

ExxonMobil Pipeline Company

**SCAT Area Transition Report
for C27**

Silvertip Pipeline Incident
Laurel, Montana

October 22, 2011



SCAT Area Transition Report for C27

Silvertip Pipeline Incident
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

Our Ref.:
B0085883.1103

Date:
October 22, 2011

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

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1. Executive Summary of Oil Removal Activities

This Shoreline Cleanup Assessment Technique (SCAT) Area Transition Report provides a summary of the SCAT surveys conducted to determine the extent of oiling along the riverbanks and floodplain within SCAT Area C27, 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 C27. 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 C27, 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 C27 is 74.6. There were no access issues for this area.

1.2 Cultural, Historic, and Natural Resource Constraints

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

Figure 2 summarizes the natural resources identified in this segment. International Bird Rescue and Resource Advisors from U.S. Fish and Wildlife Service conducted limited inspections of Area C27 due to the low level of oiling in Division C. No oiled wildlife was observed or recovered. One deceased spiny softshell turtle (*Apalone spinifera*) with no visible oiling was recovered and retained. No Wildlife Priority Cleanup Areas were identified. No active migratory bird nests were identified in Area C27.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area C27. 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 C27 are provided on Figure 3. However, to date, no samples have been collected in this area.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
	No Samples Collected*					

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 C27 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area C27.

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. 60](#)).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area C27 in accordance with the ATMs identified in the CTRs. [Appendix I](#) of the Summary of Assessment and Oil Removal Activities report presents this data including: date range/days worked, average number of people working per day, equipment used, and various types of bags removed: oily debris, personal protective equipment (PPE), plastic, trash, super sacks, wood chips, and contaminated wood.

1.7 Pre-Inspection Survey Transmittal

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

1.8 Post-Inspection Survey Transmittal

A Post-Inspection Survey Transmittal (POST) was not conducted for this area.

1.9 Summary of Final SCAT Surveys

Figure 5 shows the oiling conditions within Area C27 following completion of oil removal activities. The SCAT team performed final surveys of the left and right banks within SCAT Area C27 to confirm the agreed-upon cleanup endpoints identified in the applicable CTRs had been achieved. The final SCAT survey documentation is presented in Appendix E.

1.10 SCAT Area Conclusions

Based on the final SCAT surveys performed on the left and right banks within Area C27, no further treatment is recommended for these segments. SCAT Segment Sign-Off Forms are included as Appendix F.

2. Transition Sign-Off Form

SCAT Area Transition Report for C27

Prepared for:

Unified Command

Date

Unified Command – RP



**SCAT Area Transition
Report for C27**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for C27

Prepared for:

Unified Command

Date

Unified Command – FOSC



**SCAT Area Transition
Report for C27**

Silvertip Pipeline Incident
Laurel, Montana

SCAT Area Transition Report for C27

Prepared for:

