Imagine the result

ExxonMobil Pipeline Company

SCAT Area Transition Report for B14

Silvertip Pipeline Incident
Laurel, Montana

October 19, 2011

SCAT Area Transition Report for B14

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.:
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Date:
October 19, 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 B14, 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 B14. 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 B14, 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 B14 is 19.4. 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 area. International Bird Rescue and Resource Advisors from U.S. Fish and Wildlife Service conducted regular inspections of Area B14. No oiled wildlife was observed or recovered. No Wildlife Priority Cleanup Areas were identified. No active migratory bird nests were identified in Area B14.

1.3 Summary of Environmental Sampling

Table 1 (below) summarizes samples collected within Area B14. 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 B14 are provided on Figure 3.

Table 1 Environmental Sampling Summary

Agency	Sample Num	Date	Matrix	Location	Latitude	Longitude
CTEH	LAMT0826SO621	26-Aug-11	Soil_River	B14	45.720825	-108.589716

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, sample results were not available at the time of report production.

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 B14 are included in Appendix B. Figure 4 provides the maximum oiling zones observed by the SCAT team during the initial surveys of Area B14.

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. 8 and CTR No. 34).

1.6 Oil Removal Activities

Oil removal activities were conducted within Area B14 in accordance with the ATMs identified in the CTRs. Appendix I of the Summary of Assessment and Oil Removal Activities report presents this data including: date range/days worked, average number of people working per day, equipment used, and various types of bags removed: oily debris, personal protective equipment, plastic, trash, super sacks, wood chips, and contaminated wood.

1.7 Pre-Inspection Survey Transmittal

SCAT Operations liaisons performed an inspection of the remediated areas of SCAT Area B14 and developed a Pre-Inspection Survey Transmittal (PIST) associated with the right bank within Area B14, which is presented in Appendix C.

1.8 Post-Inspection Survey Transmittal

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

1.9 Summary of Final SCAT Surveys

Figure 5 shows the oiling conditions within Area B14 following completion of oil removal activities. The SCAT team performed final surveys of the right and left banks within SCAT Area B14 to confirm the agreed-upon cleanup endpoints identified in the applicable CTRs had been achieved. The final SCAT survey documentation is presented in Appendix E.

1.10 SCAT Area Conclusions

Based on the final SCAT surveys performed on the right and left banks within Area B14, no further treatment is recommended for this area. SCAT Segment Sign-Off Forms are included as Appendix F.

2. Transition Sign-Off Form

SCAT Area Transition Report for B14

Prepared for:

Unified Command

_____

Date

_____

Unified Command – RP

SCAT Area Transition Report for B14

Prepared for:

Unified Command

10/10/2011
Date

S. Merritt
Unified Command – FOSC

SCAT Area Transition Report for B14

Prepared for:

