herrick	MT DEC	<i>Jeffrey Herrick</i>
	Griff Miller	US EPA	<i>Griff Miller</i>

3 SEGMENT Total Segment/Reach Length 395 m Segment/Reach Length Surveyed 395 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 X _____ Mixed (X) _____ Pebble/Cobble (X) _____ Boulder _____ Peat/Organic _____ Vegetated Bank: Yes _____ Wooded Upland: _____

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

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

2102
2103

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	270	120	<1				P						X					Veg/Debris
B				X	145	50	<1				S	P					X					Veg/Debris

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

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

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

Zone A: NFT
 Zone B: Clip or dust oiled vegetation (willows) to eliminate transferrable product. Estimate of manpower & time = 10 men 1/2-1 day. Current status CTR Continue

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

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

Please Check
this out w/
Opps. team.

This area has not
been surveyed by
SCAT Recently.

B19-LB

120 122 124 123

118

119

121

122

123

114

115

113

B19-IS

Zone A

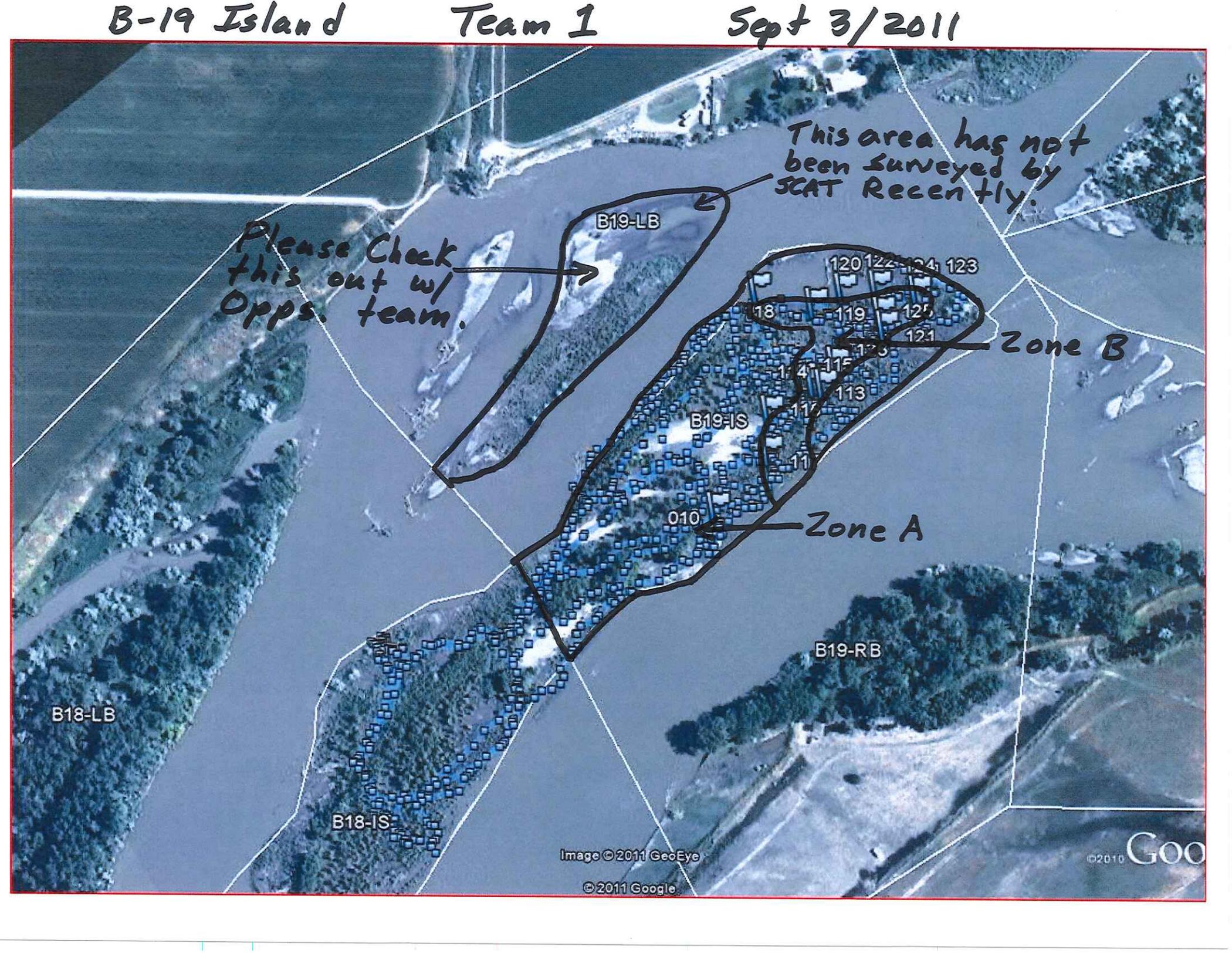
010

Zone B

B19-RB

B18-LB

B18-IS



DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 10/09/2011	Time (24h): std / daylight 0900 hrs to 1500 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - <u>steady</u> - rising
Segment/Reach ID: B19 Left Bank/ Right Bank / <u>Island</u>				
Operations Division: B				
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		<u>Sun / Clouds / Fog / Rain / Snow / Windy / Calm</u>		Air Temp + / - <u>28</u> deg C