Unified Command

Date

Unified Command – MDEQ

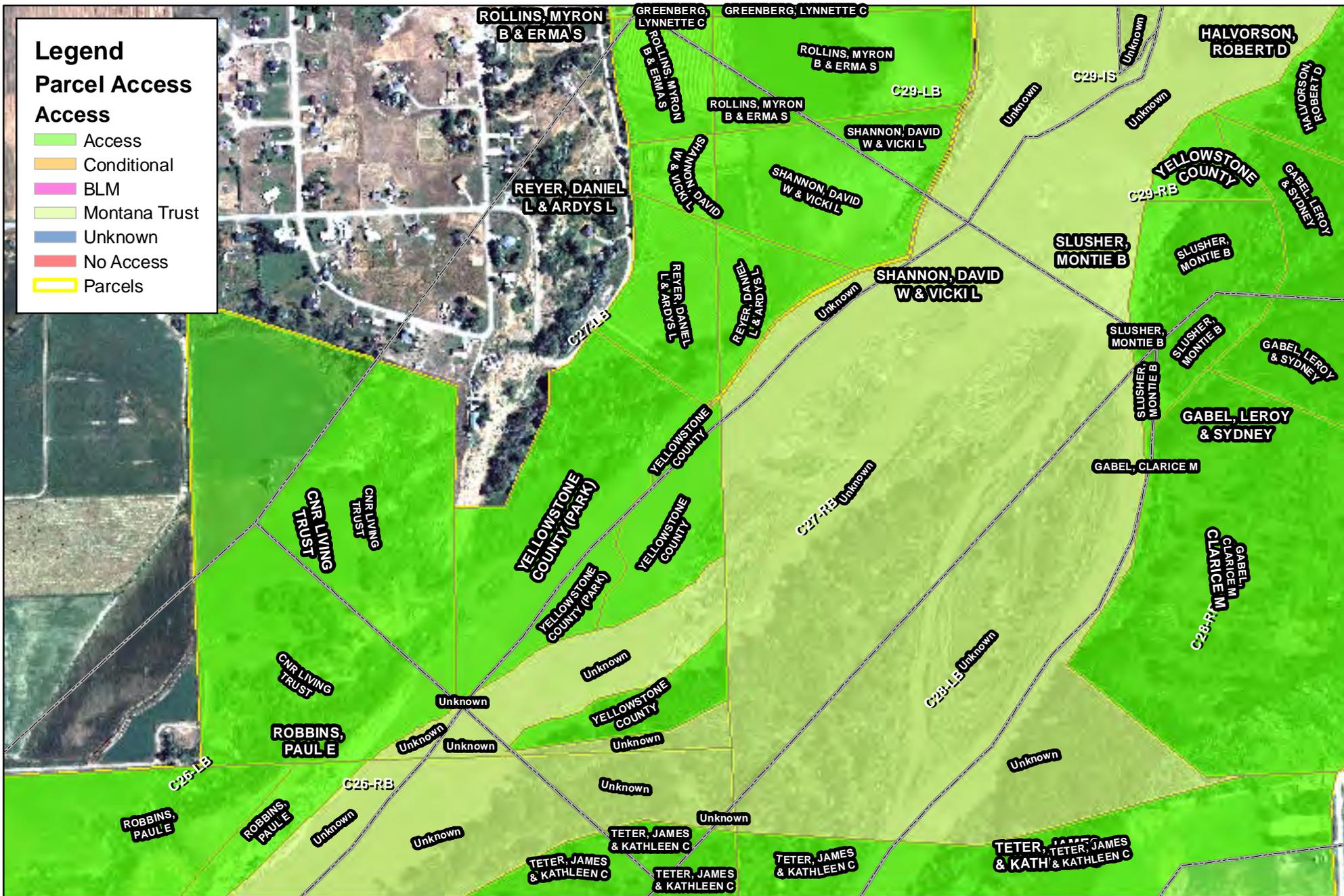


Figure 1



- LEGEND**
- Wildlife**
- Amphibian Deceased (Collected)
 - Amphibian Live (Collected)
 - Amphibian Live (Uncollected)
 - Bird Deceased (Collected)
 - Bird Live (Collected)
 - Bird Live (Uncollected)
 - Fish Deceased (Collected)
 - Fish Deceased (Uncollected)
 - Mammal Deceased (Collected)
 - Mammal Deceased (Uncollected)
 - Mammal Live (Uncollected)
 - Reptile Deceased (Collected)
 - Reptile Live (Collected)
 - Reptile Live (Uncollected)
 - Crawfish Deceased (Collected)
- Wildlife - Oiling Status**
- Oiled
 - No-visible Oiling
- Bird Nest Sites**
- Bald Eagle Nest
 - Bald Eagle Nest 1/8mi Buffer
 - Heron Rookery
 - Heron Rookery 1/8mi Buffer
 - Osprey Nest
 - Misc. Bird Nest
- Wildlife Priority Sites**
- Wildlife Cleanup Priority Area

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

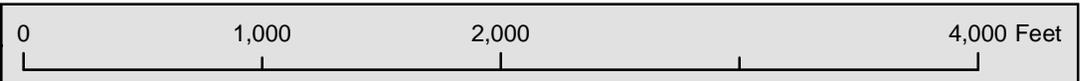
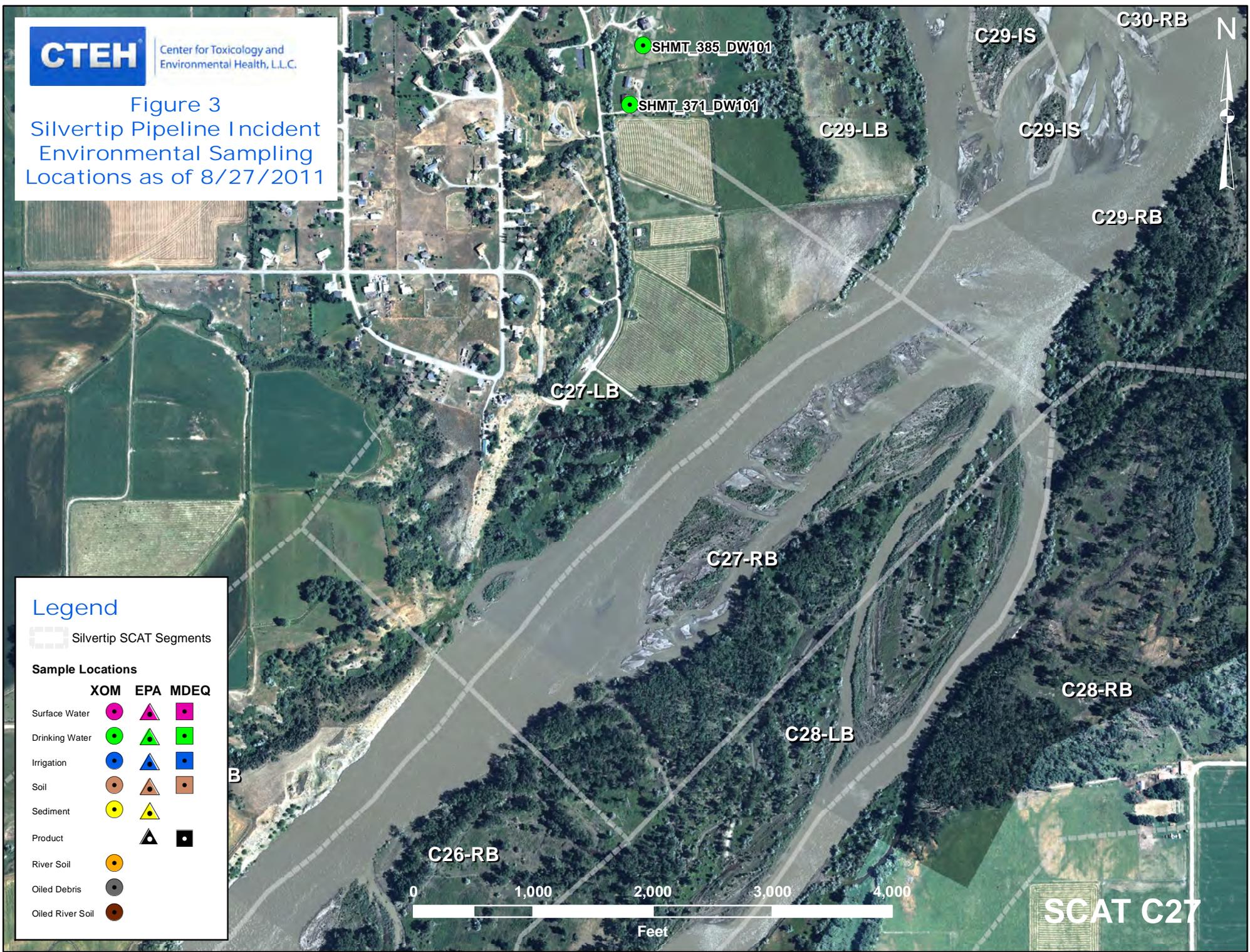


Figure 2
Wildlife Resources



Center for Toxicology and Environmental Health, L.L.C.