Unified Command

_____

Date

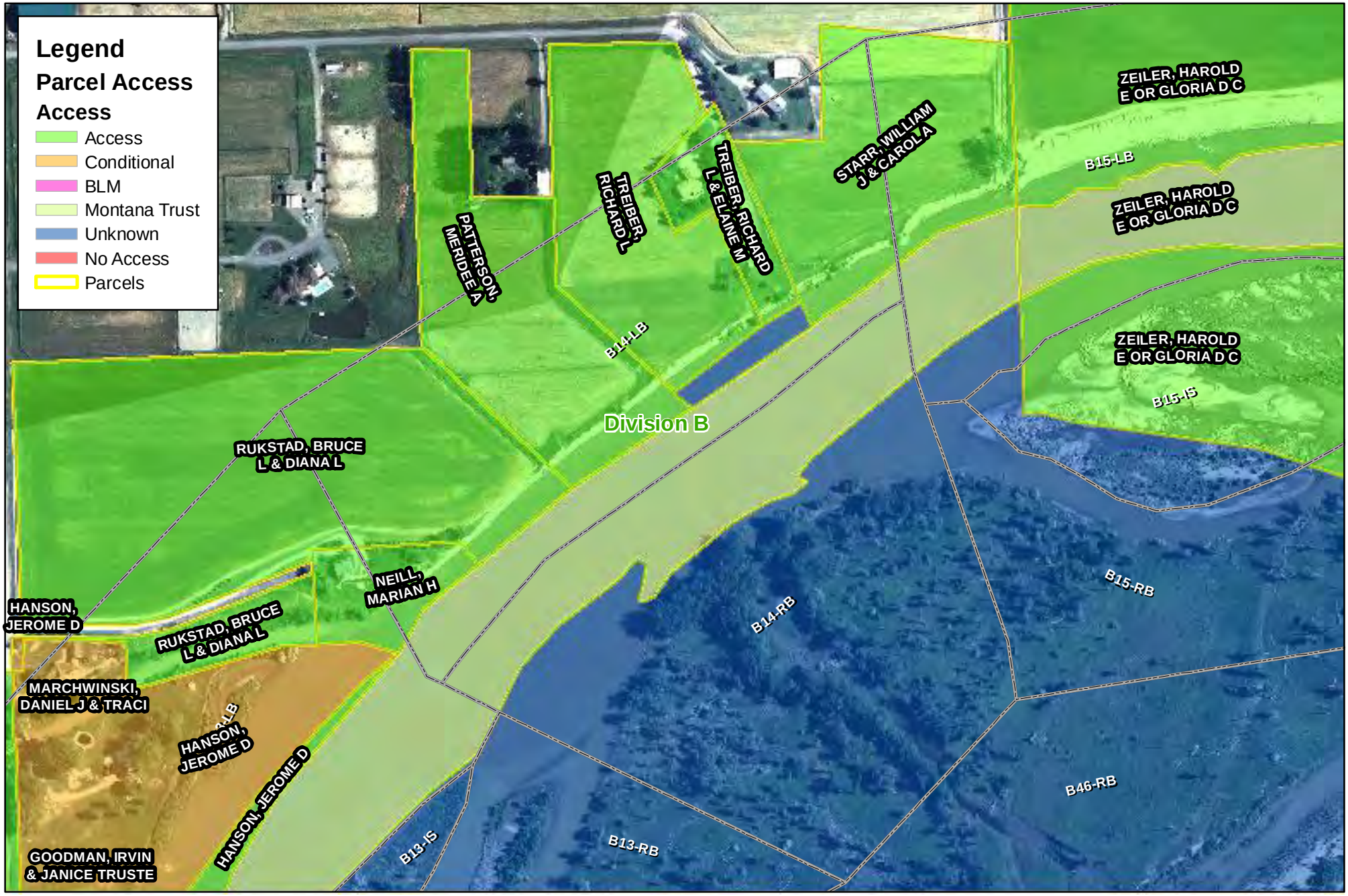
_____

Unified Command – MDEQ

Silvertip Pipeline Incident
Area Transition Report Map - Parcels
Segment - B14

9/27/2011

1:4,000



0 400 800 1,600 Feet

Figure 1

Date: 9/27/2011 Time: 12:16:42 PM

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

Silvertip Pipeline Incident
SCAT Area Transition Report Map
Area - B14

ExxonMobil Pipeline

N

1:4,800

9/25/2011

The Response Group

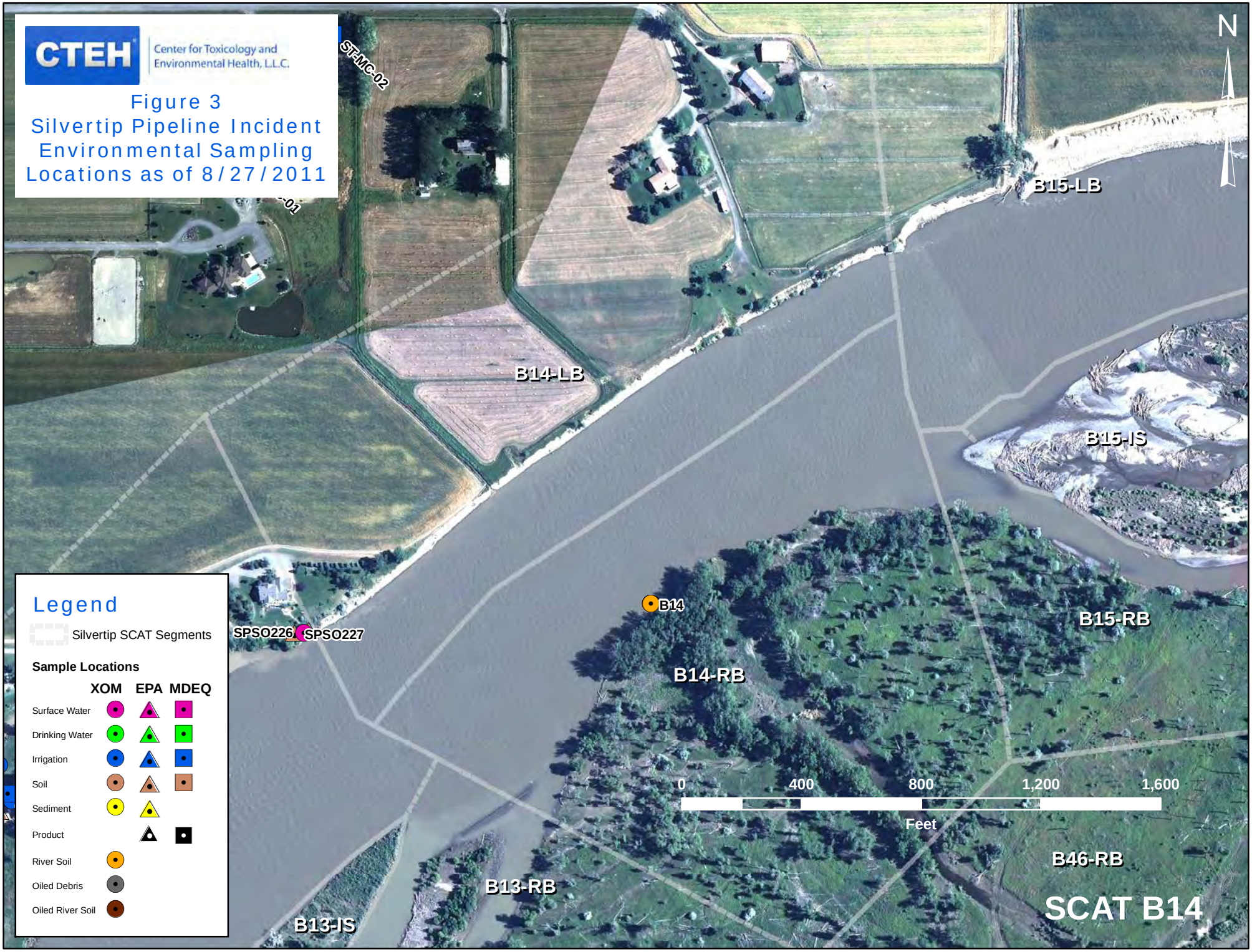
Path: P:\GIS\MXD's\Wildlife\ATR Maps - Figure 2\ATR Map_Div.B_Fig2_09252011.mxd