2 SURVEY TEAM # <u>NA 2</u>	Name	Organization	Signature
	Shawn Briggs	Montana FWP	<i>[Signature]</i>
	Richard Marty	Polaris	<i>[Signature]</i>

3 SEGMENT Total Segment/Reach Length 290 m Segment/Reach Length Surveyed 290 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 _____ Mixed _____ Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: _____ Wooded Upland: _____

Sediment Flat: Clay/Mud _____ Sand _____ Mixed/Coarse _____ Other: 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 _____ m canyon _____ manmade _____ meander p confined or leveed _____ Substrate Type: mud/sand/grvl

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

4C RIVER CHANNEL CHARACTER circle 51 or select as appropriate

est. width: <1m 1-10m 10-100m >100m 100 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 _____ bags or _____ trucks access restrictions: Best accessed by boat

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

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

OIL ZONE	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
A				X	290	125	0														X	All
B				X	85	35	<1		S	S	P						X					Veg.

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

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

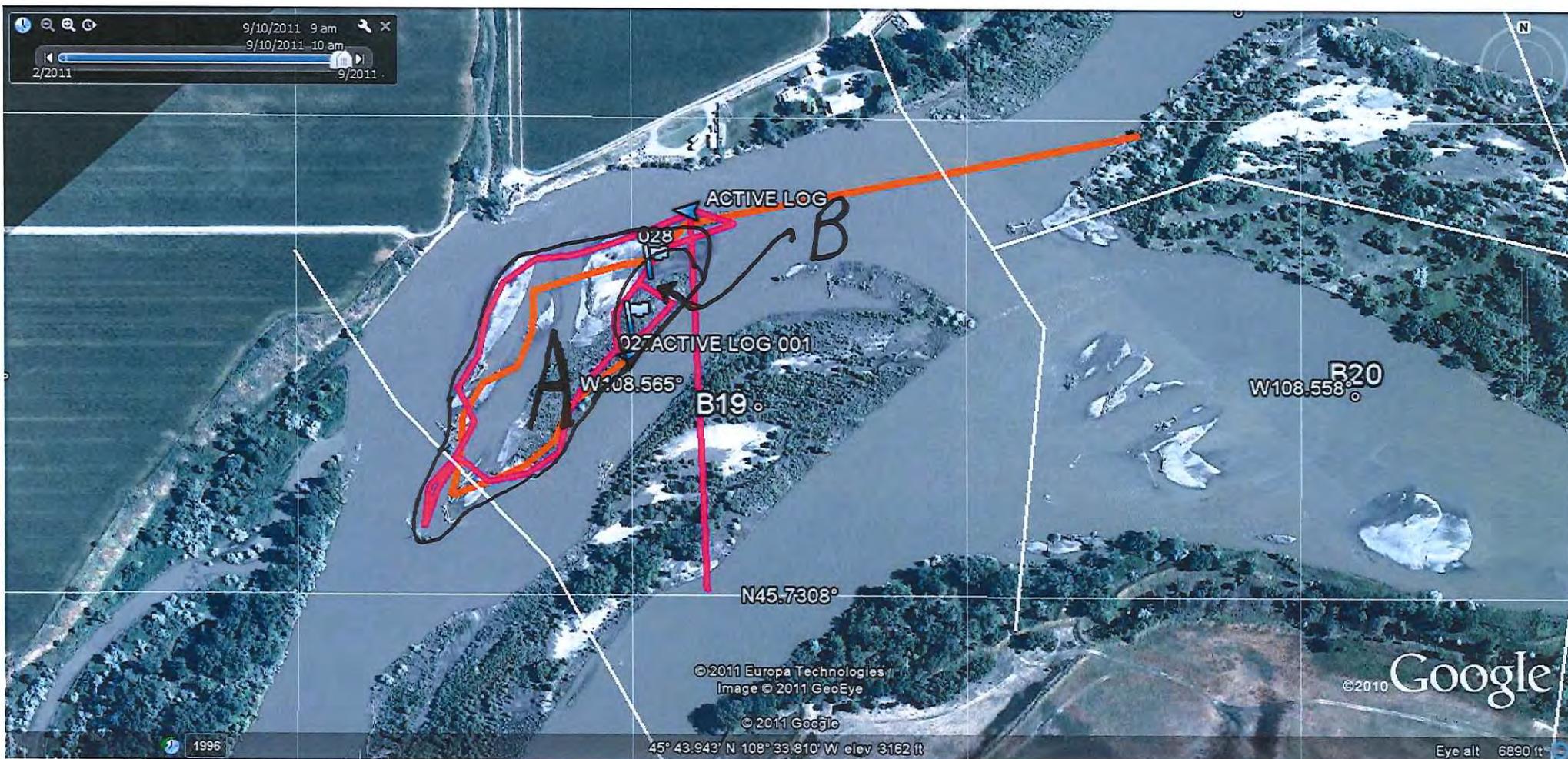
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