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



Legend

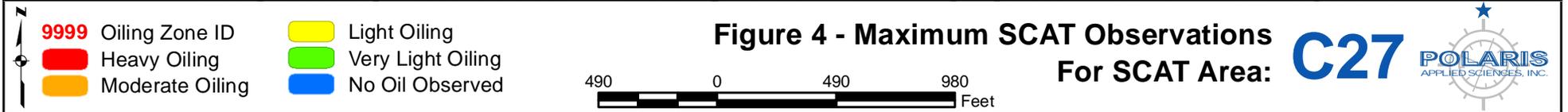
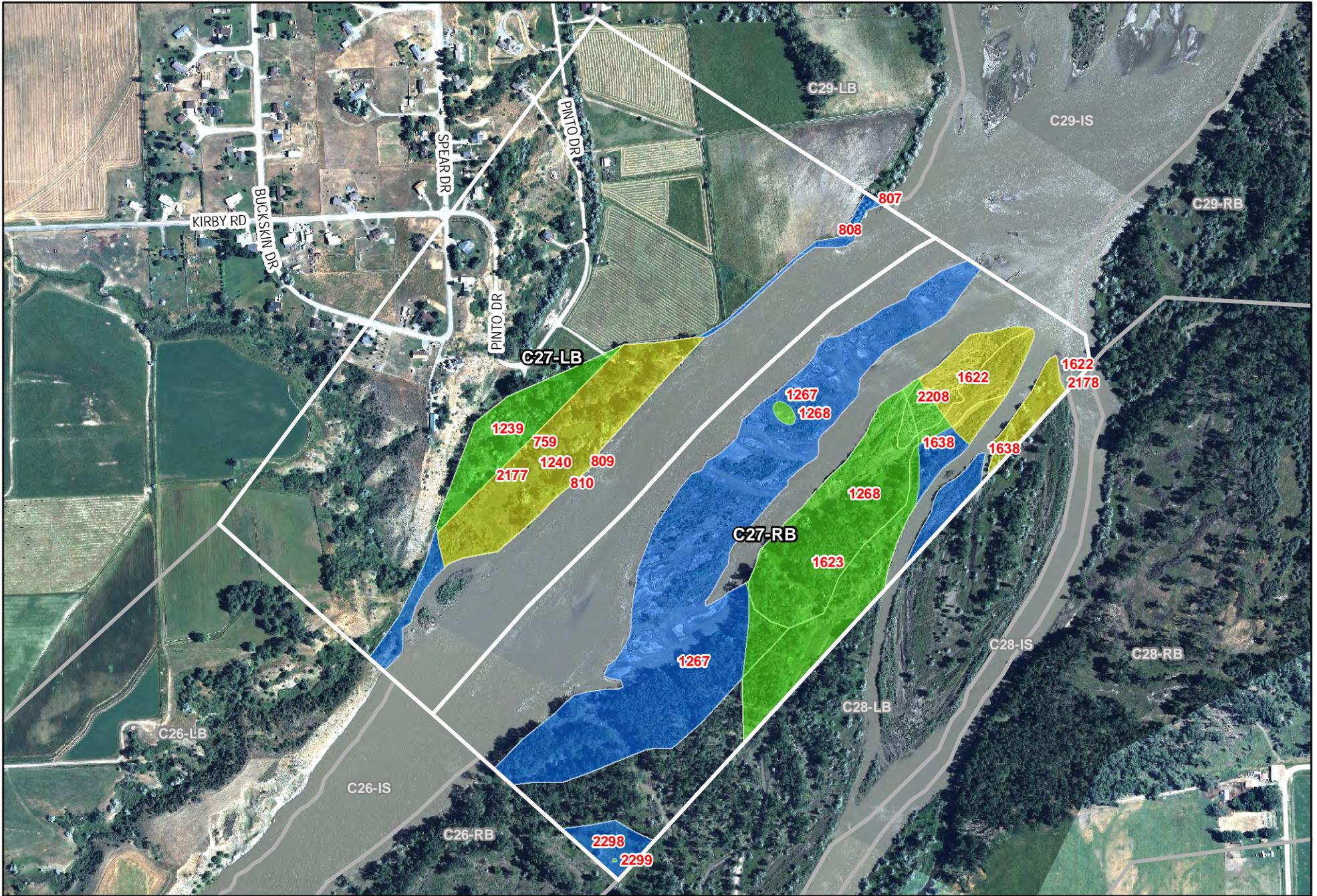
Silvertip SCAT Segments

Sample Locations

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



SCAT C27





- 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 Detection Summary



Sample Results For
SCAT Area C27

Printed 10/7/2011

NA - Not Available

Detected Above Screening Level

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



Appendix B

Initial SCAT Survey Forms and
Sketches

DB/6/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 26/07/11	Time (24h): std / daylight 1:44 hrs to 1:46 hrs	Water Level low - mean - bankfull - overbank falling - steady - rising
Segment/Reach ID: C 27 Left Bank / Right Bank / Island				
Operations Division:				
Survey by: Foot / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 2.8 deg C

2 SURVEY TEAM # 1	Name	Organization	Signature
Pete Lee	PL	Polaris	225.892.6459
John Beach	JB	US EPA	415.972.3347
Larry Alheim		MT DEQ	406.461.7516

3 SEGMENT Total Segment/Reach Length 1015 m Segment/Reach Length Surveyed 1015 / 1033 m

Start GPS: LATITUDE 45 deg. 56.172 min. LONGITUDE 108 deg. 17.825 min. Datum: _____

End GPS: LATITUDE 45 deg. 55.806 min. LONGITUDE 108 deg. 18.422 min.

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m 160m 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 40 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	
A				X	100	1	100				X		X								X	veg
B			X	X	613	1															X	
C			X	X	100	1	100				X		X								X	veg
D			X	X	290	1															X	
E			X	X	10	1	100				X		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 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

Oil height: _____ UNK _____ UNK

Treatment recommendations:

Zone B, D : No oil observed; no treatment required.