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

0 500 1,000 2,000 Feet

Figure 2
Wildlife Resources

Date: 9/25/2011 Time: 12:23:12 PM


CTEH
Center for Toxicology and Environmental Health, L.L.C.
Figure 3
Silvertip Pipeline Incident
Environmental Sampling
Locations as of 8/27/2011
N
ST-MC-02
B15-LB
B14-LB
B15-IS
B14
B15-RB
SPSO226
SPSO227
B14-RB
0
400
800
1,200
1,600
Feet
B46-RB
B13-RB
B13-IS
SCAT B14
Legend
Silvertip SCAT Segments
Sample Locations
XOM
EPA
MDEQ
Surface Water
Drinking Water
Irrigation
Soil
Sediment
Product
River Soil
Oiled Debris
Oiled River Soil

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

250 0 250 500 Feet

Figure 4 - Maximum SCAT Observations For SCAT Area: B14

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: 9/27/2011 4:58:39 PM

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

250 0 250 500 Feet

Figure 5 - Final SCAT Observations For SCAT Area: B14

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: 9/27/2011 5:29:11 PM

Appendix A

Sample Detections Summary

Detections in Samples Collected in SCAT Area B14

Printed 9/7/2011

NA - Not Available

Detected Above Screening Level

Sample Num	Sample Type	Matrix	Analytical Method	Analyte	Detected	Result	Screeining Level	Result Qualifier	Units	Above?

Sample Results Not Yet Available

Appendix B

Initial SCAT Survey Forms and Sketches

DB/G/Sc n.

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

1 GENERAL INFORMATION

Segment/Reach ID: B14 Left Bank / Right Bank / Island

Operations Division: B

Date (dd/mm/yy): 15/07/11

Time (24h): std / daylight 1215 hrs to 1245 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 + / - ____ deg C

2 SURVEY TEAM # ____

name	organization	contact phone number
John Williams / Connor Kobeski CK	Cardno ENTRIX	361·676·8138
Bob Nailon / Chuck Pons CM	Cardno ENTRIX	713·817·2469
Patrick Kriski / James Rogers JR	USCG	727·244·8292 415-320-5318
Courtney Tyree / Matt Lodd	MT FWP	406·860·7814

3 SEGMENT Total Segment/Reach Length 330 m Segment/Reach Length Surveyed 190 m

Start GPS: LATITUDE 45.71939° deg. ____ min. LONGITUDE -108.59035° deg. ____ min. Datum: WGS 84

End GPS: LATITUDE 45.71916° deg. ____ min. LONGITUDE -108.58747° 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

Cliff or Bluff: ____ Est Height 1 m canyon ____ manmade ____ meander S confined or leveed ____

Sloped: 0 (>5°)(15°)(30°) straight ____ braided ____ oxbow ____ flood plain valley ____

complete for primary Substrate Type: Vegetated

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 15 bags or ____ trucks access restrictions

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

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

	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)
194	A				P	200	120	60			S	P		P								DB/VG
195	B	B				130	160	0													P	
196	C	P				17	160	10				P		P								DB/VG

