Imagine the result

ExxonMobil Pipeline Company

SCAT Area Transition Report for A25

Silvertip Pipeline Incident
Laurel, Montana

October 21, 2011

SCAT Area Transition Report for A25

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 21, 2011

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

Table of Contents

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 1

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 2

1.8 Post-Inspection Survey Transmittal 2

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 Detection 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

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 A25, 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 A25. 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 A25, 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 A25 is 130.0. There were access issues for the right bank.

1.2 Cultural, Historic, and Natural Resource Constraints

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

Figure 2 summarizes the natural resources identified in this segment. International Bird Rescue and Resource Advisors from U.S. Fish and Wildlife Service conducted regular inspections of Area A25. No oiled wildlife was observed or recovered. The skeletal remains from one and possibly two deceased great blue herons (*Ardea herodias*) were identified and retained. No Wildlife Priority Cleanup Areas were identified. A great blue heron rookery was identified in Area A25 and a $^{1}/_{8}$-mile buffer zone was provided to Operations to protect active nests.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area A25. 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 A25 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	LAMT0710DW201	10-Jul-11	Water_Drinking	LAMT_282_DW201	45.680539	-108.6646
CTEH	LAMT0824SO618	24-Aug-11	Soil_River	SO-A25	45.679693	-108.668369

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 was one exceedance for vanadium.

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 A25 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area A25.

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. 13, CTR No. 14, and CTR No. 23).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area A25 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 A25 following completion of oil removal activities. The SCAT team performed final surveys of the island and left and right banks within SCAT Area A25 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 island and left and right banks within Area A25, 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 A25

Prepared for:

Unified Command

_____

Date

_____

Unified Command – RP

SCAT Area Transition Report for A25

Prepared for:

Unified Command

_____

Date

_____

Unified Command – FOSC

SCAT Area Transition Report for A25

Prepared for:

Unified Command

_____

Date

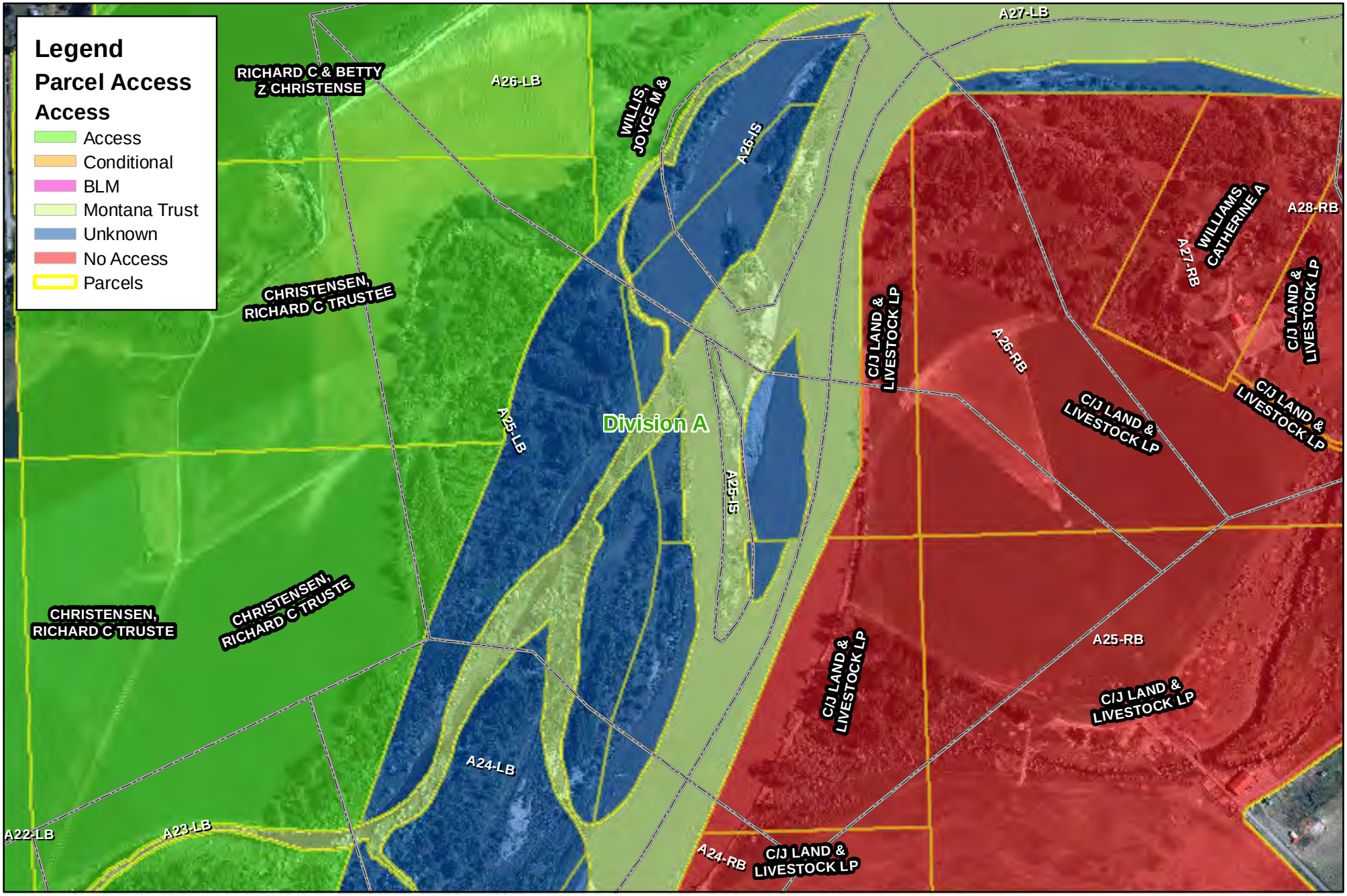
_____

Unified Command – MDEQ

Silvertip Pipeline Incident
Area Transition Report Map - Parcels
Segment - A25

9/27/2011

1:7,000



0 700 1,400 2,800 Feet

Figure 1

Date: 9/27/2011 Time: 11:28:42 AM

Path: P:\GIS\MXD's\Area_Transition_Figures\A1-Fig1-Parcels.mxd

Silvertip Pipeline Incident
SCAT Area Transition Report Map
Area - A25

ExxonMobil Pipeline

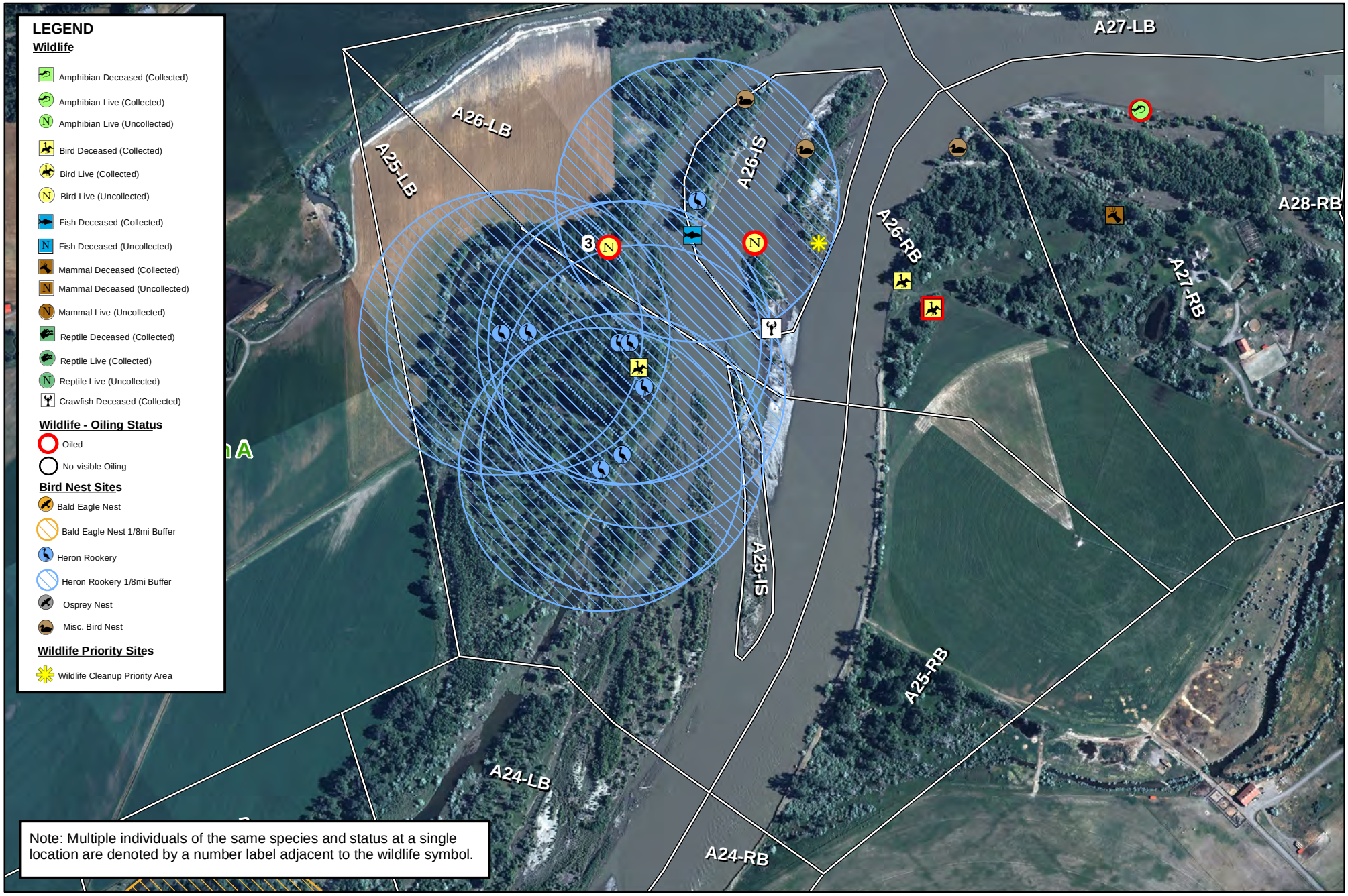
N

1:7,200

9/27/2011

The Response Group

Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.A_Fig2_09242011.mxd

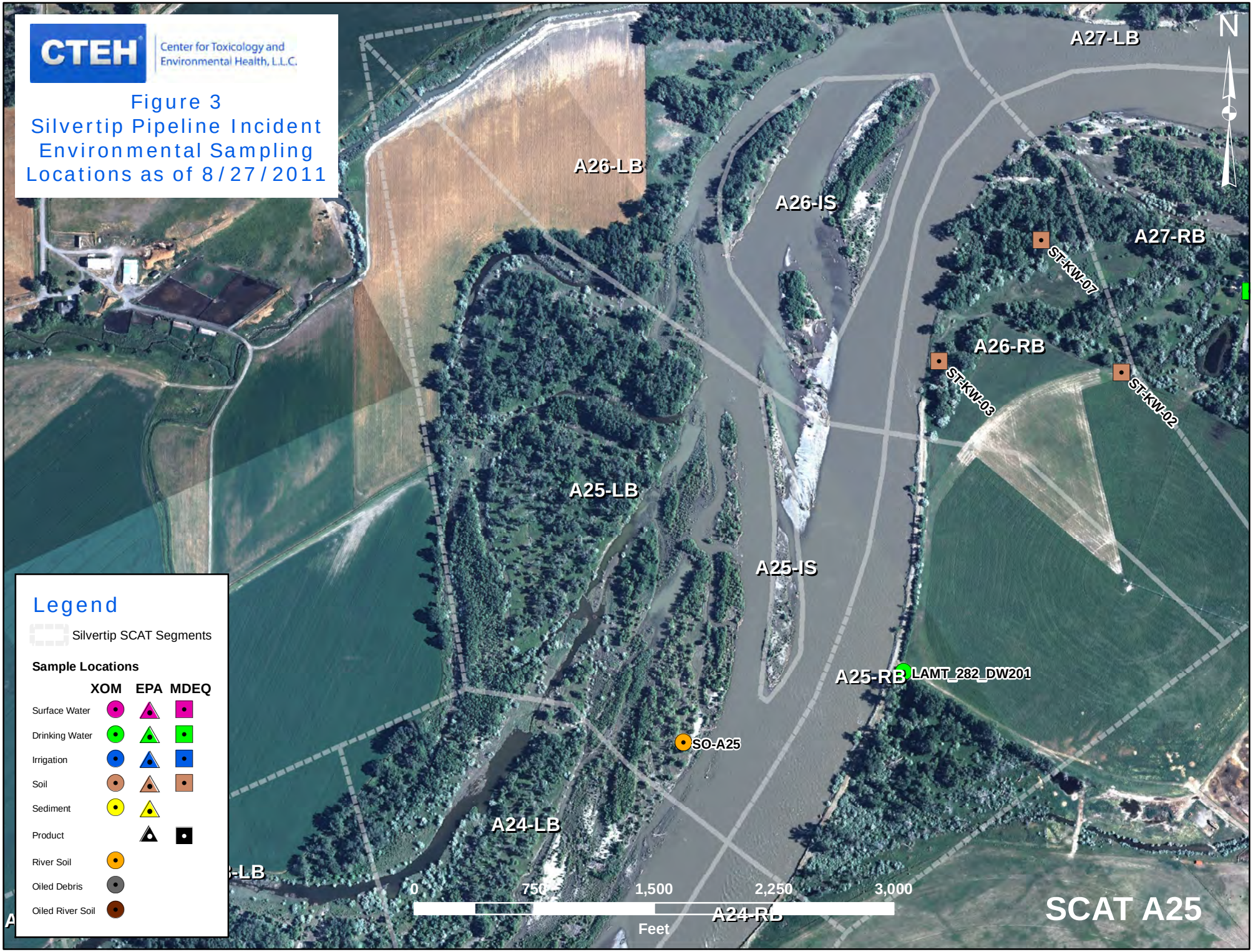


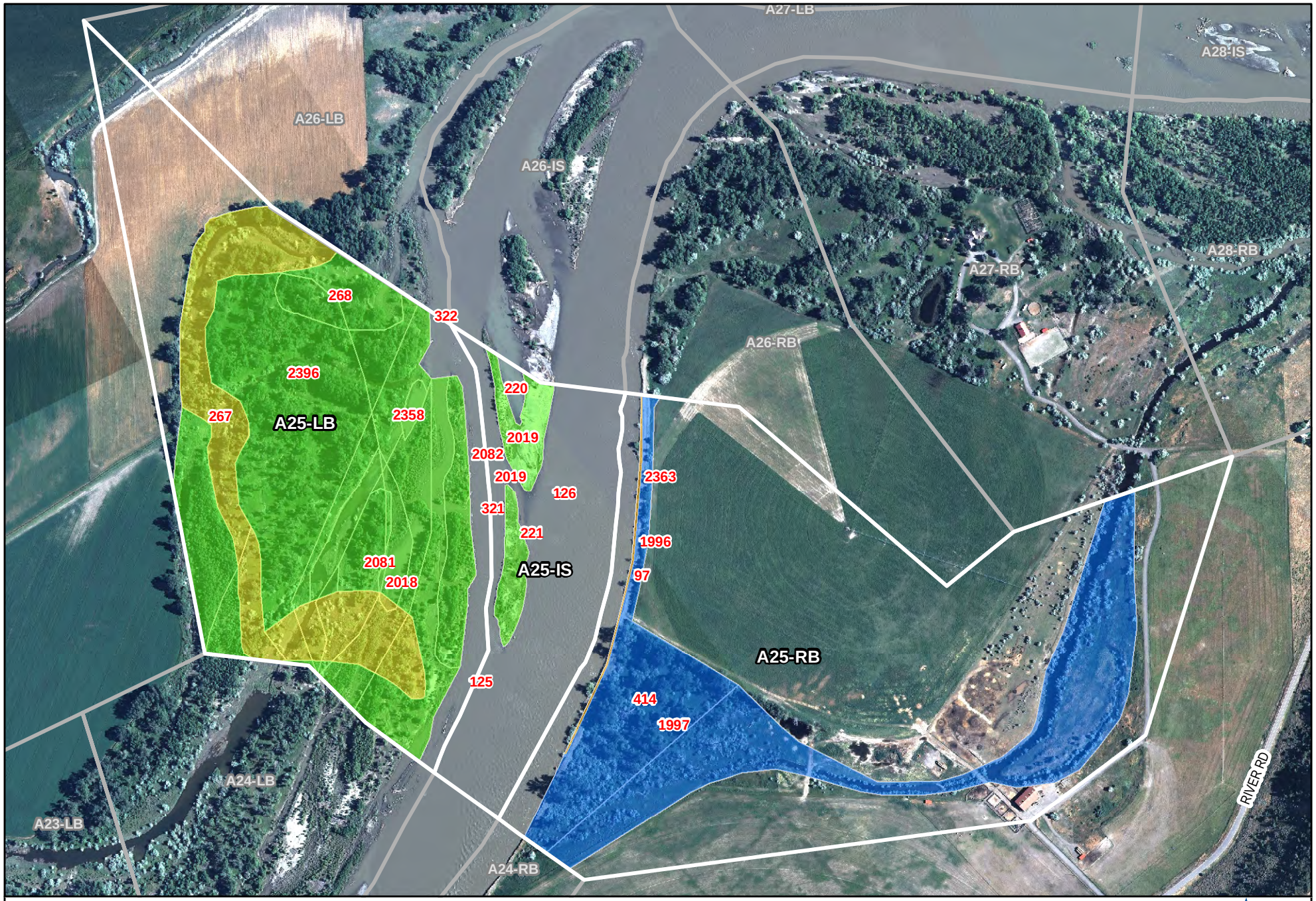
Note: Multiple individuals of the same species and status at a single location are denoted by a number label adjacent to the wildlife symbol.

0 750 1,500 3,000 Feet

Figure 2
Wildlife Resources

Date: 9/27/2011 Time: 8:08:57 AM


CTEH
Center for Toxicology and Environmental Health, L.L.C.
Figure 3
Silvertip Pipeline Incident Environmental Sampling Locations as of 8/27/2011
N
A27-LB
A26-LB
A26-IS
A27-RB
ST-KW-07
A26-RB
ST-KW-03
ST-KW-02
A25-LB
A25-IS
A25-RB
LAMT_282_DW201
SO-A25
A24-LB
A24-RB
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
750
1,500
2,250
3,000
Feet
SCAT A25