Zone A, C, E : 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 (Y) No Photos (Y) No Frames 0053 - 0058 Photographer Beach



B

C27

C

D

Image USDA Farm Service Agency

©2010 Google

45° 55.998' N 108° 18.168' W elev 913 m

Eye alt 2.18 km

Imagery Date: 6/22/2009

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>C-27</u> (Left Bank / Right Bank / Island)		<u>26/07/11</u>	<u>1:14</u> hrs to <u>1:55</u> hrs	low - mean <u>(bankfull)</u> overbank
Operations Division:				<u>(falling)</u> steady - rising
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp +/- <u>28</u> deg C	

2 SURVEY TEAM # <u>3</u>	Name <u>SAK</u> Organization <u>Cardno Centre</u>	Signature <u>Steve Kennedy</u>
<u>Steve Kennedy</u>	<u>Cardno Centre</u>	<u>Steve Kennedy</u>
<u>Gary Riley</u>		
<u>John Brown</u>		

3 SEGMENT Total Segment/Reach Length 1030 m Segment/Reach Length Surveyed 1030 m

Start GPS: LATITUDE 45°55.809 deg. min. LONGITUDE 108°18.533 deg. min. Datum: WGS 84

End GPS: LATITUDE 45 56.260 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 S Shelf P Manmade: Solid Permeable (type) Wetland: Swamp Bog/Fen Marsh

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: Est Height 10 m canyon manmade meander S confined or leveed Substrate Type:

Sloped: 15 (>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 (160m) 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 Part Private / Part Public

Oiled trees/shrubs Y / (N) River Current strong (Y) / N Other Features: good 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 m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO
A			<u>S</u>	<u>P</u>	1030	100	<u>O</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				

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

C-27, Zone A, no impact observed, no further action

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

DB/G/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

1 GENERAL INFORMATION

Segment/Reach ID: C-27 (Left Bank / Right Bank / Island)

Operations Division: _____

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

Date (dd/mm/yy): 26/07/11 Time (24h): std / daylight 1:19 hrs to 1:55 hrs falling > steady - rising

Water Level: low - mean bankfull > overbank

Sun / Clouds / Fog / Rain / Snow / Windy / Calm _____ Air Temp +/- 28 deg C

2 SURVEY TEAM # 3 Name SAK Organization Cardno Centre Signature Steve Kennedy

<u>Steve Kennedy</u>	<u>Cardno Centre</u>	<u>Steve Kennedy</u>
<u>Gary Riley</u>	<u>SAK</u>	
<u>John Brown</u>		

3 SEGMENT Total Segment/Reach Length 1030 m Segment/Reach Length Surveyed 1030 m

Start GPS: LATITUDE 45° 55.80' deg. _____ min. LONGITUDE 109° 18.533' deg. _____ min. Datum: WGS 84

End GPS: LATITUDE 45 56.260 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 S Shelf P Manmade: Solid Permeable (type) _____ Welland: Swamp Bog/Fen Marsh _____

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

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

4B RIVER VALLEY CHARACTER select as appropriate

Cliff or Bluff: Est Height 10m canyon _____ manmade _____ meander S confined or leveed _____ complete for primary

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

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 (bankfull) / 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 Part Private / Part Public

Oiled trees/shrubs Y / N River Current strong Y / N Other Features: good 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 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>	1030	100	0															P

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

C-27, Zone A, no impact observed, no further action

DB/G/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): sld / daylight	Water Level
Segment/Reach ID: <u>C-27</u> (Left Bank / Right Bank / Island)		<u>26/07/11</u>	<u>1:19</u> hrs to <u>1:55</u> hrs	low - mean <u>(bank full)</u> overbank
Operations Division:				<u>(falling)</u> steady - rising
Survey by: <u>Foot/ATV/Boat/Helicopter/Overlook/</u>		Sun/Clouds/Fog/Rain/Snow/Windy/Calm	Air Temp +/- <u>28</u> deg C	
2 SURVEY TEAM # <u>3</u>		Name <u>SAK</u> Organization <u>Cardno Centric</u>	Signature <u>Steve Kennedy</u>	
<u>Steve Kennedy</u>		<u>Cardno Centric</u>	<u>Steve Kennedy</u>	
<u>Gary Riley</u>		<u>MAFER</u>	<u>[Signature]</u>	
<u>John Brown</u>				

3 SEGMENT Total Segment/Reach Length 1030 m Segment/Reach Length Surveyed 1030 m

Start GPS: LATITUDE 45° 55.80' deg. min. LONGITUDE 109° 18.533 deg. min. Datum: WGS 84

End GPS: LATITUDE 45 56.260 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 S Shelf P Manmade: Solid Permeable (type) Wetland: Swamp Bog/Fen Marsh

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: Est Height 10 m canyon manmade meander S confined or leveed Substrate Type:

Sloped: (S) (>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 (180m) 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 Part Private / Part Public

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

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

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OIL ZONE	RIVER BANK ZONE					OIL COVER			OIL THICKNESS					OIL CHARACTER					SUBST. TYPE(S)	
						Length	Width	Distib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC		SR
	ID	MS	LB	UB	OB	m	m	%												
A			<u>S</u>	<u>P</u>		1030	100	<u>0</u>												P

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 - shoreline biota and wildlife observations - cleanup recommendations

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

C-27, Zone A, no impact observed, no further action

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

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 08/06/2011	Time (24h): std / daylight 0955 hrs to 1040 hrs	Water Level low - mean - <u>bankfull</u> - overbank <u>falling</u> - steady - rising
Segment/Reach ID: C27 <u>Left Bank</u> / Right Bank / Island		Operations Division:		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		<u>Sun</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- 3.2 deg C

2 SURVEY TEAM # 6	Name	Organization	Signature
Chris Arredondo		CardnoENTRIX	
Dominic Ventura		EPA	
Jeremiah Wood		FWP	

3 SEGMENT Total Segment/Reach Length 985 m Segment/Reach Length Surveyed 512 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: 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: Clay/Mud

Sloped: (>5°)(15°)(30°) straight _____ 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 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 0 bags or 0 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

1239
1290

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	273	85															X	
B				X	512	86	1			(X)	X							X				Grass, shrubs

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

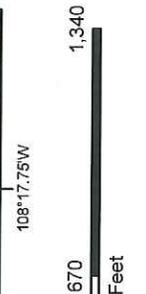
8 COMMENTS ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations

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

Zone A: No treatment required.