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

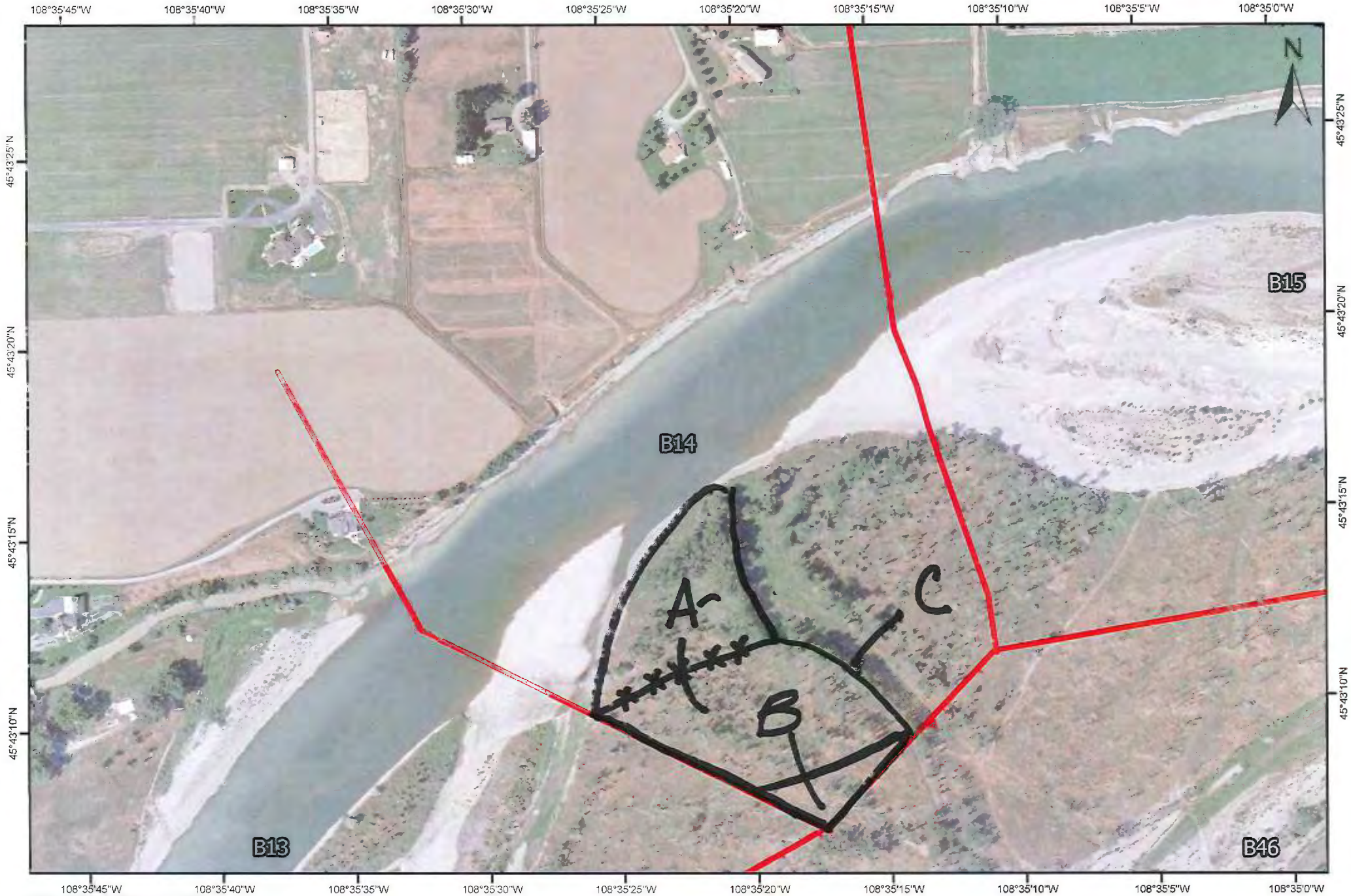
TRENCH or PIT NO.	RIVER BANK ZONE MS	LB	UB	OB	MAX. PIT DEPTH cm	OILED ZONE cm-cm	SUBSURFACE OIL CHARACTER SAP	OP	PP	OR	OF	TR	NO	WATER TABLE cm	SHEEN COLOUR B, R, S, N	CLEAN BELOW Yes / No	SUBST. TYPE(S)

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

Oil Zone A: oil debris removal recommended; cut/removal with hand held for oiled vegetation

(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# ____



B14 - (L/R/I)??

DATE:

TEAM:

COMMENTS:

0 50 100 150 200
Meters

DB/G/SC

n

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

1 GENERAL INFORMATION

Segment/Reach ID: B14 Left Bank / Right Bank / Island

Operations Division: B

Date (dd/mm/yy): 16/07/11

Time (24h): std / daylight 0912 hrs to ~~0930~~ 0940 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 + / - 25 deg C

2 SURVEY TEAM # 4

name	organization	contact phone number
John Williams / Connor Kobeski CK	Cardno ENTRIX	361·676·8132
Patrick Kriske	USCG	415·596·6587
Ken Frazer	MT FWP	406·245·0590

3 SEGMENT

Total Segment/Reach Length 350 m Segment/Reach Length Surveyed 350 m

Start GPS: LATITUDE N45° deg. 43.168' min. LONGITUDE W108° deg. 35.219' min. Datum: WGS 84

End GPS: LATITUDE N45° deg. 43.272' min. LONGITUDE W108° deg. 35.217' 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: ____

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 1 m canyon ____ manmade ____ meander P confined or leveed ____

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

complete for primary: Substrate Type: vegetated; 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 5 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)
239	A				P	130	60	0													P	Veg
240	B			P		180	1	60			S	P		P								Veg
241	C				P	140	50	50			S	P		P								Sed

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

Oil Zone A: No recommendations; no oiling present.

Oil Zone B: Sparse, thin band width, very light staining with sporadic patches of coat. No recommendations at this time

Oil Zone C: Hand cut/bag recommended for oiled vegetation

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

Sketch Yes/No Photos Yes/No (Roll # 19 Frames ____) Video Tape Yes/No (tape# ____

DB/G/SC

n

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: B14 Left Bank / Right Bank / Island	16/07/11	0912 hrs to ~~0930~~ 0940 hrs	low - mean - bankfull - overbank
Operations Division: B			falling - steady - rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook /	Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 25 deg C

2 SURVEY TEAM # 4	name	organization	contact phone number
John Williams / Connor Kobeski		Cardno ENTRIX	361.676.8132
Patrick Kriske		USCG	415.596.6587
Ken Frazer	Ken Frazer 8/29/11	MT FWP	406.245.0590

3 SEGMENT Total Segment/Reach Length 350 m Segment/Reach Length Surveyed 350 m

Start GPS: LATITUDE N45° deg. 43.168' min. LONGITUDE W108° deg. 35.219' min. Datum: WGS 84

End GPS: LATITUDE N45° deg. 43.272' min. LONGITUDE W108° deg. 35.217' 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: ___