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

450 0 450 900 Feet

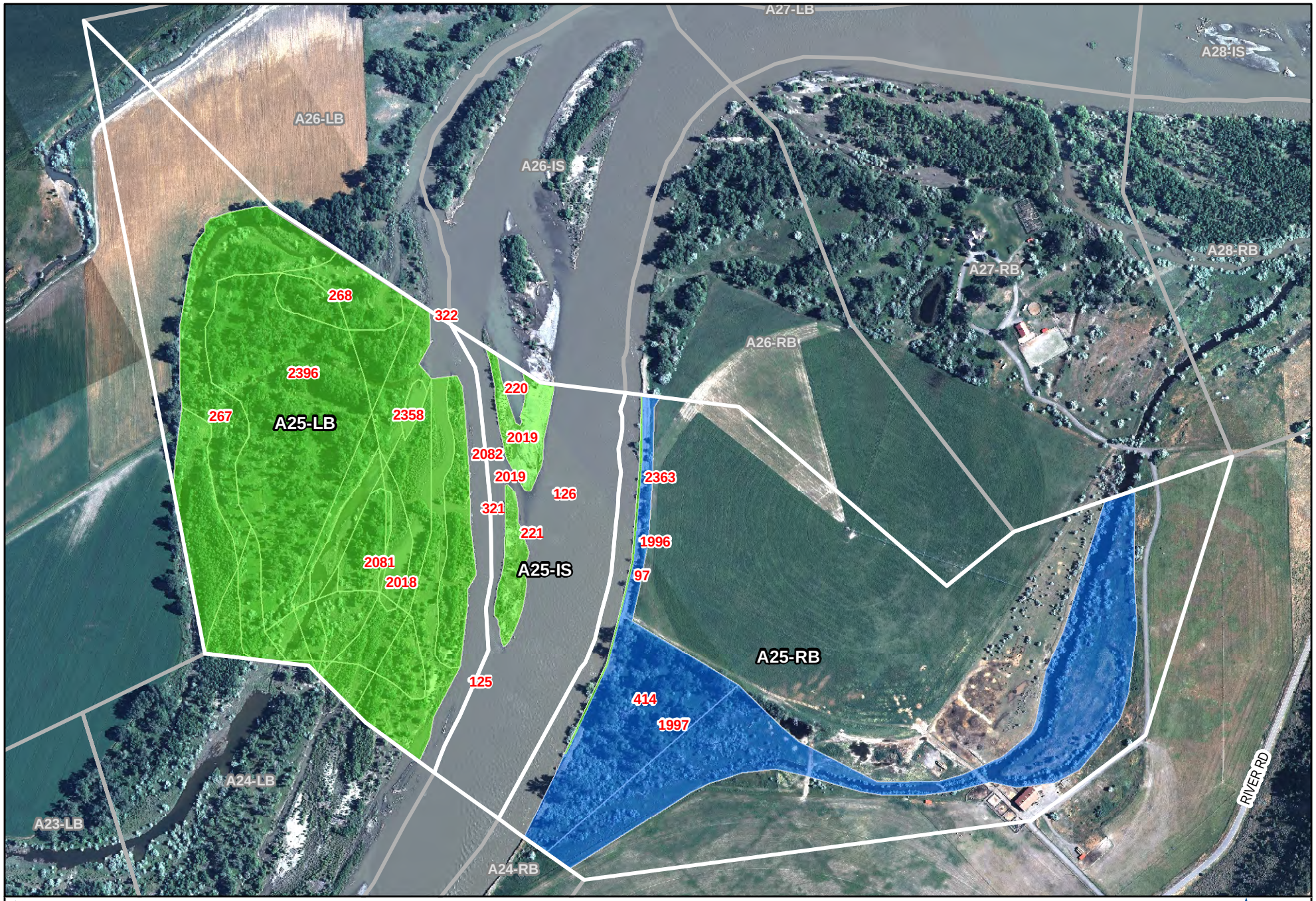
Figure 4 - Maximum SCAT Observations For SCAT Area: A25

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 4 - Max_SCAT_Observations_DataPages.mxd

Printed: 10/12/2011 10:22:49 AM



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

450 0 450 900 Feet

Figure 5 - Final SCAT Observations For SCAT Area: A25

POLARIS APPLIED SCIENCES, INC.

Aerial Photography Dated July 20, 2011

O:\GIS\SCAT Mapping\Maps\Area Transition Reports MXD\ATR Fig 5 - Final_SCAT_Observations_DataPages.mxd

Printed: 10/12/2011 10:30:43 AM

Appendix A

Sample Detection Summary

Detections in Samples Collected in SCAT Area A25

Printed 9/9/2011

NA - Not Available

Detected Above Screening Level

Sample Number	Date	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screening Level	Lab Result Qualifier	Units	Above?
LAMT0710DW201	10-Jul-11	Field	Water_Drinking	E524.2	Toluene	Y	0.26	1000	J	ug/L	no
LAMT0824SO618	24-Aug-11	Field	Soil_River	EPA 6010	Arsenic	Y	18	40		mg/kg	no
LAMT0824SO618	24-Aug-11	Field	Soil_River	EPA 6010	Barium	Y	125	820		mg/kg	no
LAMT0824SO618	24-Aug-11	Field	Soil_River	EPA 6010	Cadmium	Y	1.1	3.8		mg/kg	no
LAMT0824SO618	24-Aug-11	Field	Soil_River	EPA 6010	Chromium	Y	21.7	280		mg/kg	no
LAMT0824SO618	24-Aug-11	Field	Soil_River	EPA 6010	Lead	Y	7.6	400		mg/kg	no
LAMT0824SO618	24-Aug-11	Field	Soil_River	EPA 6010	Nickel	Y	13.8	150		mg/kg	no
LAMT0824SO618	24-Aug-11	Field	Soil_River	EPA 6010	Vanadium	Y	41.1	39		mg/kg	YES
LAMT0824SO618	24-Aug-11	Field	Soil_River	EPA 9060	Mean Total Organic Carbon	Y	2320	NA		mg/kg	no
LAMT0824SO618	24-Aug-11	Field	Soil_River	EPA 9060	RSD%	Y	6.2	NA		%	no
LAMT0824SO618	24-Aug-11	Field	Soil_River	EPA 9060	Total Organic Carbon	Y	2470	NA		mg/kg	no

Appendix B

Initial SCAT Survey Forms
and Sketches

tB / R | Sc

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident Page 1 of 1

1 GENERAL INFORMATION	Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A25 Left Bank / Right Bank / Island	11-Jul-2011		low - mean - bankfull - overbank
Operations Division: A		1045 hrs to 1046 hrs	falling - steady – rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____	Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 29.4 deg C

AA 10/12

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

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 550 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 1–10 m 10–100 m >100m _____m **est. water depth :** <1 m 1-3 m 3-10 m >10 m ____ m

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

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

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

Debris: Y / N oiled Y / N amount _____bags or 1 ____trucks access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	
125 A			X	X	420	1	60			X	X		X								Grass, trees, debris
126 B			X	X	130	1	60			X	X		X								Grass, trees, debris

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

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

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

Oiled Band Heights: Zones A & B - 40cm

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

Cleanup Recommendations: Trim oiled vegetation; wipe large oiled debris; remove small oiled debris; wipe oiled trees;

(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#

Ver. 04 July 2011

SCAT Teams 2 & 4 Survey

Segment A25 Left Bank

11-Jul-2011

400 0 400 Feet

Legend

Oil Zones

Segment Boundaries

DB / G / Sc

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident Page 1 of 1

1 GENERAL INFORMATION	Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A25 Left Bank / Right Bank / **Island**	15-Jul-2011		low - mean - bankfull - **overbank**
Operations Division: A		1135 hrs to 1140 hrs	**falling** - steady – rising
Survey by: Foot / ATV / **Boat** / Helicopter / Overlook / _____	**Sun** / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - **32** deg C

2 SURVEY TEAM # 1 & 2	name	organization	contact phone number
Andrew Milanes	ANM	Polaris	
Tom Freeman	THF	Polaris	
Bruce Kvam	BBK	Polaris	
Pete Lee	PDL	Polaris	
Travis Olson		USCG	
Aaron Anderson	AA	MTDEQ	406-841-5049
Darrick Turner		MTDEQ	406-444-1504

3 SEGMENT *Total Segment/Reach Length* _____ *m* *Segment/Reach Length Surveyed* 310 *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 S___ Boulder_____ Peat/Organic_____ ***Vegetated Bank:*** S ***Wooded Upland:*** P

Sediment Flat: Clay/Mud_____ Sand_____ Mixed/Coarse_____ ***Other:*** _____ If snow and ice use Winter River SOS

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

Cliff or Bluff:____Est Height _____m canyon_____ manmade_____ meander _____ confined or leveed _____ Substrate Type: mixed

Sloped:___(>5°)(15°)(30°) straight P___ braided S___ oxbow_____ flood plain valley_____ Forested / **Vegetated** / Bare

4C RIVER CHANNEL CHARACTER *circle or select as appropriate*

est. width : < 1m 1–10 m **10–100 m** >100m 95m **est. water depth :** <1 m 1-3 m **3-10 m** >10 m ____ m

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

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

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

Debris: **Y** / N oiled **Y** / N amount _____bags or 1 ____trucks access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	
220 A				X	150	10	5			X	X		X								Grass, trees, debris
221 B				X	160	20	15			X	X		X								Grass, trees, debris