Zone B: The lands within Zone B are utilized by the public; therefore, the following treatment recommendations are suggested. Cut and remove oil coated vegetation smaller than 1" diameter with hand tools. Wipe larger coated vegetation.

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



C27- []
06/08/11
Team []
[]

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 2

1 GENERAL INFORMATION		Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: <u>C27</u>	Left Bank / Right Bank / Island	<u>08/08/11</u>	<u>1330</u> hrs to <u>1538</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>C</u>				falling - steady - rising
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook /		<u>(Sun)</u> / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>27</u> deg C

2 SURVEY TEAM # <u>12</u>	Name	Organization	Signature
	<u>Nathan Hammond</u>	<u>Cardno Entrix</u>	<u>Nathan Hammond</u>
	<u>Lisa Greenercher</u>	<u>Cardno Entrix</u>	<u>Lisa Greenercher</u>
	<u>Peter Reich</u>	<u>EPA</u>	<u>Peter Reich</u>
	<u>Betsy Honda</u>	<u>DER</u>	<u>Betsy Honda</u>
	<u>Alphon Bousch</u>	<u>Cardno Entrix</u>	<u>Alphon Bousch</u>
	<u>Jack Smith</u>	<u>USCG</u>	<u>Jack Smith</u>
	<u>Earl Radzinski</u>	<u>FWP</u>	<u>Earl Radzinski</u>

3 SEGMENT Total Segment/Reach Length 1060 m Segment/Reach Length Surveyed 1016 m

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

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

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

Sloped: (>5°)(15°)(30°) straight _____ braided 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 / gobble / 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 N

Debris: Y/N oiled Y/N amount 1 bags or _____ trucks access restrictions

Oiled trees/shrubs Y/N River Current strong Y/N Other Features: Boat 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 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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		650	200																
B		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		581	230	<1			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>									<u>Grass, shrub vegetation</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 - NCO
Zone B - NTR

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

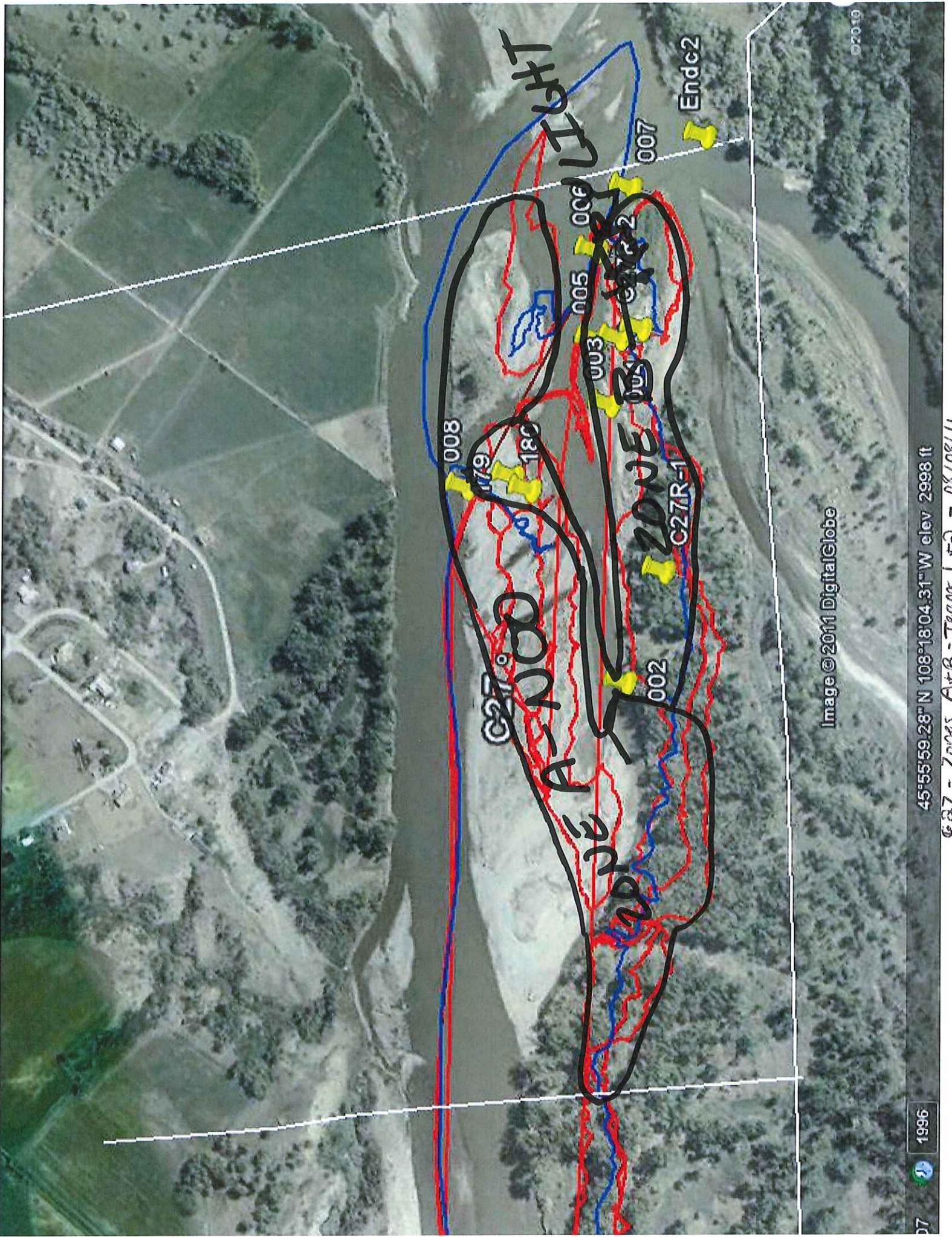


Image © 2011 DigitalGlobe

DS16

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>C27</u> Left Bank / (Right Bank) / Island		<u>17/08/11</u>	<u>1015</u> hrs to <u>1100</u> hrs	low - mean - bankfull - overbank
Operations Division: <u>C</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		falling - steady - rising
Survey by: (Foot) / ATV / Boat / Helicopter / Overlook / _____		Air Temp +/- <u>30</u> deg C		