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 1 m | canyon ___ manmade ___ meander P confined or leveed ___ | Substrate Type: vegetated

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 ___ 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 5 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)
239	A				P	130	60	0													P	Veg
240	B			P		180	1	60			S	P		P								Veg
241	C				P	140	50	50			S	P		P								Sed

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

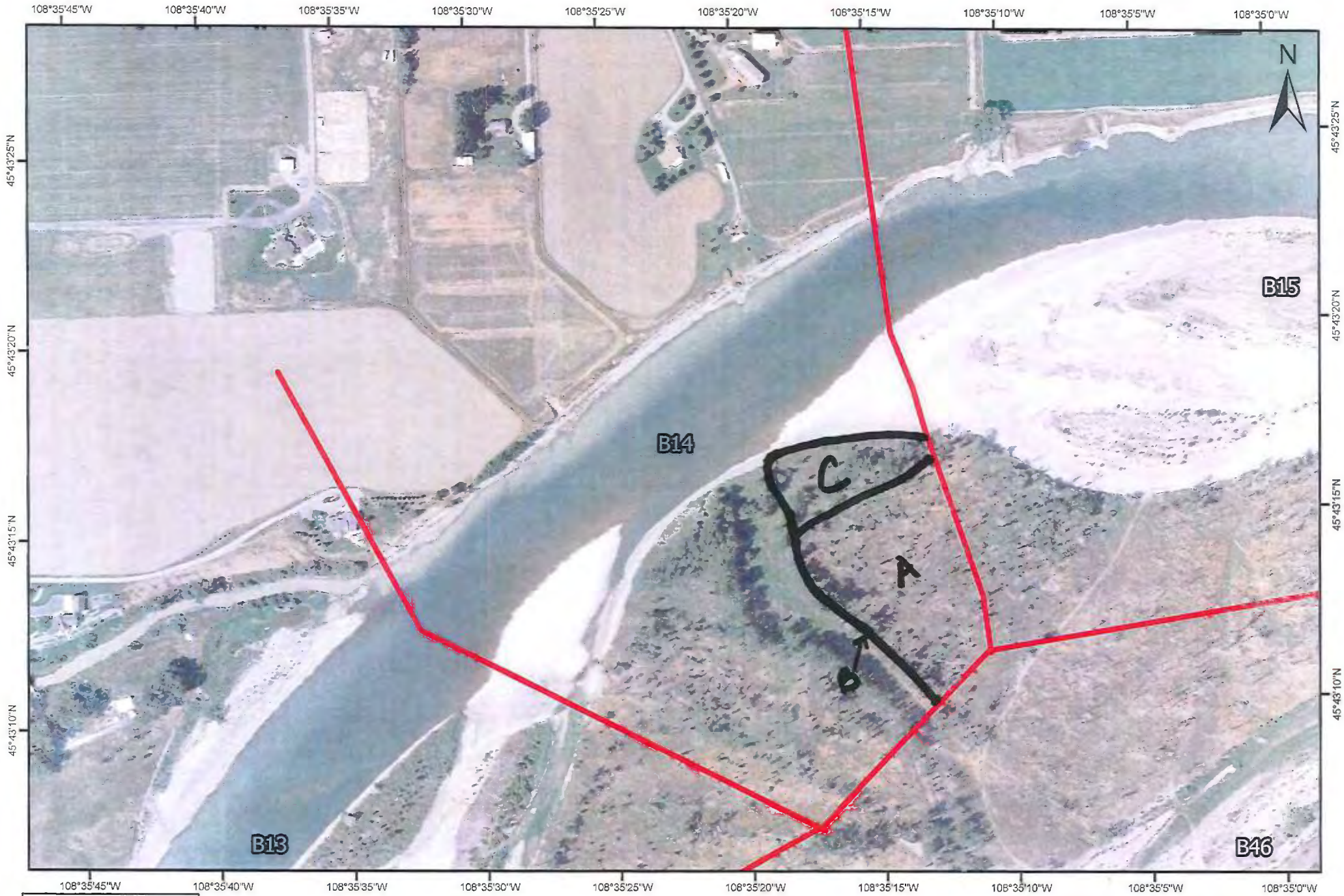
Oil Zone A: No recommendations; no oiling present.

Oil Zone B: Sparse, thin band width, very light staining with sporadic patches of coat. No recommendations at this time

Oil Zone C: Hand cut/bag recommended for oiled vegetation

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

Sketch Yes/No Photos Yes/No (Roll # 19 Frames ___) Video Tape Yes/No (tape#



B14 - R
(L/R/I)??

DATE: 16 Jul 2011

TEAM: 4

COMMENTS:

0 50 100 150 200
Meters

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): std / daylight	Water Level
Segment/Reach ID: B14 Left Bank / Right Bank / Island	19 / 07 / 11	1203 hrs to 1204 hrs	low - mean - bankfull - overbank
Operations Division: B			falling / steady - rising
Survey by: Foot / ATV / Boat / helicopter / Overlook / _____	Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 35 deg C

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

3 SEGMENT Total Segment/Reach Length 430 m Segment/Reach Length Surveyed 430 m

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

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

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

Bedrock: Cliff/Ramp____ Shelf____ | Manmade: Solid____ Permeable____ (type)____ | Wetland: Swamp____ Bog/Fen____ Marsh____

Sediment Bank: Clay/Mud____ Sand ✓ 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: 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 180 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 50 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)
669 A				X	430		3				P		X								ity bank
				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 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

OSR = 4 OSC = unk SSC = unk

5323 - 5328

(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# _____

B14 - (L/R/I)??