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

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

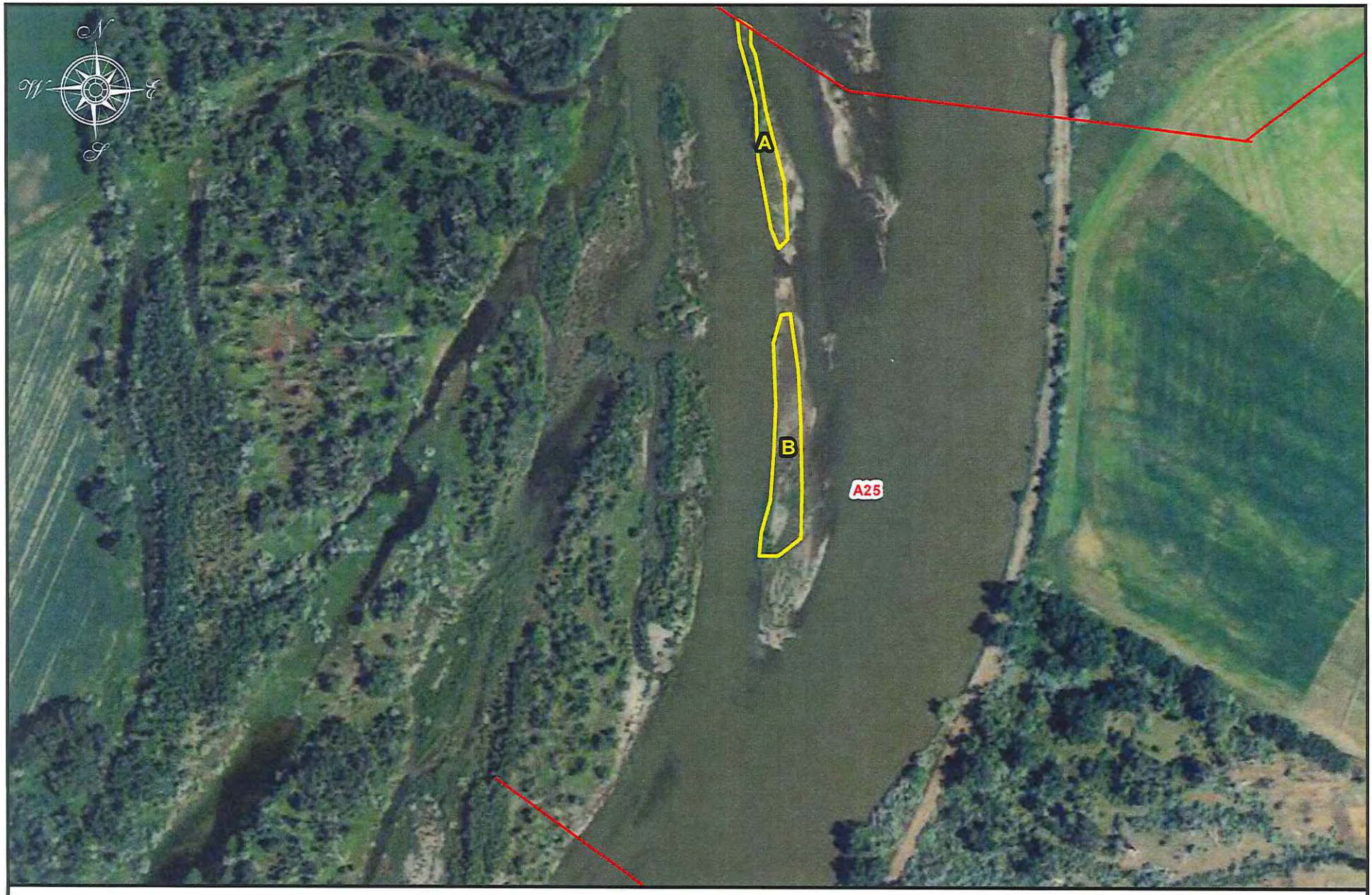
8 COMMENTS *ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations*

Oil band heights: Zones A & B – 20cm

Treatment Recommendations:

Zones A & B: No Further Treatment Required

Sketch **Yes** / No **Photos** **Yes** / No **Photo Numbers** 4211-4225 (Milanes)



SCAT Teams 1 & 2 Survey

Segment A25 - Island

15 July 2011

300 0 300 Feet

Legend

Segment Boundaries

Oiling Zones

DB/G/Sc

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident Page 1 of _____

1 GENERAL INFORMATION	Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A25 Left Bank / ~~Right Bank~~/Island	17/07/2011	11:30 hrs to 14:20 hrs	low - mean - bankfull - **overbank**
Operations Division: A			**falling** - steady - rising
Survey by: **Foot** / ATV / Boat / Helicopter / Overlook / _____	**Sun** / Clouds / Fog / Rain / Snow / Windy / **Calm**		Air Temp + / - 33 deg C

2 SURVEY TEAM # 3	Name:	Organization:	Signature:
	Jenni Nelson	Polaris	
	Mike Ruggles	Montana Fish Wildlife and Parks	
	Janice Witul	EPA	
	Rebecca Ridenour	MDEQ	

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_____ 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 P___ confined or leveed _____ Substrate Type: Mud

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 1–10 m 10–100 m >100m 200___m **est. water depth :** <1 m 1-3 m **3-10 m** >10 m ____ m

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

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

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

Debris: **Y** / N oiled **Y** / N amount 0 bags or ____trucks access restrictions: Area is wet & heavily vegetated, fences around fields.

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	
267 A				X	1100	50	<1		(X)	X	X		X								veg
268 B				X	150	70	0													X	veg/pond

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

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

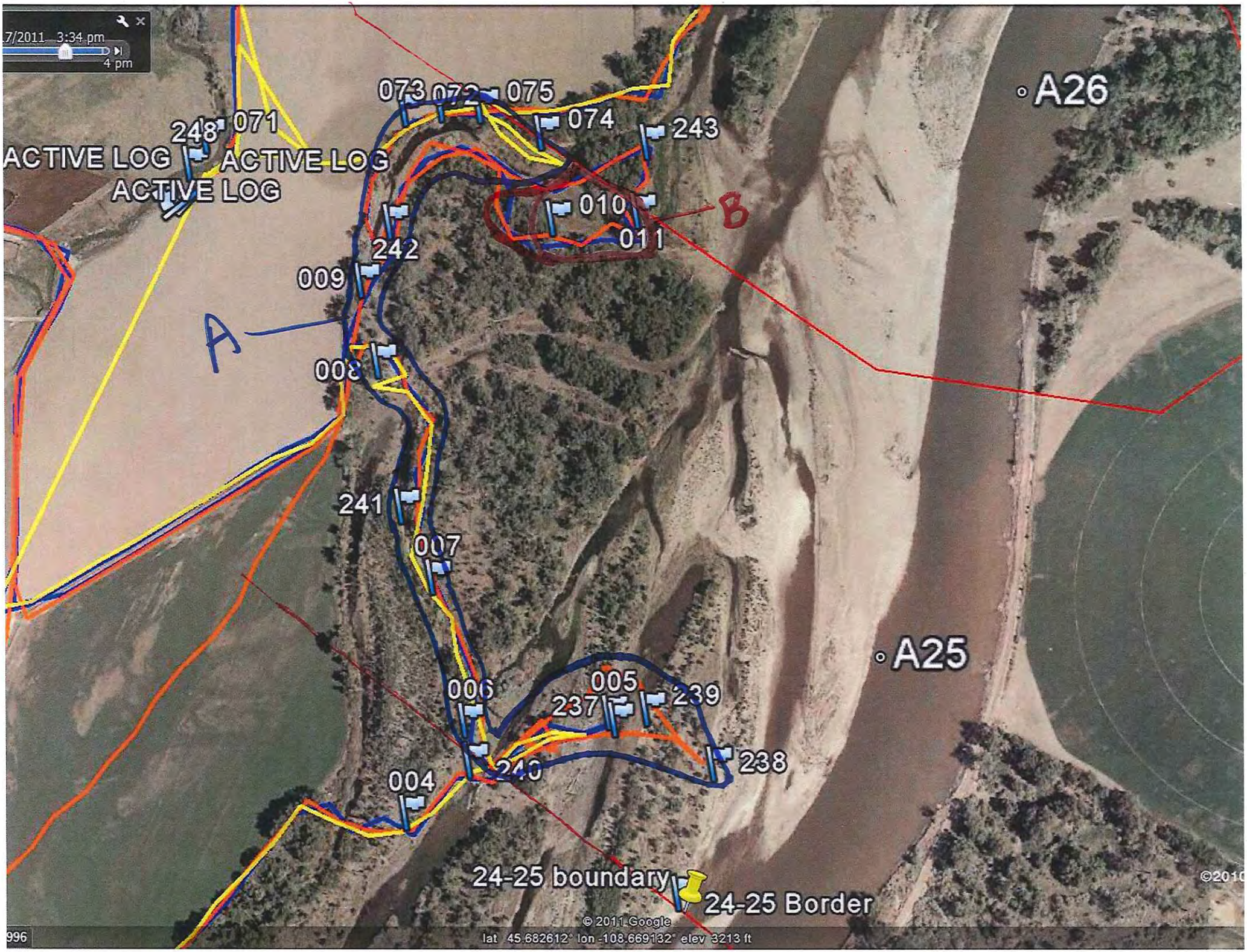
8 COMMENTS *ecological/recreational/cultural/economic constraints - shorezone biota and wildlife observations - cleanup recommendations*

A - trace occassional pieces of oiled debris, sticks, & grasses through over wash floodplain - primary around higher elevated edges of channels.

B - pond & channel bank - sheen on pond was biogenic, but could be mistaken for oil by non-trained observer, no oil seen in area.

(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#


7/2011 3:34 pm
4 pm
A26
A25
073
072
075
074
243
248
071
ACTIVE LOG
ACTIVE LOG
ACTIVE LOG
010
011
B
242
009
A
008
241
007
006
005
237
239
238
240
004
24-25 boundary
24-25 Border
© 2011 Google
lat 45.682612° lon -108.669132° elev 3213 ft

D/D / G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident Page 1 of 1

1 GENERAL INFORMATION	Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A25 **Left Bank** / Right Bank / Island	18-Jul-2011		low - mean - **bankfull** - overbank
Operations Division: A		1045 hrs to 1046 hrs	**falling** - steady – rising
Survey by: Foot / ATV / **Boat** / Helicopter / Overlook / _____	**Sun** / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - **32** deg C

2 SURVEY TEAM # 1 & 2

name	organization	contact phone number
Andrew Milanes	Polaris	
Bruce Kvam	Polaris	
Pete Lee	Polaris	
Andy Johnson	USCG	
Travis Olson	USCG	
Aaron Anderson	MTDEQ	
Larry Elheim	MTDEQ	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 464 m

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

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

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

Bedrock: Cliff/Ramp_____ Shelf_____ | Manmade: Solid___ Permeable___ (type) riprap | Wetland: Swamp_____ Bog/Fen_____ Marsh _____

Sediment Bank: Clay/Mud_____ Sand_____ Mixed S___ Pebble/Cobble_____ Boulder_____ Peat/Organic_____ | Vegetated Bank: P | Wooded Upland: S

Sediment Flat: Clay/Mud_____ Sand_____ Mixed/Coarse_____ | Other: _____ | If snow and ice use Winter River SOS

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

Cliff or Bluff:____Est Height _____m | canyon_____ manmade_____ meander _____ confined or leveed _____ | Substrate Type: mixed

Sloped:___(>5°)(15°)(30°) | straight P___ braided S___ oxbow_____ flood plain valley_____ | Forested / **Vegetated** / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width : < 1m 1–10 m **10–100 m** >100m _____m | est. water depth : <1 m **1-3 m** 3-10 m >10 m ____ m

