HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

February 17, 2016

Patrick McMahon
Dan Fields
311 N First
Lovington, NM 88260
TEL: (505) 396-5303
FAX

RE: Targa-Fields OrderNo.: 1602530

Dear Patrick McMahon:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/11/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1602530**
Date Reported: **2/17/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Dan Fields
Project: Targa-Fields
Lab ID: 1602530-001
Matrix: SOIL
Client Sample ID: T-1-4
Collection Date: 2/9/2016 2:20:00 PM
Received Date: 2/11/2016 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: **TOM**
Petroleum Hydrocarbons, TR	44000	1900		mg/Kg	100	2/17/2016	23750

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Dan Fields
Project: Targa-Fields
Lab ID: 1602530-002
Matrix: SOIL
Client Sample ID: T-2-18
Collection Date: 2/9/2016 2:30:00 PM
Received Date: 2/11/2016 9:30:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 418.1: TPH							Analyst: **TOM**
Petroleum Hydrocarbons, TR	49000	1900		mg/Kg	100	2/17/2016	23750

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1602530**

17-Feb-16

Client: Dan Fields
Project: Targa-Fields

Sample ID **MB-23750**	SampType: **MBLK**	TestCode: **EPA Method 418.1: TPH**
Client ID: **PBS**	Batch ID: **23750**	RunNo: **32201**
Prep Date: **2/16/2016**	Analysis Date: **2/17/2016**	SeqNo: **984360** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	ND	20								

Sample ID **LCS-23750**	SampType: **LCS**	TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS**	Batch ID: **23750**	RunNo: **32201**
Prep Date: **2/16/2016**	Analysis Date: **2/17/2016**	SeqNo: **984361** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	106	83.4	127			

Sample ID **LCSD-23750**	SampType: **LCSD**	TestCode: **EPA Method 418.1: TPH**
Client ID: **LCSS02**	Batch ID: **23750**	RunNo: **32201**
Prep Date: **2/16/2016**	Analysis Date: **2/17/2016**	SeqNo: **984362** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Petroleum Hydrocarbons, TR	110	20	100.0	0	108	83.4	127	1.20	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

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Sample Log-In Check List

Client Name: DAN FIELDS | Work Order Number: 1602530 | RcptNo: 1

Received by/date: JA 02/11/16

Logged By: Ashley Gallegos 2/11/2016 9:30:00 AM

Completed By: Ashley Gallegos 2/12/2016 9:48:55 AM

Reviewed By: AT 02/12/16

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

Client: Dan Fields
Patrick McMahon
Mailing Address: 311 N. First
Aztec N.M. 88260
Phone #: 505-386-5303
email or Fax#: hsnepbm@leaco.net
QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)
Accreditation
☐ NELAP ☐ Other _____
☐ EDD (Type) _____

Turn-Around Time:
☑ Standard ☐ Rush _____
Project Name: Targa – Fields
Project #: Targa spill
Project Manager: Patrick McMahon
Sampler: EWD
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0

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Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
	per Eddie					1602530				Analysis Request												
2/9	1420	Soil	T-1-4	1-4oz	Ice	-001				X												
2/9	1430	"	T-2-18	1-4oz	"	-002				X												

Date:	Time:	Relinquished by:	Received by:	Date	Time
2/9	3:00	Eddie Wade			
2/9/16	1530			2/9/16	1500
Date:	Time:	Relinquished by:	Received by:	Date	Time
			Jac. Arnett	02/11/16	0930

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Dan Field

From: Dan Field
Sent: Thursday, March 10, 2016 1:27 PM
To: patrick bryan mcman
Subject: FW: 16" Remediation on Dan Field
Attachments: Remediation Summary Townsend 16 Inch Pipeline Release December 15 2015.pdf

From: Garcia, Willie [mailto:wgarcia@targaresources.com]
Sent: Wednesday, January 20, 2016 11:55 AM
To: 'hsncpbm@leaco.net'
Cc: 'Samantha Torrez'; Dan Field
Subject: 16" Remediation on Dan Field

Mr. McMahon-

Please find attached the remediation report on the 16" pipeline we worked on. Let me know if you have any questions regarding this matter.