DATE:

TEAM:

COMMENTS:

0 50 100 150 200
Meters

DB/9

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: B14 Left Bank / (Right Bank) / Island	06/08/11	1305 hrs to 1500 hrs	low - mean - (bankfull) - overbank
Operations Division:			(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 # 4	Name	Organization	Signature
	Ken Frazer	MFW&P	
	John Davis	USCG	
	Bruce Kvam	Polaris Applied Sciences, LLC	Bruce Kvam

3 SEGMENT Total Segment/Reach Length 361 m Segment/Reach Length Surveyed 361 m

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

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

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

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

Sediment Bank: Clay/Mud_____ Sand_____ Mixed_____ Pebble/Cobble_____ Boulder_____ Peat/Organic_____ | Vegetated Bank: S | Wooded Upland (P)

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

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

Cliff or Bluff: ____ Est Height _____ m | canyon_____ manmade_____ meander _____ confined or leveed _____ | Substrate Type: mixed

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width : < 1m 1–10 m 10–100 m >100m 152 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 3 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	
1259 A				X	361	79	<1			(X)	X		(X)				X				Shrubs, woody debris
~~1260 B~~				~~X~~	~~361~~	~~148~~															

CK 9/27/11

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

Treatment Recommendations*:

Zone A: Target areas that have been flagged. Cut and remove oil coated vegetation smaller than 1" diameter. Remove oil coated debris smaller than 4" diameter.

Zone B: Was not re-SCATed. Previous treatment recommendations as specified in appropriate CTR still apply. Removed from database

Zone A and Zone B parallel each other and thus combined lengths are longer than segment length (see sketch map).

* Refer to current (7-30-11 version) treatment recommendations.

Sketch (Yes) / No Photos (Yes) / No Frames 005 – 012 Photographer Bruce Kvam

B14 -

(L/R/I)??

DATE: 8/6/2011

TEAM: 4

COMMENTS:

0 50 100 150 200

Meters

DB/6

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: B14 Left Bank / Right Bank / Island	19-Jul-2011	1105 1109 ~~1065~~ hrs to ~~1069~~ hrs	low - mean - bankfull - overbank falling - steady – rising
Operations Division: B			
Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____	Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 31 deg C

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

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 491 m

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

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

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

Bedrock: Cliff/Ramp____ Shelf____ | Manmade: Solid___ Permeable S (type) Riprap | Wetland: Swamp____ Bog/Fen____ Marsh____

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

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

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

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

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

4C RIVER CHANNEL CHARACTER circle or select as appropriate

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

Debris: Y / N oiled Y / N amount 3 bags or ____ trucks | access restrictions

Oiled trees/shrubs Y / N | River Current strong Y / N | Other Features: Farm/residence adjacent to north

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

OIL ZONE ID	RIVER BANK ZONE				OIL COVER			OIL THICKNESS					OIL CHARACTER								SUBST. TYPE(S)
	MS	LB	UB	OB	Length m	Width m	Distrib. %	TO	CV	CT	ST	FL	FR	MS	TB	PT	TC	SR	AP	NO	
595 A				X	153	1														X	Grass, trees, debris, riprap
596 B				X	25	1	100			X	X		X								Grass, trees, debris, riprap
597 C				X	313	1														X	Grass, trees, debris, riprap

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 band heights: Zone B: 30 cm

Treatment Recommendations:

Zone A, C: No oil observed; no treatment required.

Zone B: Cut & remove oil coated vegetation smaller than 1" diameter. Wipe larger oil coated vegetation.

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

Sketch Yes / No Photos Yes / No Frames 1236 (Lee)

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: B1~~5~~4 Left Bank / Right Bank / Island	19-Jul-2011	5 9	low - mean - bankfull - overbank
Operations Division: B		106~~1~~ hrs to 106~~5~~ hrs	falling - steady – rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____	Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 31 deg C

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

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed ~~745~~ 491 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 ~~70m~~ 100 | 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 3 bags or ____trucks | access restrictions

Oiled trees/shrubs Y / N | River Current strong Y / N | Other Features: Farm/residence adjacent to north

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

OIL ZONE ID	RIVER BANK ZONE 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)
A				X	~~745~~	1	~~100~~ 153													X	Grass, trees, debris
B				X	25	1	100			X	X		X								
C				X	313	1														X	

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

TRENCH or PIT NO.	RIVER BANK ZONE 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

Oil band heights: NO

Treatment Recommendations:

Zone A: No oil observed; no treatment required.