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

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

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

Debris: **Y** / **N** oiled Y / **N** amount _____bags or _____trucks | access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	
321 A			X	X	404	1	25			X	X										Grass, trees
322 B			X	X	60	1														X	Grass, trees

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

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

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

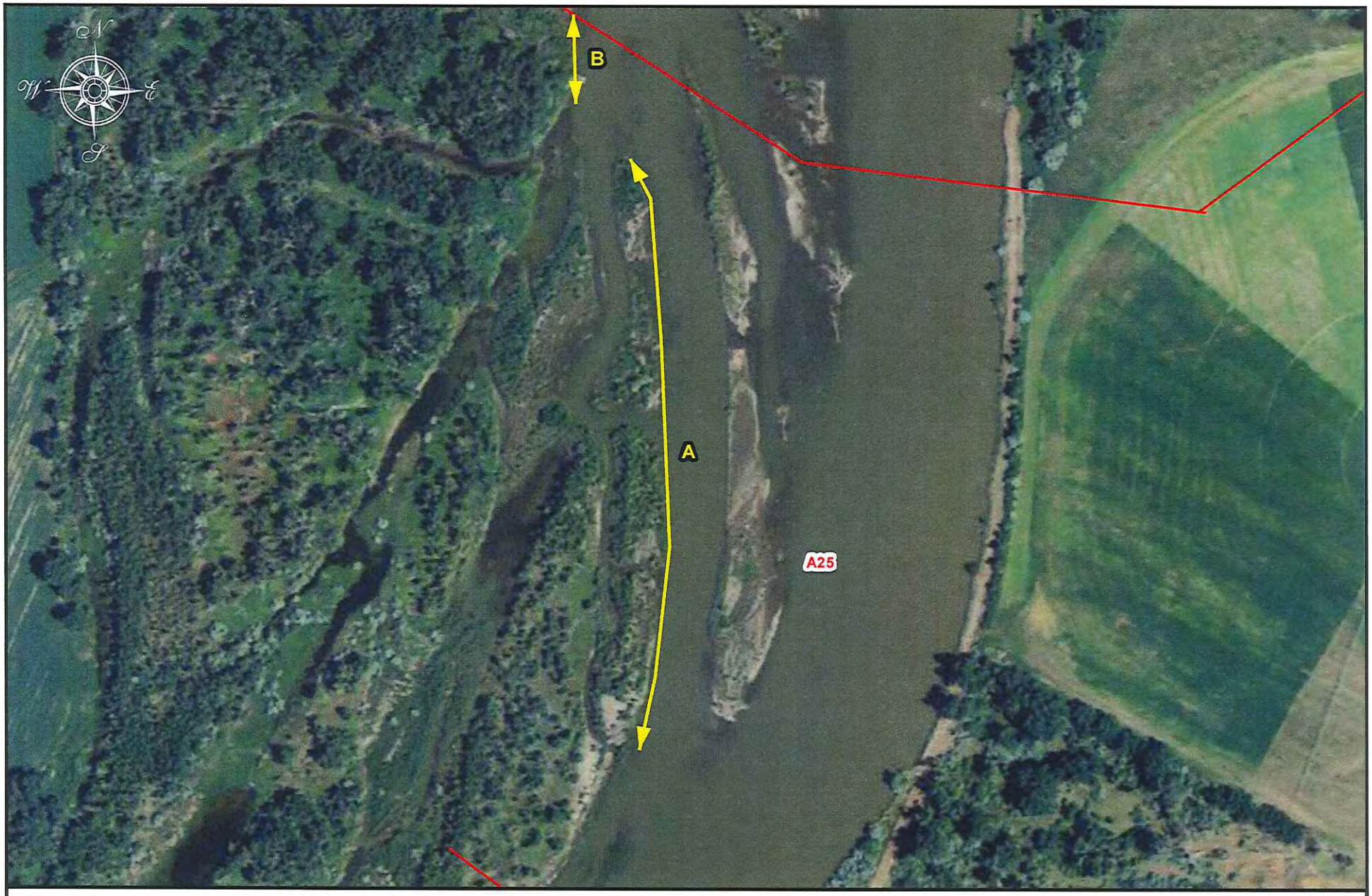
Height of oiled band on vegetation: Zone A – 10cm

Treatment Recommendations:

Zone A: Patchy distributions of stained vegetation observed along riverbank shoreline. No further treatment recommended along shoreline.

Zone B: No oil observed along the shoreline. No treatment required along shoreline.

Sketch **Yes** / No Photos **Yes** / No Frames 4844-4845 (Milanes)



SCAT Teams 1 & 2 Survey

Segment A25 - Left Bank

18 July 2011

300 0 300 Feet

Legend

Segment Boundaries

Oiling Zones

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident Page 1 of 1

1 GENERAL INFORMATION	Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A25 Left Bank / **Right Bank** / Island	11-Jul-2011		low - mean - bankfull - **overbank**
Operations Division: A		1047 hrs to 1048 hrs	**falling** - steady – rising
Survey by: Foot / ATV / **Boat** / Helicopter / Overlook / _____	**Sun** / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 29.4 deg C

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

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 631 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 (S) Permeable (P) (type) Riprap | Wetland: Swamp____ Bog/Fen____ Marsh____

Sediment Bank: Clay/Mud____ Sand____ Mixed S Pebble/Cobble S Boulder____ Peat/Organic____ | Vegetated Bank: P | Wooded Upland: S

Sediment Flat: Clay/Mud____ Sand____ Mixed/Coarse____ | Other: ____ | If snow and ice use Winter River SOS

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

Cliff or Bluff: ____ Est Height ____ m | canyon____ manmade____ meander P confined or leveed____ | Substrate Type: mixed

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 1–10 m **10–100 m** >100m 95 m | est. water depth : <1 m 1-3 m **3-10 m** >10 m ____ m

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

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

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

Debris: **Y** / N oiled **Y** / N amount ____ bags or 1 trucks | access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	
97 A			X		631	0.75	95			X	X		X								Grass, trees, debris, rocks

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

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

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

Zone A Oiled Band Height: 30cm

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

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

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

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

3334 - 3357

Ver. 04 July 2011

SCAT Teams 2 & 4 Survey

Segment A25 Right Bank

11-Jul-2011

400 0 400 Feet

Legend

Oil Zones

Segment Boundaries

DB / 6

...VER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

1 GENERAL INFORMATION

Segment/Reach ID: A25 Left Bank / Right Bank / Island

Operations Division: A

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

Date (dd/mm/yy): 21/07/11

Time (24h): std / daylight 1048 hrs to 1056 hrs

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

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

Air Temp + / 27 deg C

2 SURVEY TEAM # 6

name		organization	contact phone number
Chelsea Murphy	[signature]	Cardno ENTRIX	775-313-3976
JAMES ROGERS	James Rogers	USCG PAC STRIKE TEAM	727-244-8292
Steve Kennedy	Steve Kennedy	Cardno Entrix	281/723-1259
Darrick Turner	[signature]	MT DEQ	406-444-1504

3 SEGMENT Total Segment/Reach Length 630 m Segment/Reach Length Surveyed 630 m

Start GPS: LATITUDE 45.68~~053~~ deg. 7794-CKM min. LONGITUDE 108.66~~48~~ deg. 663-CKM min. Datum: WGS84

End GPS: LATITUDE 45.68~~383~~ deg. — min. LONGITUDE 108.66~~423~~ deg. — min.

4A RIVER BANK TYPE 29 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) ____ Wetland: Swamp ____ Bog/Fen ____ Marsh ____

Sediment Bank: Clay/Mud S Sand ____ Mixed ____ Pebble/Cobble P 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

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

Sloped: 85° (>5°)(15°)(30°) straight ____ braided P oxbow ____ flood plain valley ____

complete for primary: Substrate Type: Cobble; Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: <1m 1–10 m 10–100 m >100m 300 m

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

shoal(s) present Y / N point bar present Y / N

bar-shoal substrate: silt / sand / gravel / cobble / boulder / bedrock / debris

seasonal water level: low / mean / bank full / overbank flow

est. change over next 7 days: falling — same — rising

5 OPERATIONAL FEATURES Suitable backshore staging Y/N

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

Debris: Y / N oiled Y / N amount ____ bags or ____ trucks

access restrictions Private property + cropland adjacent

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 MS	LB	UB	OB	OIL COVER Length m	Width m	Distrib. %	OIL THICKNESS TO	CV	CT	ST	FL	OIL CHARACTER FR	MS	TB	PT	TC	SR	AP	NO	SUBST. TYPE(S)
414 A				P	630	25	Ø													P	Cobble/Sand

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

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

Zone A Recommendation - NFT - NOO - oil observed on mid-bank

(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# _____

Ver. 04 July 2011

A25 - A
(L/R/I)??