2 SURVEY TEAM # <u>3</u>	Name	Organization	Signature
	<u>Damien Korte</u>	<u>Cardno Entrix</u>	<u>See Attached</u>
	<u>Lance Richman</u>	<u>EPA</u>	<u>See Attached</u>
	<u>Jeffrey Herrick</u>	<u>DEQ</u>	<u>See Attached</u>

3 SEGMENT Total Segment/Reach Length 110 m Segment/Reach Length Surveyed 150 m

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

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

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

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

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

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

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

2298
2299

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	150	150	0														Grass, trees
B				X	5	5	<1			P	S										Grass

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 - NOO

Zone B - Very light coat on grass, less than 1%. NFT

Instructed to only survey Peter property.

Sketch (Yes)/No Photos (Yes)/No Frames/Photographer: [Signature]



SCAT
Teams
8/17/11
C27-RB

A 10 RB

C28N

005

002

001

001

004

002005

003

C28S

C28

C28W

C26-RB

9/11/2009
2009

CA7EB

CA6RB

CA8L

CA8R

CA9FT

CA8N

light contour
CA8N

004

005

002

003

001

002

000

C28W

C28

C28

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Image USDA Farm Service Agency

45°55'35.81" N 108°18'02.84" W elev 2996 ft

1996

©2010

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>C27</u>	Left Bank (Right Bank) Island	<u>18/08/11</u>	<u>1015</u> hrs to <u>1100</u> hrs	low - <u>mean</u> - bankfull - overbank
Operations Division: <u>C</u>		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		falling - steady - rising
Survey by: <u>Foot / ATV / Boat / Helicopter / Overlook /</u>		Air Temp +/- <u> </u> deg C		

2 SURVEY TEAM # <u>142</u>	Name	Organization	Signature
	<u>Robert Nulton</u>	<u>Cardno ENRIX</u>	<u>[Signature]</u>
	<u>Todd Farrar</u>	<u>Polaris</u>	<u>[Signature]</u>
	<u>Jay Watson</u>	<u>MT FNP</u>	<u>[Signature]</u>
	<u>Jessica Ross</u>	<u>M DEQ</u>	<u>[Signature]</u>
	<u>Alicia Taylor</u>	<u>USCG</u>	<u>[Signature]</u>
	<u>John Ra Davis</u>	<u>USCG</u>	<u>[Signature]</u>
	<u>Ariel Blanc</u>	<u>Polaris</u>	<u>[Signature]</u>

3 SEGMENT Total Segment/Reach Length m Segment/Reach Length Surveyed 1000 m W895

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 Pebble/Cobble Boulder Peat/Organic Vegetated Bank: P Wooded Upland:

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

Cliff or Bluff: Est Height m canyon manmade meander confined or leveed Substrate Type: veg bank; woody debris

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 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 10 bags or trucks access restrictions island requiring boat access

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	Width	Distrib.	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
A				<input checked="" type="checkbox"/>	200	100	S		<u>BS</u>	<u>P</u>	<u>MS</u>						X					veg bank
B				<input checked="" type="checkbox"/>	100	100	<1				X						X					veg bank; woody debris
C				<input checked="" type="checkbox"/>	50	100															X	

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

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

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

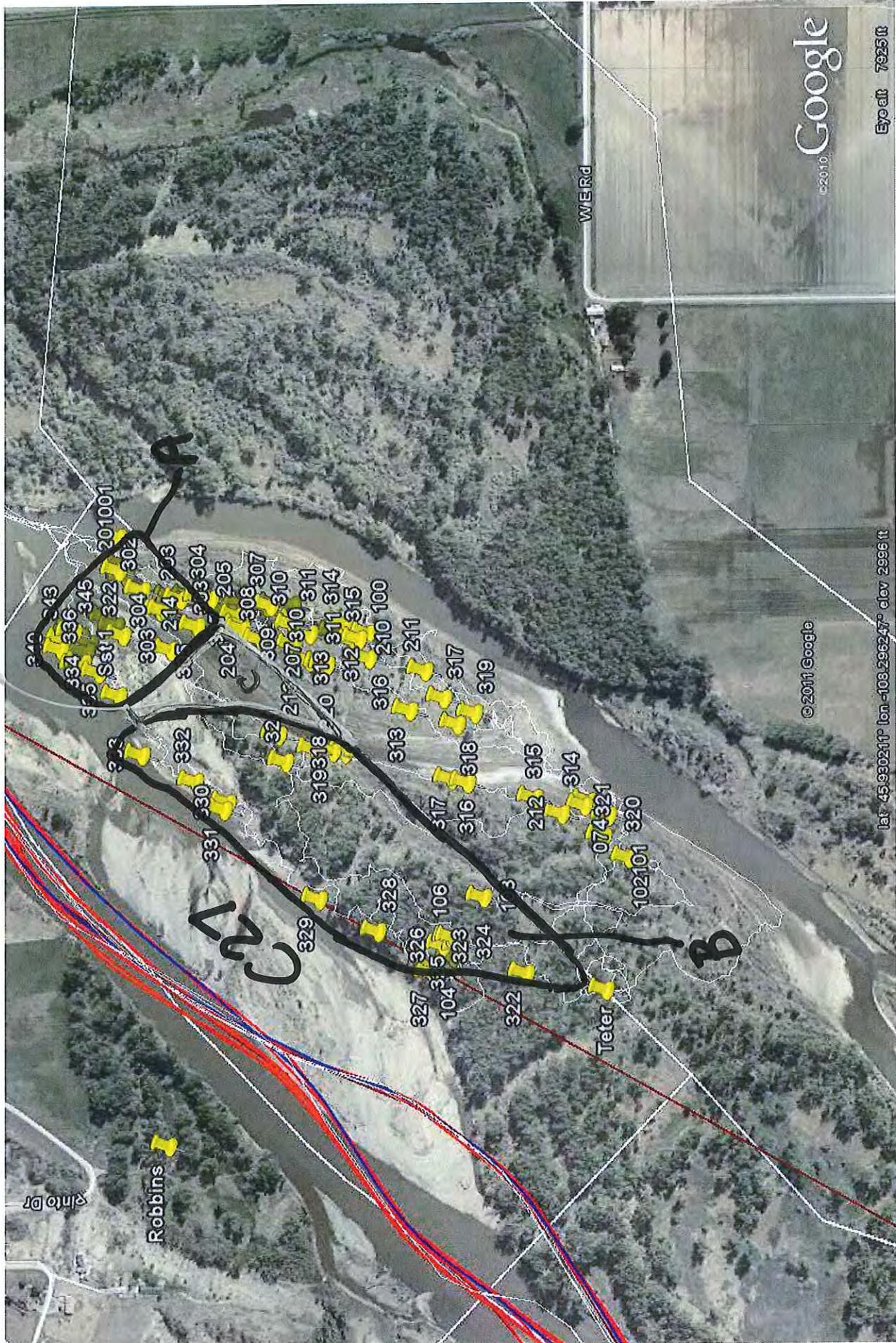
Overbank Survey Required Y / N Overbank Survey Completed Y / N Shoreline Survey Completed Y / N