Zone B:

1236

Sketch Yes / No Photos Yes / No Frames None

B
A
C
B14
©2010 Google
Imagery Date: 4/30/2004
45°43'18.41" N 108°35'24.07" W elev 3177 ft

DB/G/S

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

Page 1 of 1

1 GENERAL INFORMATION

Segment/Reach ID: B 14 (Left Bank / ~~Right Bank~~ / Island)

Operations Division:

Date (dd/mm/yy): 26/07/11

Time (24h): std / daylight 8:30 hrs to 11:00 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 + / - 30 deg C

2 SURVEY TEAM # 4

Name	Organization	Signature
John Matousek	Cardno ENTRIX	[signature]
Ken Frazer	MT FISP	[signature]
JANICE Witel	US EPA	Janice Witel

3 SEGMENT Total Segment/Reach Length 512 m Segment/Reach Length Surveyed 512 m

Start GPS: LATITUDE 45 deg. 43.235 min. LONGITUDE 108 deg. 35.564 min. Datum: WGS 84

End GPS: LATITUDE 45 deg. 43.406 min. LONGITUDE 108 deg. 35.255 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____ 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: X Est Height 30 m canyon____ manmade____ meander P confined or leveed ____ Substrate Type: Veg

Sloped: ___(>5°)(15°)(30°) straight____ 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) 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: Private Agriculture field

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)
778	A			P		90	10	1			S	P						P				Veg
779	B			S	P	512	10	0													No	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

Zone - A Recommend natural attenuation

Zone B - no oil

Sketch (Yes) / No Photos (Yes) / No Frames_____ Photographer_____

Ver. 04 July 2011

B14 - (L/R/I)??

DATE:

TEAM:

COMMENTS:

0 50 100 150 200
Meters

Appendix C

Pre-Inspection Survey Transmittal

SCAT – Pre Inspection Survey Transmittal (PIST) Memo

Survey Date: 13 August 2011

Segment: B14 RB

Team: SCAT Liaison John Spenik Signed: _____

USCG Observer TRUMAN SKANG Signed: _____

Observer LAUREN GLUSHIK (POLARIS) Signed: _____

Observer _____ Signed: _____

Segment meets criteria? YES X NO ____

RBOS attached? YES ____ NO X

If NO:

Location Sketch attached? YES N/A NO ____

CTR continue? YES ____ NO x

Comments: During the survey there were debris piles and vegetation noted with light coat. The noted oiling collected /cleaned by a hot shot cleanup crew during the survey.

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

DB/Gre

R

RIVER BANK OILING SUMMARY FORM for Silvertip Pipeline Incident

1 GENERAL INFORMATION

Segment/Reach ID: B14 Left Bank / Right Bank / Island

Operations Division:

Date (15-16/08/11)

Time (24h): std / daylight 12h30 hrs to 15h00 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 + / - 28 deg C

2 SURVEY TEAM # 5

name	organization	contact phone number
1595 Merlo Gauvreau	Polaris	
Chris Arrendondo	Cardno Entrix	
Cindy Santiago	EPA	Cindy E. Santiago
Jay Watson	FWP	
Marcile Sigler	DEQ	Marcile Sigler

3 SEGMENT Total Segment/Reach Length 377 m Segment/Reach Length Surveyed 377 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 (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

Sloped:___(>5°)(15°)(30°)

canyon_____ manmade_____ meander _____ confined or leveed _____

straight X___ braided _____ oxbow_____ flood plain valley

Substrate Type: Mixed

Forested / Vegetated / Bare

4C RIVER CHANNEL CHARACTER circle or select as appropriate

est. width : < 1m 1–10 m 10–100 m >100m 110 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	
1595 A				X	331	258	<1%				X							X			Trees, Veg Debris