DATE: 7/21/11

TEAM: Scat 6

COMMENTS:

overbank only

0 60 120 180 240
Meters

SCAT TEAM 6 7/21/11

0800 - Arrived @ duck creek
S.A - met team

0845 - arrive @ house for parking - @ Seg A23

Pic 4 - track log time

0900 Begin Seg. ~~A23~~ A22 RB Zone A

WP #1 45.67042
0909 < N ~~45.67118°~~ W ~~108.68108°~~ 108.68306 > maybe in Seg 22A

- Begin Seg A22 → Begin Seg A22
- OPS present - & has been working last few days - Cut grasses.
- we are only doing OB work
* After talking w/ ops - realized that we are in A22

Pic 5: End of Seg A22 - Begin a 23

7/21/11

WP #2 N 45.673666°
W 108.67713°
→ End Seg A23 - @ 0930
* only 1 zone - A
- NOO
→ OPS working - weed cutting & removal of debris
* Ops doing excellent job.
- small patches of oil - Ops is working in area & know where the oil is located
- NFT

~~#WP2~~ N 45.673666° 7/21/11
begin @ 0946 W 108.67713°
Begin Seg A23 Zone A

WP #3 N45.67450 > Time 1003
W 108.67286
- End Seg A23 Zone A

only 1 zone - NOO

- NFT

Time: 1014
WP#3 - Begin ~~Zo~~ Seg A24
Zone A

- In OB
- Pic #6 - man-made levee @ bank.
- Pic #7 - " - looking down River

WP#4 N 45.68053
W 108.66489°

Time: 1036
* ~~Enter~~ end Seg A24
- NOO in OB - no Further treatment

Time: 1048
• Seg A25 - Begin - Zone A
- WP#4 - End A24 begin A25
- oil along mid-bank observed
- NOT on OB

- oil mark - bath tub ring ~2' from top of bank
- H2O didn't over bank here

SCAT team 6 7/21/11

WP #5 45.68383 > Time: 1056
108.66423

END Seg A25
- NOO in OB
- NFT
- No photos

Seg A26 - Zone A
Time: 1106
WP#6 - begins Seg A26
N 45.68387 > Zone A
W 108.66416
- Oil observed in a low spot along shore - through OB
- Stain on bottom stem of grasses
Pic #8 "
Pic #9 Coat on grass + small debris
- width of oiled area average -
- Veg oiled from ground up to 1.5' off ground.
pic #10 - Cover on ground by large woody debris
- not on debris -

7/21/11

WP 07 N 45.686997°
W 108.662206°
Time: 1142
* END SEG 26 - Zone A
- only 1 Zone

~1000 m circle from wooded Area up into Cottonwoods.

- treatment Same
- all in OB
- ~15% - patchy distribution

- In game preserve
  - segment splits game reserve + private property
  - could all be private

Recom: = Cutting / mowing grasses
- hand removal of small oiled debris
- Raking of small patches of debris.
  - small less than 6" trees cut -

- Scrapping w/ hand tools to remove oiled sediment + debris.

- dead + oiled Canadian goose observed @ 45.68715, 108.66603
  - Derrick took photos - - Called wildlife hotline

WP #8 Begin Seg A27 - Zone A
N 45.686699
W 108.662206 @ Time: 1159

→ Between 8 + 9 WP - Zone A

WP #9 45.686613
108.65931 > Time 1211

End Zone A - Begin Zone B

Zone A -
W ~ 30 m
- P = stain
- m veg.
- % distribution.
- primarily oiled debris piles
- tree staining.

Zone B
pic #11 oiled small debris pile
pic #12 tree ring.

Pic #13 - larger oiled debris pile.

- Reached side channel
  - Fast flowing current ~~#1~~ not able to cross.
  - ending Zone B

WP #10 N 45.68620 W 108.65683 time 1224

- END ZONE B

P = oiled small debris
~ 100m wide
- % O = 8% sporadic
- Cover = P

*ENDED Seg A27 - can't get around flow.

WP 11 @ 1234 - 45.68592 108.65769
- water/mud/wetland
  - possible sheen from oil
    - rainbow - trace.

Scat team 7/21/11

→ ~~Not going to work on 28~~
~~- did Seg A28 a few days ago.~~
~~- going ahead to A29~~ CKM 7/21/11

OB @ Seg A28

WP #12 Time: 1248
N 45.68250
W 108.65508
Begin Seg A28 Zone A

WP #13 @ 1314 pm

N 45.68692°
W 108.64284
- end Seg A28 - OB only
- NOD
- NFT

Cmm 7/21/11

SCAT TEAM 6 7/21/11

Seg A29 - Zone A: RB

WP # 14 N 45. 68 738
W 108. 64188

Time: 1355

Begin @ Staging Area & work downstream.

- ended on Road way -
mostly not accessible due to
swampy conditions + dense veg

ended @ 45. 68816 N
108. 6413 W
Time: 1418

[redacted]

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: ~~B~~ A25 Left Bank / **Right Bank** / Island	01/09/11	1000 hrs to 1100 hrs	low - **mean** - bankfull - overbank
Operations Division: ~~B~~ A			**falling** - steady – rising
Survey by: **Foot** / ATV / Boat / Helicopter / Overlook / _____	**Sun** / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - ____ deg C

2 SURVEY TEAM # 2	Name	Organization	Signature
	Pete Lee	Polaris	PBLee
	Eric Harlow	Cardno ENTRIX	Bernard Eric Harlow
	~~Griff Miller~~ Stephen Ball	USEPA	~~Griff Miller~~ Stephen Ball
	Larry Alheim	MTDEQ	

3 SEGMENT Total Segment/Reach Length 630 m Segment/Reach Length Surveyed 630 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 5 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 1–10 m 10–100 m >100m m **est. water depth :** <1 m 1-3 m >10 m _____ m

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

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

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

Debris Y / N oiled Y / N amount ____ bags or ____ trucks Access restrictions: ~~Boat only~~ Private Landowner

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

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	
1996 A			X		520	2	60		X	X	X						X				Grass, trees, debris
1997 B			X		110	5														X	"
~~1998 C~~				X	~~430~~	~~660~~														X	Crop

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

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

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

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

Oil height: 4 m

Treatment recommendations:

Zone A : ~~No further treatment required~~ ATM #1, #2

Zone B : NO

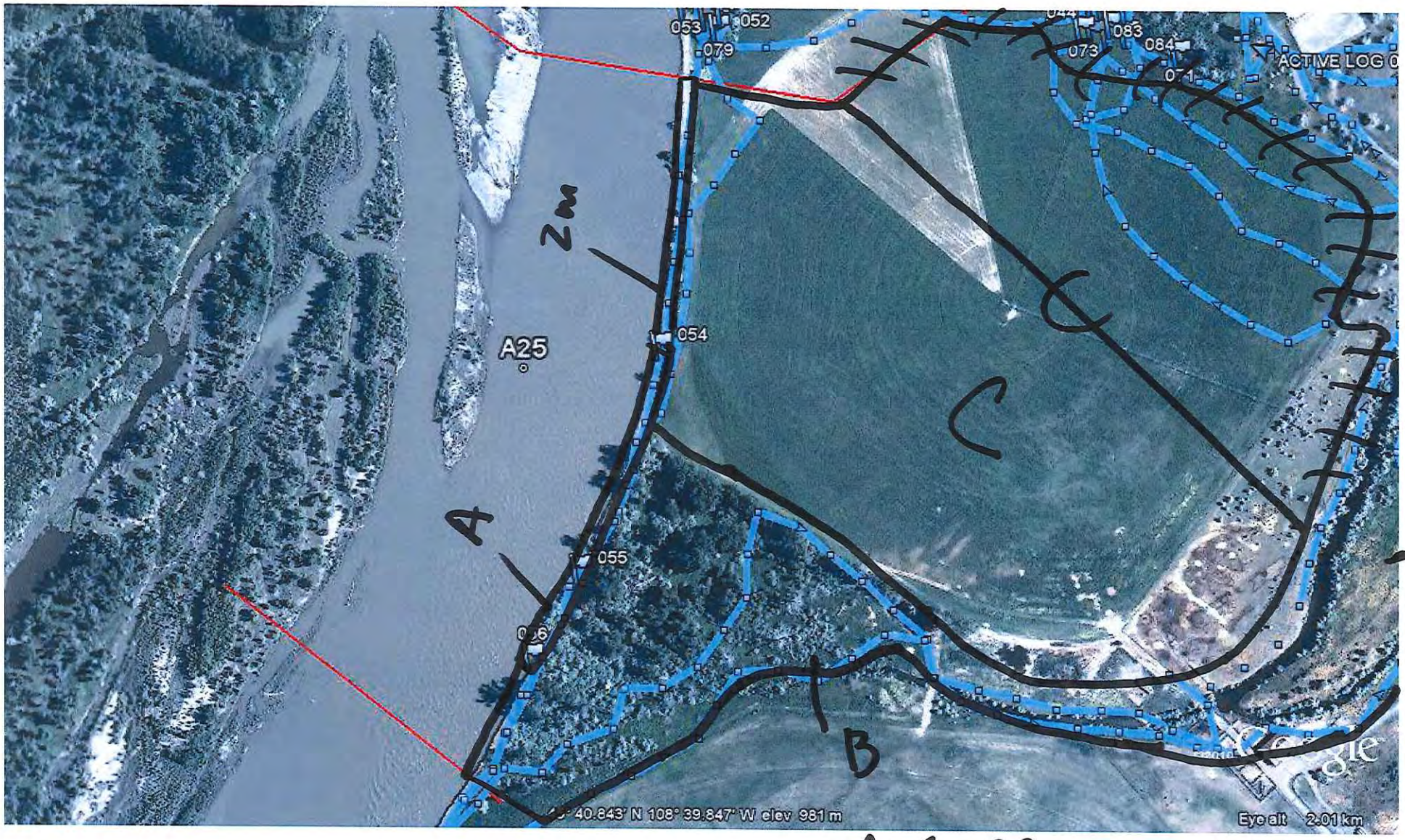
~~Zone C : NO (Agricultural land with crop)~~ * Zone C not surveyed, crops claims.

~~Ops Hot Shot (Rich Jessup)~~

Note: Very steep bank with active erosion / slumping

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

Ver. 04 July 2011



A25-RB
SCAT 2
1 Sept 2011

Appendix C

Pre-Inspection Survey Transmittal

ARCADIS

A Pre-Inspection Survey was not conducted for this area

Appendix D

Post-Inspection Survey Transmittal

ARCADIS

A Post-Inspection Survey was not conducted for this area

Appendix E

Final SCAT Survey Forms
and Sketches

DB16

R

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION

Segment/Reach ID: A 25 Left Bank / Right Bank / Island

Operations Division:

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

Date (dd/mm/yy): 1/9/11

Time (24h): std / daylight 11:00 hrs to 12:00 hrs

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

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

Air Temp + / - 00 deg C 21

2 SURVEY TEAM # 1

Name	Organization	Signature
Tom Freeman	Polaris	Tom Freeman
Griff Miller	EPA	
Jeffrey Herrick	MT DEQ	

3 SEGMENT Total Segment/Reach Length 375 m Segment/Reach Length Surveyed 375 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 S Mixed S 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 ____ 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 1–10 m 10–100 m >100m 160m | est. water depth: <1 m 1-3 m 3-10 m >10 m ____ m

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

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

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

Debris Y / N oiled Y / N amount 0 bags or ____ trucks | access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	
2019 A				X	375	63	<1				X						X				Debris/Veg

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

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

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

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

Zone A: Minor occurance of stain primarily on shrubs.