Recommend crew with hand tools to remove oiled debris + clipping vegetation + bag + remove offsite - Zone A

Zone B - Light stain on vegetation with a few spots on woody debris - No further treatment - NFT

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

WTF?



Google

Eye alt 7925 ft

© 2011 Google

lat 45.930211° lon -103.296247° elev 2996 ft

Robbins

Teter

WERRd

A

A

B

Phlo Dr

- 340 343
- 334 336 345
- 305 304 302
- 214 203
- 204 205
- 308 307
- 309 310
- 217 207 310 311
- 313 311 314
- 312 315
- 316 210 100
- 211
- 313 318 317
- 319
- 329
- 319 318
- 316 318 319
- 212 315
- 314
- 074321
- 102101 320
- 327 326 5 106
- 104 323
- 324 173
- 322



Appendix C

Pre-Inspection Survey Transmittal

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



Appendix D

Post-Inspection Survey Transmittal

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



Appendix E

Final SCAT Survey Forms and
Sketches

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page _____ of _____

1 GENERAL INFORMATION		Date (dd/mm/yy) 07/09/11	Time (24h): std / daylight 1314 hrs to 1415 hrs	Water Level low - <u>mean</u> - bankfull - overbank falling - steady - rising
Segment/Reach ID: C27 <u>Left Bank</u> / Right Bank / Island		Operations Division: C		
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp +/- 33 deg C

2 SURVEY TEAM # 3	Name	Organization	Signature
Adam Bausch		Cardno Entrix	<i>[Signature]</i>
Mike Shannon		USCG	<i>[Signature]</i>
Jay Watson		FWP	<i>[Signature]</i>

3 SEGMENT Total Segment/Reach Length 1,092 m Segment/Reach Length Surveyed 400 m

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

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

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

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

Sediment Bank: Clay/Mud _____ Sand _____ Mixed Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: 5 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: _____

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

shoal(s) present 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 N Access: Direct from backshore N Alongshore from next segment N

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

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER							SUBST. TYPE(S)		
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP		NO	
A				<input checked="" type="checkbox"/>	400	152	<1				<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>					Grass

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

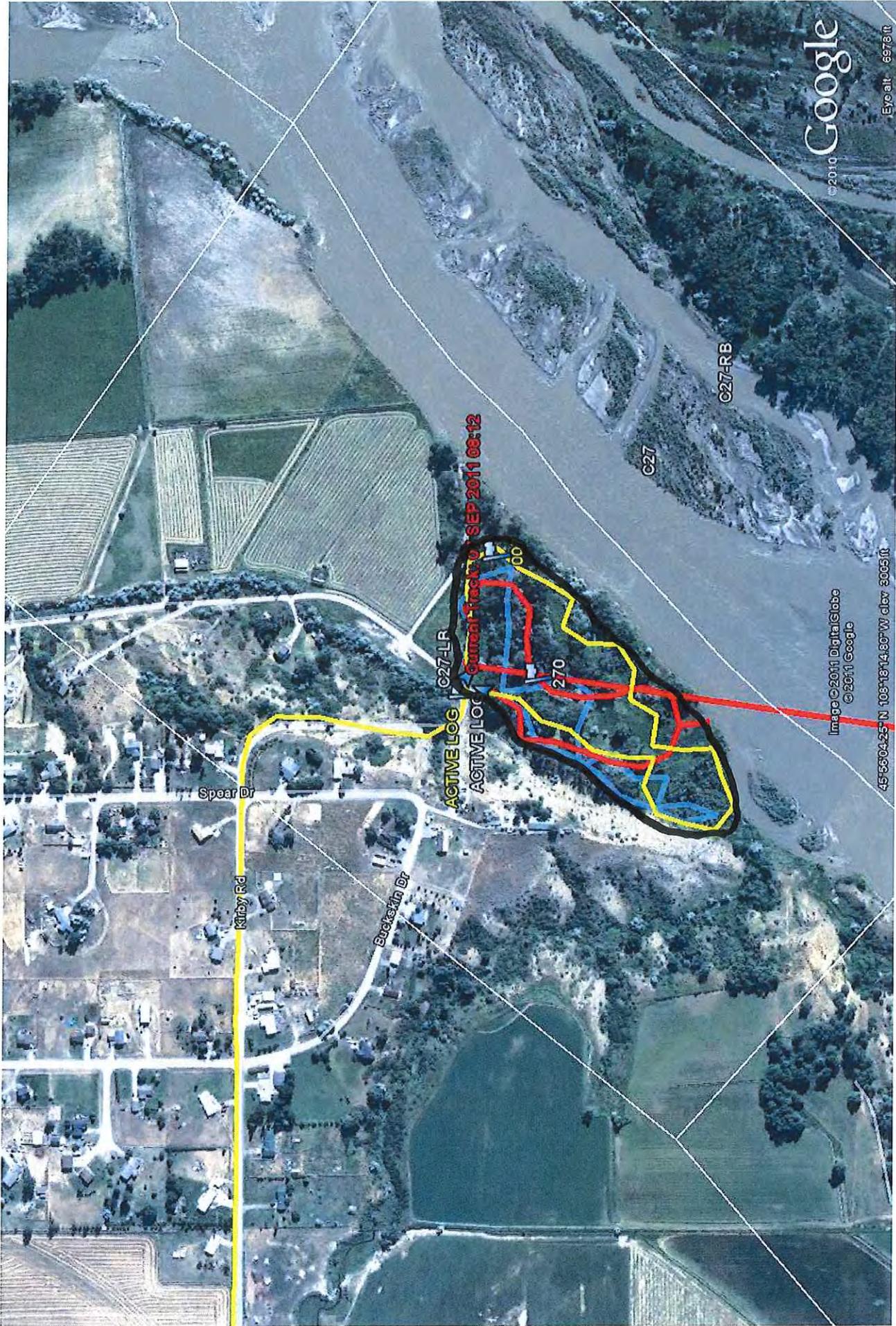
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER						WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)
	MS	LB	UB	OB			SAP	OP	PP	OR	OF	TR				