Thanks,

Willie Garcia
Contract ROW Agent
Permian Region-New Mexico

Targa Resources
P.O. Box 67 or
8201 S. Hwy. 322
Monument, NM 88265

Off.# 575-393-5716 ext. 234
Cell# 325-574-0996
wgarcia@targaresources.com

Larson & Associates, Inc.
Environmental Consultants

REMEDIATION SUMMARY

December 15, 2015

TO: David McQuade
Cal Wrangham
Bill Little
Ralph England
Cindy Klein

RE: **Townsend 16" Pipeline Remediation Summary, Lea County, New Mexico**

Introduction

This summary is a supplement to a report dated August 27, 2015 and presents the investigation and remediation of a natural gas liquid (NGL) release from the Townsend 16" pipeline (Site). The legal description is Unit M (SW/4, SW/4) Section 3, Township 16 South and Range 35 East in Lea County, New Mexico. The Site is located about 4 miles west of Lovington, New Mexico. The release occurred in July 2015. The NGL covered an area measuring approximately 1,025 square feet. Watson Construction, Inc. (Watson) used a track hoe to excavate approximately 60 cubic yards of soil from around the pipeline to repair the leak. Soil was excavated to about 4 feet below ground surface (bgs) and piled adjacent to the south side of the excavation. Figure 1 presents a topographic map. Figure 2 presents an aerial map.

Investigation

On July 16, 2015, personnel from Larson & Associates, Inc. (LAI) collected soil samples from five (5) locations (HA-1 through HA-5). The samples were analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX), total petroleum hydrocarbons (TPH) and chloride. The laboratory reported concentrations of benzene, BTEX, and TPH above the New Mexico Oil Conservation Division (OCD) recommended remdiation action level (RRAL) of 10 milligrams per kilogram (mg/Kg) for benzene (HA-5), 50 mg/Kg for BTEX and 1,000 mg/Kg for TPH (HA-1 through HA-5).

On August 3, 2015, LAI personnel supervised drilling five (5) borings (SB-1 through SB-5) between about 10 and 25 feet bgs. The laboratory reported concentrations of TPH above the RRAL to greater than 10 feet bgs at location SB-1 (HA-1). Table 1 presents the investigation analytical data summary. Figure 3 presents a site drawing.

Remediation

Between September 19 and October 30, 2015, Watson under supervision from LAI excavated soil to a maximum depth of about 23 feet bgs north of the pipeline. Confirmation samples were collected from the excavation sidewalls and bottom and reported concentrations of TPH below the RRAL (1,000 mg/Kg) and chloride below 250 mg/Kg. The excavation measures about 30 feet wide by 50 long and about 23 feet deep. The soil was hauled to the Jay Dan Landfarm, LLC located northwest of Lovington, New Mexico. Table 2 presents the remediation sample analytical data summary. Figure 4 presents the excavation limits and soil sample locations.

Recommendation

LAI recommends backfilling the excavation and seeding as specified by land owner. LAI will prepare a final report upon completion of excavation backfilling and seeding.

Mark J. Larson

Tables

Table 1
Remediation Analytical Data Summary
Targa Midstream Services, LLC, Townsend 16" Pipeline Release
Lea County, New Mexico

Location	Depth (Feet)	Collection Date	Status	DRO (mg/Kg)	GRO (mg/Kg)	TPH (mg/Kg)	Chloride (mg/Kg)
OCD RRAL:						1,000	
Bottom North of Pipeline)	15	09/21/2015	Excavated	3,120	3,921	**7,040**	--
	18	10/13/2015	Excavated	4,640	4,640	**9,280**	<25.0
	20	10/13/2015	Excavated	8,300	5,240	**13,540**	<25.0
	22	10/13/2015	Excavated	1,050	668	**1,718**	<25.0
	23	10/26/2015	In-Situ	<50.0	<4.00	<54.0	<25.0
	24	10/13/2015	In-Situ	281	201	482	<25.0
	26	10/13/2015	In-Situ	578	86.6	664.60	<25.0
Bottom (South of Pipeline)	15	09/23/2015	Excavated	3,220	1,420	**4,640**	--
	18	10/15/2015	Excavated	2,450	5,770	**8,220**	--
	20	10/15/2015	Excavated	1,850	1,400	**3,250**	--
	21	10/22/2015	In-Situ	171	<4.0	171	--
	22	10/15/2015	In-Situ	69.0	11.9	80.9	183
	24	10/15/2015	In-Situ	<50.0	<4.00	<54.0	--
North Side	12	09/21/2015	In-Situ	<50.0	<4.00	<54.0	--
	23	10/26/2015	In-Situ	<50.0	<4.00	<54.0	<25.0
South Side	9	09/21/2015	In-Situ	<50.0	<4.00	<54.0	--
	21	10/23/2015	In-Situ	<50.0	<4.00	<54.0	<25.0
East Side	12	09/21/2015	In-Situ	<50.0	<4.00	<54.0	--
	23	10/22/2015	In-Situ	<50.0	<4.00	<54.0	**110**
West Side (north of P/L)	12	09/21/2015	Excavated	12,500	5,350	**17,850**	--
	15	10/15/2015	In-Situ	242	77.3	**319.3**	--
	18	10/15/2015	In-Situ	<50.0	<4.0	<54.0	<25.0
	21	10/30/2015	In-Situ	<50.0	<4.0	<54.0	<25.0