Zone A = NFT

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

A25-IS TEAM #1 1/9/11

DB/6 (R)

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION

Segment/Reach ID: A-25 (Left Bank) / Right Bank / Island

Operations Division:

Date (dd/mm/yy): 1/9/11

Time (24h): std / daylight 14:00 15:00 ~~13:00~~ hrs to ~~14:00~~ hrs

Water Level: low - (mean) - bankfull - overbank; falling - (steady) - rising

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

Air Temp + / - 21 deg C

2 SURVEY TEAM # 1

Name	Organization	Signature
Tom Freeman	Polaris	[signature]
Griff Miller	EDA	[signature]
Jeffery Herrick	MT DEQ	[signature]

3 SEGMENT Total Segment/Reach Length 500 m Segment/Reach Length Surveyed 500 m

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

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

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

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

Sediment Bank: Clay/Mud ____ Sand 5 Mixed 5 Pebble/Cobble 5 Boulder ____ Peat/Organic ____ Vegetated Bank: (P) Wooded Upland: ____

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

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

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width: < 1m 1–10 m 10–100 m (>100m) 160m est. water depth: <1 m (1-3 m) 3-10 m >10 m ____ m

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

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

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

Debris (Y) N oiled Y / (N) amount ____ bags or ____ trucks access restrictions

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

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

OIL ZONE ID	RIVER BANK ZONE MS	LB	UB	OB	OIL COVER Length m	Width m	Distrib. %	OIL THICKNESS TO	CV	CT	ST	FL	OIL CHARACTER FR	MS	TB	PT	TC	SR	AP	NO	SUBST. TYPE(S)
2018 A				X	500	200	<1			5	P						X				Debris / 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 MS	LB	UB	OB	MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER SAP	OP	PP	OR	OF	TR	NO	WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)

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

The area included in the polygon on the attached map meets NFT standards.

Zone A = NFT

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

A25-LB TEAM #1 1/9/11

DB/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION

Segment/Reach ID: A025 (Left Bank) / Right Bank / Island

Operations Division: A

Date (dd/mm/yy): 03/09/11

Time (24h): std / daylight 0930 hrs to 1150 hrs

Water Level: low - (mean) - bankfull - overbank; (falling) - steady – rising

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

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

Air Temp + / - 22 deg C

2 SURVEY TEAM # 6

Name	Organization	Signature
Nathan Hammond	Cardno Entrix	[signature]
Austin West	USCG	[signature]
Matthew Kent	DEQ	[signature]

3 SEGMENT Total Segment/Reach Length 580 m Segment/Reach Length Surveyed 580 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 X 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: _____

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 1–10 m (10–100 m) >100m

est. water depth : <1 m (1-3 m) 3-10 m >10 m ____ m

shoal(s) present (Y) / N point bar present (Y) N

bar-shoal substrate: (silt) (sand) / gravel / (cobble) / boulder / bedrock / (debris)

seasonal water level: low (mean) / bank full / overbank flow

est. change over next 7 days : (falling) – same – rising

5 OPERATIONAL FEATURES Suitable backshore staging (Y) / N

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

Debris (Y) / N oiled (Y) / N amount <1 bags or ____ trucks

access restrictions

Oiled trees/shrubs (Y) / N River Current strong (Y) / N

Other Features:

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	
2081 A			P	S	580	180	<1				P						X				Veg
2082 B			P		390	30	<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	OILED ZONE	SUBSURFACE OIL CHARACTER							WATER TABLE	SHEEN COLOUR	CLEAN BELOW	SUBST. TYPE(S)
	MS	LB	UB	OB	cm	cm-cm	SAP	OP	PP	OR	OF	TR	NO	cm	B, R, S, N	Yes / No	

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

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

Zone A - Hot shot crew utilized ATM1, ATM2, ATM9 to clear segment. ATM7 sufficient for remaining oil. No Further Treatment.

Zone B - Same as zone A.

Re SCAT

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

0 am
9/3/2011 4:21 pm
4 pm
A25-LB
006
005
ZONE A
TRACE
004
003
002
ZONE B
A25-IS
VERY LIGHT
Team 6
A25LB
9/3/11
© 2011 Google
1996
45°40'54.15" N 108°40'07.49" W elev 3216 ft

PD/6

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident Page 1 of 3

1 GENERAL INFORMATION	Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A 25 (Left Bank) / Right Bank / Island	21/09/11	1300 hrs to 1530 hrs	low - mean - bankfull - overbank
Operations Division: A			falling - steady – rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____	Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - ____ deg C

2 SURVEY TEAM # 3	Name	Organization	Signature
	Pete Lee	Polaris	PDLee
	Jay Watson	MTFWP	

3 SEGMENT Total Segment/Reach Length ~~770~~ 600 m Segment/Reach Length Surveyed ~~770~~ 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 1–10 m 10–100 m (>100m) m | est. water depth : <1 m (1-3 m) >10 m _____ m

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

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

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

Debris (Y) / N oiled (Y) / N amount ____ bags or ____ trucks | Access restrictions:

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	
A				X	600	400	<1				P						X				Grass, trees, debris

2358

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

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

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

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

Oil height: 60 - 180 cm

Treatment recommendations:

Zone A : Treated by Ops and Hot Shot ; no further treatment

Zone B : NO COVERAGE, MOSTLY ABOVE FLOOD WATER LEVEL. JW 9/22/11

Sketch Yes / No Photos Yes / No Frames_____ Photographer_____

A26-RB
A25-LB
A25-IS
A25-RB
017
017
015
019
020
021
024
025
023
014
015
Utv 1
286 m
45° 40.937' N 108° 40.217' W elev 980 m
©2010 Google
Eye alt 2.22 km
A
B

T3 9/21/11

DB/G

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident Page 1 of 23

1 GENERAL INFORMATION	Date (dd/mm/yy)	Time (24h): std / daylight	Water Level
Segment/Reach ID: A25 (Left Bank / Right Bank / Island)	26/09/11	0900 hrs to 1130 hrs	low - mean - bankfull - overbank
Operations Division: A			falling - steady – rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____		Sun / Clouds / Fog / Rain / Snow / Windy / Calm	Air Temp + / - 30 deg C

2 SURVEY TEAM # 3	Name	Organization	Signature
	Pete Lee	Polaris	PBLee
	Mark Ewanic	MTDEQ	Mark Ewanic

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 560 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 P oxbow_____ flood plain valley X___ | Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

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

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

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

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

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

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	
A				X	560	300	<1			S	P						X				Grass, trees, debris

2396

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

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

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

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

Oil height: 30-90 cm

Treatment recommendations:

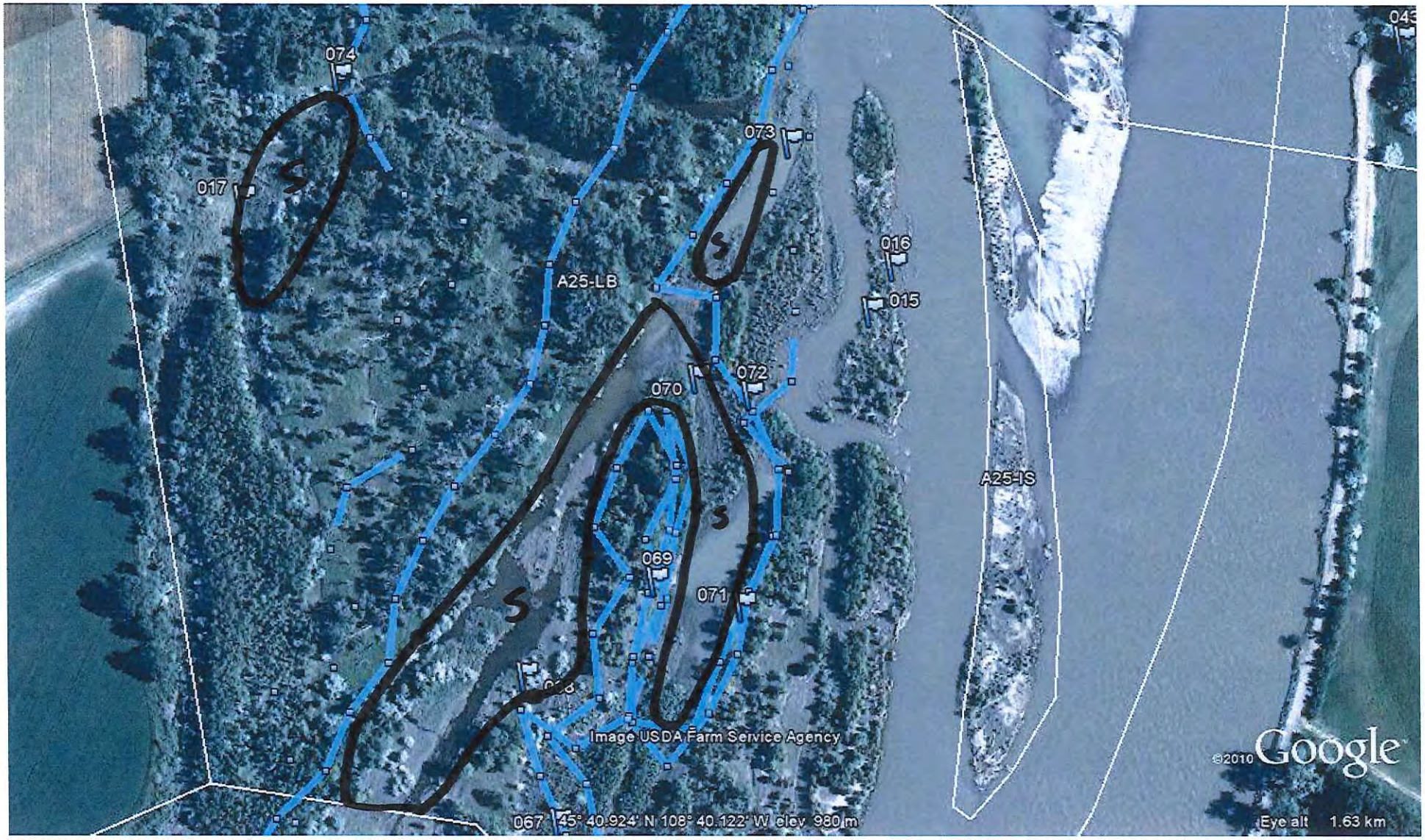
Zone A : Treated by Hot Shot Ops crew; No Further Treatment (NFT)