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

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

Zone A - Non-transferable stain on grass
 No Further Treatment Recommended
 Ops crew removed 1 bag of oil coated grass during ReSCAT process

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



A-NFT

C27LB
Team #3
07/09/11

D/B / G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 07/09/11	Time (24h): std / daylight 10:30 hrs to 12:00 hrs	Water Level low - MEAN - bankfull - overbank falling - STEADY - rising
Segment/Reach ID: <u>C 27</u> Left Bank (Right Bank) Island				
Operations Division:				Air Temp +/- <u>26</u> deg C
Survey by: <u>Foot</u> / ATV / Boat / Helicopter / Overlook / _____		(Sun) / Clouds / Fog / Rain / Snow / Windy / Calm		

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

3 SEGMENT Total Segment/Reach Length 182 m Segment/Reach Length Surveyed 182 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 _____ Pebble/Cobble _____ Boulder _____ Peat/Organic _____ Vegetated Bank: Yes Wooded Upland: _____

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

4B RIVER VALLEY CHARACTER select as appropriate complete for primary

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1-10m 10-100m >100m _____ m est. water depth: <1m 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/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 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	CT	ST	FL	FR	MS	TB	PT	TC	SR		AP	NO	
A				<u>X</u>	182	40	<1			<u>S</u>	<u>P</u>						<u>X</u>					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

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

Zone A: NFT - 1/2 bag removed by Hot Shot team
 This is a partial segment survey. See attached map which indicates a small area within C-27 RB still needs Re-SCAT.

(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 # _____)

C-27 RB

SCAT TEAM #1

Sept 7, 2011



Needs Re-SCAT from previous survey

ZONE A

ACTIVE LOG-361

All FT from Survey

C28-RB

GOOG

©2011 Google

-RB

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION		Date (dd/mm/yy) 08/09/11	Time (24h): std / daylight 9:30 hrs to 10:10 hrs	Water Level low - MEAN - bankfull - overbank falling - STEADY - rising
Segment/Reach ID: <u>C27</u> Left Bank / <u>Right Bank</u> Island				
Operations Division:				
Survey by: <u>Foot</u> ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - <u>26</u> deg C
2 SURVEY TEAM # <u>1</u>	name	organization	contact phone number	
	Tom Freeman	Polaris App. Sciences	<u>Tom Freeman</u>	
	Jeffrey Herrick	<u>MIT DECS</u>	<u>Jeffrey Herrick</u>	
	Griff Miller	USEPA	<u>Griff Miller</u>	

3 SEGMENT Total Segment/Reach Length 270 m Segment/Reach Length Surveyed 270 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 (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

2208

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	270	60	21				X						X					alg./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: light stain on pockets in debris piles,
Zone A = NFT

* Note: this survey completes C27 RB as NFT in conjunction w/ previous surveys.

(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# _____)

C-27 RB

SCAT TEAM #1

Sept 8, 2011



Zone A

C27-RB



Appendix F

Completed SCAT Segment Sign-Off
Forms

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment C276B Date of Survey Sept 7 2011

Dates of Initial SCAT Assessments 26 JUL 11 (P)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment N/A

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] Michael Shannon / USC 9/8/11
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] JAY WATSON FWP 9/7/11
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] Adam Busch Cardio-Entrix 9/7/2011
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 C 27 RB Date of Survey Sept 7, 2011

Dates of Initial SCAT Assessments 08 Aug 11 (DL)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment None

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] Gina Miller / EPA 9-7-11
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] Jessie Frank Herrick / MT DEQ 07 Sept. 2011
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] Tom Freeman / Polaris Sept. 7, 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.

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SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment C 27 RB Date of Survey Sept 8, 2011

Dates of Initial SCAT Assessments 08 AUG 11 (P)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment CTR 49

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 9-8-11
Sign Name Print Name/ Affiliation Date
Federal Representative (EPA/USCG)

[Signature] Jeffrey Frank Herrick 08 Sep. 2011
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP)

[Signature] Tom Freeman / Polaris Sept 8, 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.

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