Table 1

Remediation Analytical Data Summary

Targa Midstream Services, LLC, Townsend 16" Pipeline Release

Lea County, New Mexico

West Side (under P/L)	6	09/21/2015	In-Situ	106	<4.0	**106**	--
	12	09/21/2015	In-Situ	<50.0	<4.0	<54.0	<25.0
West Side (south of P/L)	12	09/21/2015	In-Situ	<50.0	<4.0	<54.0	<25.0
	15	10/15/2015	In-Situ	<50.0	<4.0	<54.0	<25.0
	18	10/15/2015	In-Situ	<50.0	<4.0	<54.0	<25.0
	21	10/22/2015	In-Situ	<50.0	<4.0	<54.0	**112**

Notes: Laboratory analysis performed by Trace Analysis, Inc., Midland and Lubbock, Texas.

TPH (GRO and DRO) performed by EPA SW-846 method 8015M

Chloride performed by titration method

Depth in feet below ground surface (bgs)

mg/Kg: milligrams per kilogram equivalent to parts per million (ppm)

P analysis pending

Bold and highlighted indicates that analyte was detected above the OCD recommended remediation action level (RRAL)

Figures

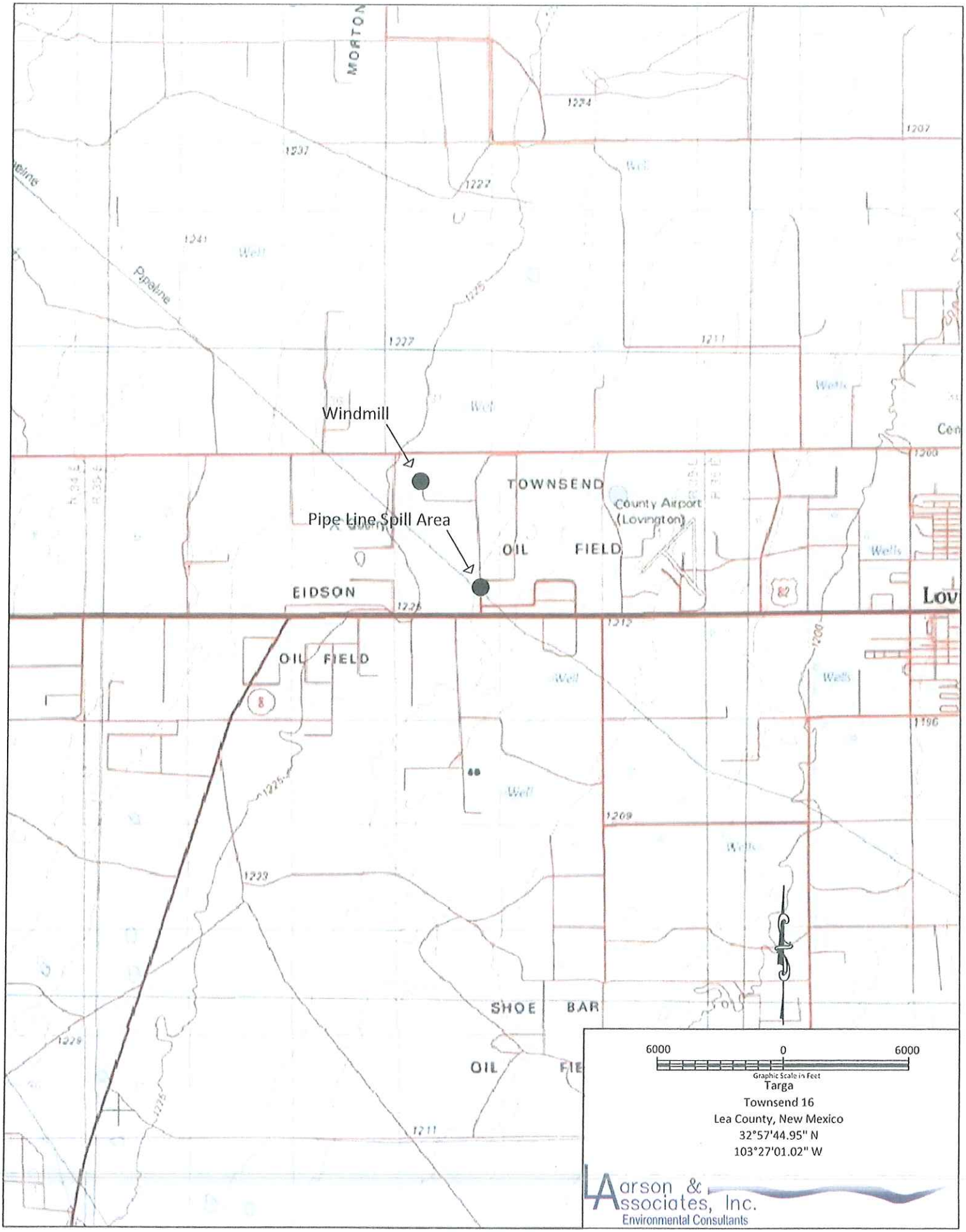
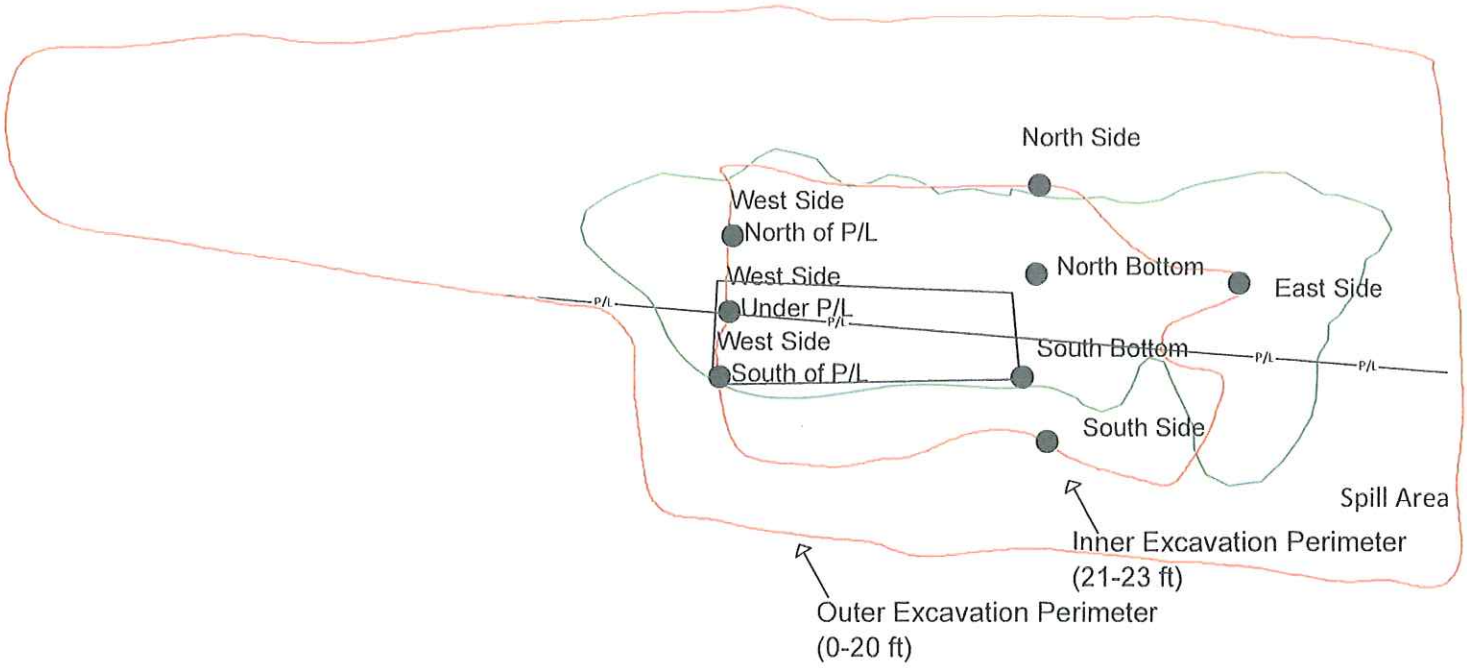


Figure 1 - Topographic Map

Figure 2 - Aerial Map



15 0 15

Graphic Scale in Feet

Targa
Townsend 16
Lea County, New Mexico
32°57'44.95" N
103°27'01.02" W

LEGEND

-Pipeline Spill Area

-Excavation

—P/L— -Pipeline

Larson & Associates, Inc.
Environmental Consultants

Figure 3 - Site Map

Appendix A

507 North Marienfeld, Suite 205 ◆ Midland, Texas 79701 ◆ Ph. (432) 687-0901 ◆ Fax (432) 687-0456

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