Zone :

Partial segment full-in; inundated swamp areas inaccessible

Sketch Yes / No Photos Yes / No Frames_____ Photographer_____

A25 LB Partial (Fill-in)
T3 9/26/11



A25 LB

S = Inaccessible swamp

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: A 25 Left Bank / Right Bank / Island	22/09/11	1530 ~~1330~~ hrs to 1600 hrs	low - **mean** - bankfull - overbank
Operations Division: A			falling - steady – rising
Survey by: **Foot** / ATV / Boat / Helicopter / Overlook / _____	**Sun** / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 30 deg C

2 SURVEY TEAM # 2	Name	Organization	Signature
	Merlo Gauvreau	Polaris	
	Pete Lee	Polaris	PBLee
	Jeffrey Frank Herrick	MTDEQ	

3 SEGMENT Total Segment/Reach Length 625 m Segment/Reach Length Surveyed 560 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 4 m | canyon_____ manmade_____ meander ____ confined or leveed P | 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 1–10 m 10–100 m >100m m | est. water depth: <1 m 1-3 m >10 m _____ m

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

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

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

Debris: Y / N oiled Y / N amount _____ bags or _____ trucks | Access restrictions: Williams property

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

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	
A			X		560	1	<1				X							X			Grass, trees, debris

2303

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

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

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

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

Oil height: 3 m

Treatment recommendations:

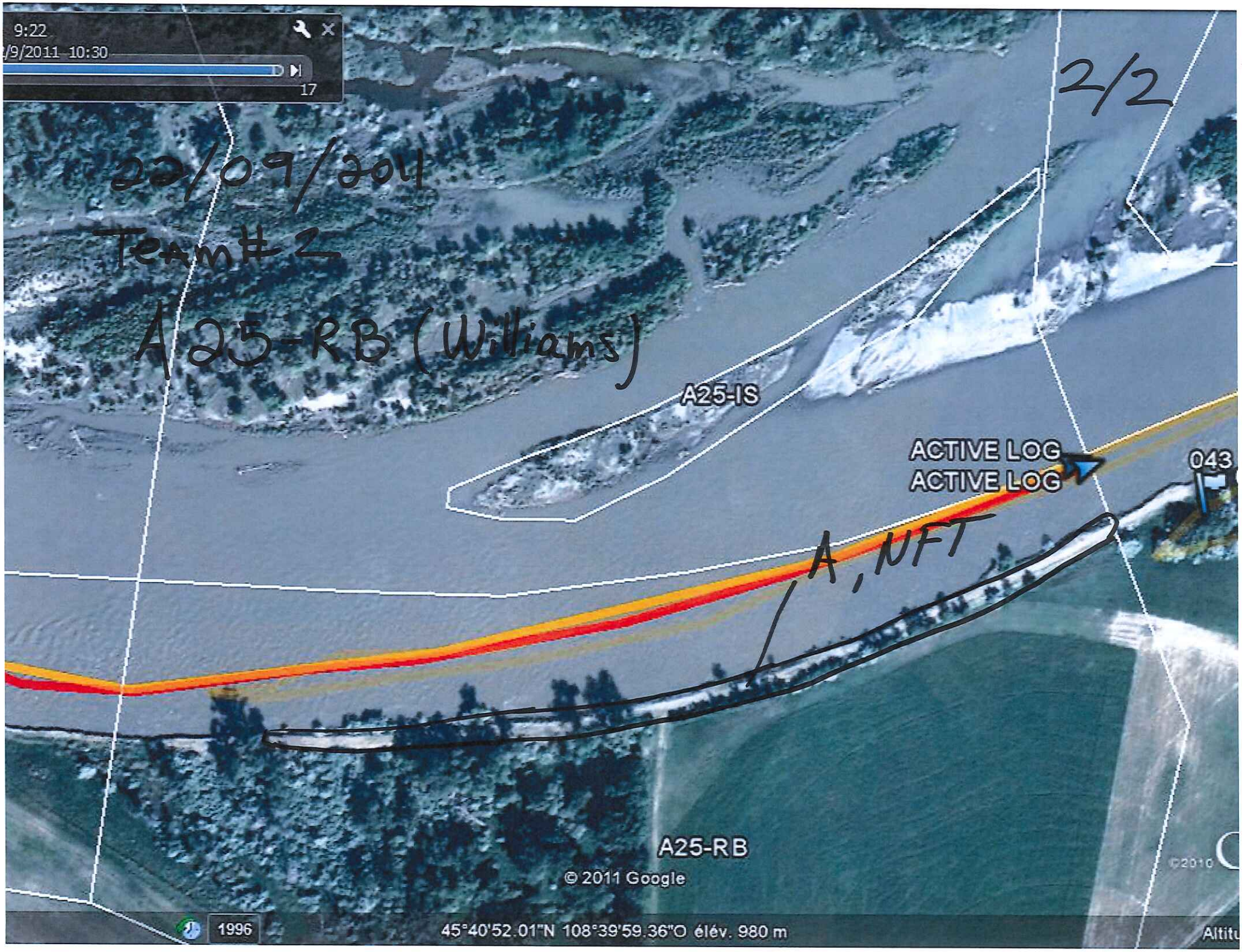
Zone A : Treated by Ops ; No Further Treatment ; CTR 63

Zone :

Williams property

Sketch Yes / No Photos Yes / No Frames_____ Photographer_____

Ver. 04 July 2011


9:22
/9/2011 10:30
17
2/2
22/09/2011
Team # 2
A25-RB (Williams)
A25-IS
ACTIVE LOG
ACTIVE LOG
043
A, NFT
A25-RB
© 2011 Google
1996
45°40'52.01"N 108°39'59.36"O élév. 980 m

Appendix F

Completed SCAT Segment Sign-Off Forms

SCAT Segment Operations Completion Sign-Off Sheet

Silvertip Pipeline Release

Segment A-25 Is Date of Survey 1/9/11

Dates of Initial SCAT Assessments 15 JUL 11 (IL)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment CTR # 23

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

Segment Assessment Complete[1] ☒

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

[signature] Jeffrey Frank Herrick 01 Sept. 2011
Sign Name Print Name/ Affiliation Date
State Representative (DEQ/FWP) MT DEQ

[signature] Tom Freeman/Polaris 1/9/11
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 A25 - Left Bank Date of Survey 1/9/11

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

CTR(s) Associated with SCAT Segment CTR # 13

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

Segment Assessment Complete[1] ☐

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).

Sign Name	Print Name/ Affiliation	Date
	Giff Miller / EPA	9-2-11

Federal Representative (EPA/USCG)

Sign Name	Print Name/ Affiliation	Date
	Jeffrey Frank Herrick MT DEQ	01 Sept. 2011

State Representative (DEQ/FWP)

Sign Name	Print Name/ Affiliation	Date
Tom Freeman	Tom Freeman	1/9/11

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 A25LB

Date of Survey 9/3/11

Dates of Initial SCAT Assessments 11JUL11 IC
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 13

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

Segment Assessment Complete[1] ☒

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).

Sign Name	Print Name/ Affiliation	Date
	AUSTIN WEST USCG	9/3/2011

Federal Representative (EPA/USCG)

Sign Name	Print Name/ Affiliation	Date
	DEQ	9/3/2011

State Representative (DEQ/FWP)

Sign Name	Print Name/ Affiliation	Date
	Nathan Hammond / Cardno Entrix	9/3/11

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 A25 LB

Date of Survey 9/21/11

Dates of Initial SCAT Assessments 11 Jul 2011 (12)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 13

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

Segment Assessment Complete[1] ☒

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).

Sign Name	Print Name/ Affiliation	Date
No Federal Rep Present		

Federal Representative (EPA/USCG)

Sign Name	Print Name/ Affiliation	Date
[signature]	JAY WATSON FWP	9/22/11

State Representative (DEQ/FWP)

Sign Name	Print Name/ Affiliation	Date
P B Lee	Pete Lee / Polaris	9/21/11

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 A 25 LB

Date of Survey 9/26/11

Dates of Initial SCAT Assessments 11 Jul 11 (to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 13

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

Segment Assessment Complete[1] ☐

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).

Sign Name	Print Name/ Affiliation	Date
	No Federal Rep Present	
Federal Representative (EPA/USCG)		
	MARK EWANIC / MT DEQ	9/26/11
State Representative (DEQ/FWP)		
P B Lee	Pete Lee / Polaris	9/26/11
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 A25 RB

Date of Survey 9/22/11

Dates of Initial SCAT Assessments 11 Jul 2011 (R)
(to be filled out by SCAT Data Management)

CTR(s) Associated with SCAT Segment 63

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

Segment Assessment Complete[1] ☒

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).

Sign Name	Print Name/ Affiliation	Date
No Federal Rep Present		

Federal Representative (EPA/USCG)

Sign Name	Print Name/ Affiliation	Date
[illegible]	Jeffrey Frank Henrich MTDEQ	22 Sept 2011

State Representative (DEQ/FWP)

Sign Name	Print Name/ Affiliation	Date
PBLee	Pete Lee / Polaris	9/22/11

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.