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

Oiling was restricted to the eastern end of the island. Oiling was coat, cover, and stain initially, but the Hot Shot Team removed 16 bags of oiled vegetation and applied dust fixative to remaining oiling. Natural Attenuation is recommended for remaining oil.

Sketch Yes / No Photos Yes / No Frames None Photographer _____

B19 IS (Partial)
10 Sept. 2011
Team Z



A = NOO 290m X 125m
B = VERY LIGHT 85m X 35m



Appendix F

Completed SCAT Segment
Sign-Off Forms

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment B19 RB Date of Survey 8/28/11

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

CTR(s) Associated with SCAT Segment 24

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

Segment Assessment Complete¹

Partial Segment Assessment

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

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

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

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

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

[Signature] David Eric Harkow Cardno ENTRY 8/28/11
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.

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment B-19 Island Date of Survey Sept 3, 2011

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

CTR(s) Associated with SCAT Segment CTR # 18

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

Segment Assessment Complete¹

Partial Segment Assessment

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

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

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

[Signature] Griff Miller / EPA 9-5-11
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] Frank Herrick 05 Sep 2011
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP) MT / DEQ

[Signature] Tom Freeman / Polaris Sept 5 / 2011
Sign Name Print Name/ Affiliation Date
RP Representative (SCAT RP Representative)

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

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

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment B19IS (Northern, Small)

Date of Survey 10 September 2011

Dates of Initial SCAT Assessments

10 September 2011
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment

CTR32

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).*

NONE

Sign Name

Print Name/ Affiliation

Date

Federal Representative (EPA/USCG)



Shawn Briggs/Montana FWL and P

9/10/2011

Sign Name

Print Name/ Affiliation

Date

State Representative (DEQ/FWP)



Richard Marty/Polaris (for Exxon-Mobil)

10 Sept 2011

Sign Name

Print Name/ Affiliation

Date

RP Representative (SCAT RP Representative)

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

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



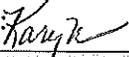
Appendix G

Exception Memos

GENERAL MESSAGE - SCAT AND OPERATIONS GUIDANCE FOR B19IS BATHTUB RING IN WILLOWS

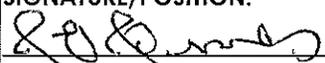
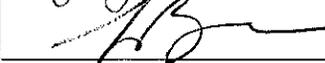
TO: Jimmie James, RPIC Tom Livers, SOSC Steven Merritt, FOSC	POSITION: ExxonMobil Montana DEQ State On-Scene Coordinator EPA Federal On-Scene Coordinator
FROM: Wildlife Branch	POSITION: Wildlife Chief
SUBJECT: B-19 Island Bathtub Ring in Willows	DATE: 09.07.2011 TIME: 1427

MESSAGE: International Bird Rescue and Resource Advisors with the USFWS identified bathtub ring on vegetation that is transferable and presents a threat to wildlife. Bird and insect activity in this area is high. The area that requires further treatment is located on the downstream portions (east end) of the island. The points outlining the area needing treatment are N 45.73182, W 108.56330 (southwest point) N 45.73249, W 108.56430 (northwest point), and N 45.73292, W 108.56202 (east point). A map of the area can be produced upon request.

SIGNATURE:  Karen Nelson, Contaminants Specialist **POSITION:** USFWS – Wildlife Branch

REPLY: SCAT and Operations

The Unified Command is aware of this area within SCAT Segments B19IS and that operations within these segments have not yet been completed by operations or passed by Re-SCAT efforts. We agree with the recommended treatment proposed above for this area. ExxonMobil will coordinate any future remediation activities at this site with MTDEQ. In the meantime, this segment will be flagged as a "Wildlife Exception" 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 beyond Re-SCAT and a POST should be used to re-close the segment once these wildlife concerns are addressed by operations teams.

DATE: 09/08/2011	TIME: 11:40	SIGNATURE/POSITION:  Jimmie James, RPIC  Jenny Chambers  Tom Livers, SOSC  Steven Merritt, FOSC
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completed

Nick Kantaman for Diane Titus 9/19/11