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

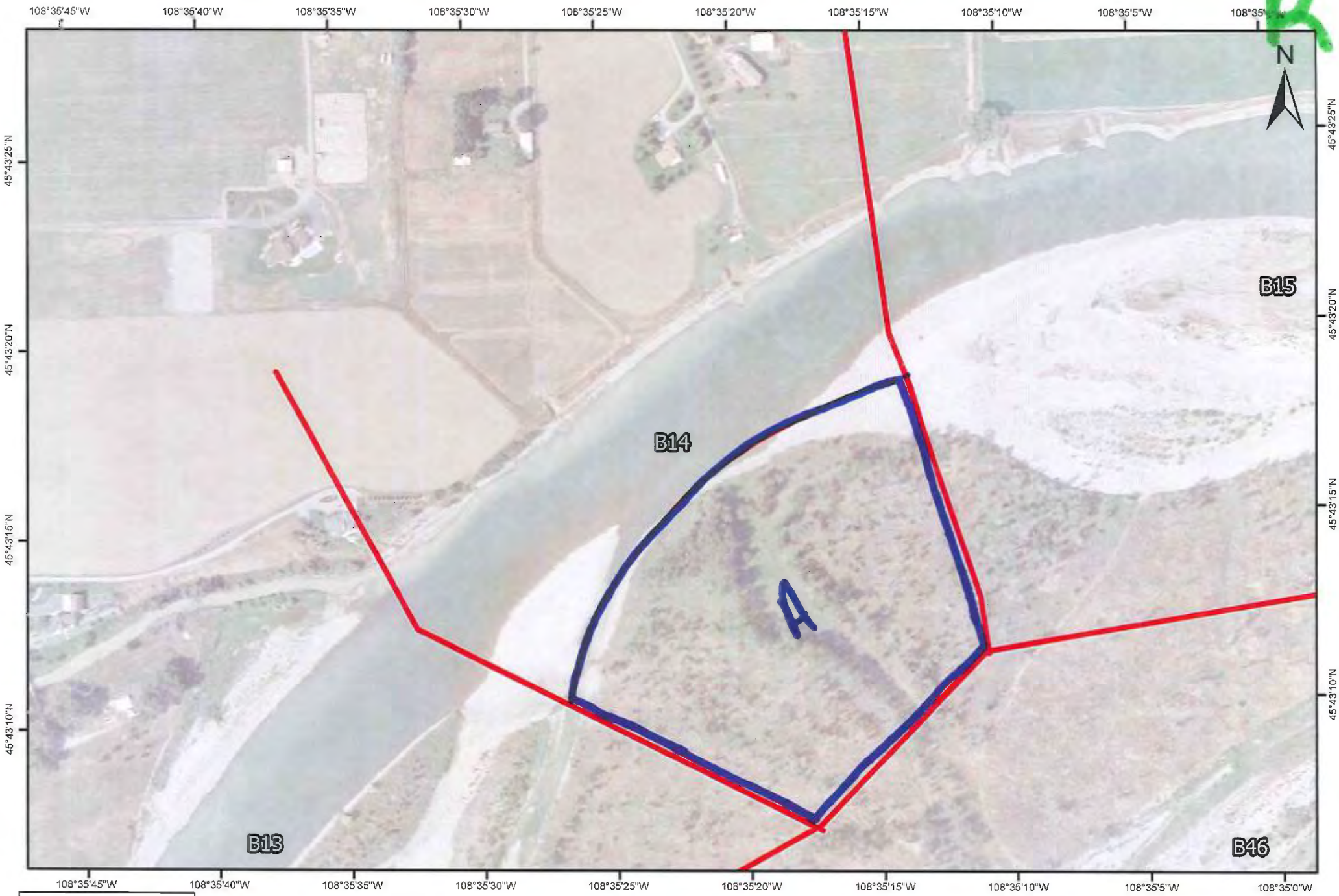
TRENCH or PIT NO.	RIVER BANK ZONE				MAX. PIT DEPTH	OILED ZONE	SUBSURFACE OIL CHARACTER							WATER TABLE	SHEEN COLOUR	CLEAN BELOW	SUBST. TYPE(S)
	MS	LB	UB	OB	cm	cm-cm	SAP	OP	PP	OR	OF	TR	NO	cm	B, R, S, N	Yes / No	

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

A: ReSCAT, Stain on trees and large debris, meet the conditions of the CTR; NFT

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

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



B14 -

(L/R/I)??

DATE:

~~TEAM:~~ 15-16/8/2011

Team 5

COMMENTS:

0 50 100 150 200
Meters

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: B14 Left Bank / Right Bank / Island	29/08/11		low - mean - bankfull - overbank
Operations Division: B		1224 hrs to 1300 hrs	falling - steady – rising
Survey by: Foot / ATV / Boat / Helicopter / Overlook / _____	Sun / Clouds / Fog / Rain / Snow / Windy / Calm		Air Temp + / - 35 deg C

2 SURVEY TEAM # 1	Name	Organization	Signature
	Josh Hofkes	Cardno ENTRIX	
	Tom Bovington	DEQ	
	Stephen Ball	EPA	

3 SEGMENT Total Segment/Reach Length _____ m Segment/Reach Length Surveyed 420 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____ Pebble/Cobble P 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: X Est Height 4 m | canyon____ manmade____ meander ____ confined or leveed ____ | Substrate Type: cobble

Sloped: >70 (>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 | 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	
1948 A				X	420	5														X	cobble

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: N.F.T.

Ops: Matt Delong
=> Removed 1 bag of oil debris

* Re SCAT

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

TEAM 1 B14 LB ZONE A: N.O.O.

August 29, 2011 N.F.T.

Appendix F

Completed SCAT Segment Sign-Off Forms

Silvertip Pipeline Spill
SCAT Segment Sign-Off Sheet

COMPLETED

Operations Division:	A ___ B C ___
SCAT Area Number (i.e. A12):	B14
SCAT Segment Number (i.e. A12-LB/IS/RB):	B14/RB

Complete

Check if Complete:

1. Completion Date for Initial SCAT Assessment: 7-8-15-16-17-18 July 2011 ☑
2. Combined Treatment Recommendations (CTRs) Developed/Issued: ☐

   List CTRs Applicable to SCAT Segment: 8

3. Clean-Up Operations Conducted: ☒
4. Inspection (CTR Objectives and CTR Addendums Complete): ☐

   RP Representative (SCAT/Ops Liaison Contractor) — Date: 22 AUG 2011

5. SCAT Reassessment: ☐

   Cindy C. Santiago — Federal Representative (EPA/USCG) — Date: 8/22/11

   Maxile Sigler — State Representative (DEQ/FWP) — Date: ~~8/22~~ 8/24/11

   RP Representative (SCAT Contractor) — Date: 22-08-11

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

SCAT SEGMENT OPERATIONS COMPLETION SIGN-OFF SHEET

SILVERTIP PIPELINE RELEASE

Segment B14 LB Date of Survey 29/08/11

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

CTR(s) Associated with SCAT Segment 34

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
	Stephen Ball-EPA	8/29/11

Federal Representative (EPA/USCG)

Sign Name	Print Name/ Affiliation	Date
	Tom Rainston DEQ	8/29/11

State Representative (DEQ/FWP)

Sign Name	Print Name/ Affiliation	Date
	Josh Hoffkes/Cardno	8/29/11

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.

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[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.