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TALON LPE

APPROVED
By Olivia Yu at 11:02 am, Jun 28, 2017

NMOCD grants closure to 1RP-4343.

Site Closure Report

Cimarex Penzoil 36 #1
Enterprise:T16-084
Talon Project #700348.345.01
RP #4343

Prepared For:

Enterprise Crude Oil
4500 E Hwy 80
Midland, Texas 79706

Prepared By:

Nathan Callicoatte
Talon/LPE
2901 Hwy 349
Midland, TX 79706

SITE CLOSURE REPORT

CIMAREX PENZOIL 36 #1
ENTERPRISE CRUDE OIL
ENTERPRISE #T16-084
RP #4343

TALON/LPE PROJECT NO. 700348.345.01

PREPARED FOR:
ENTERPRISE CRUDE OIL
4500 EAST HIGHWAY 80
MIDLAND, TEXAS 79706

Prepared By:

Nathan Callicoatte
Project Manager

Shane Currie, PG
Professional Geologist

Talon/LPE
2901 State Highway 349
Midland, Texas 79706

September 6, 2016

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APPENDICES

1.0 INTRODUCTION

1.1 Objectives and Site Background

Talon/LPE (Talon) was retained by Enterprise Crude Oil (Enterprise) to provide environmental consulting services at the Cimarex Penzoil 36 #1 (site). The purpose of this report is to document remediation and site restoration activities undertaken regarding the release of crude oil at the subject site.

The site is located approximately 28.3 miles southwest of the city of Hobbs, in Lea County, New Mexico. The GPS coordinates for the site are 32.614577° north latitude and 103.610280° west longitude. A crude oil release occurred as a result of truck driver error during truck unloading activities. Remediation activities occurred on site following guidance drafted by the New Mexico Energy, Natural Resources Department (EMNRD), New Mexico Oil Conservation Division (OCD) rules (*NMAC 19.15.30 Remediation and NMAC 20.6.2 Ground and Surface Water Protection*) and the New Mexico EMNRD OCD *Guidelines for Remediation of Leaks, Spills and Releases* as guidance.

On July 10, 2016, a release of crude oil occurred at the referenced site from a transport truck during unloading activities. The release was determined to be approximately 20 barrels (bbl) of crude oil lost with 10 bbl recovered, resulting in a net loss of 10 bbl of crude oil. Enterprise completed a C-141 Release Notification and Corrective Action Report on July 10, 2016. Impacts from the release crude oil were contained inside the berm surrounding the tank battery. The release impacted a total area that measured approximately 250 square feet. A Topographic Map depicting the location of the Site is included as Figure 1. An Aerial Photograph of the Site is attached as Figure 2. Site Details are provided as Figure 3.

1.2 NMOCD Site Classification

The site is subject to regulatory oversight by the New Mexico EMNRD OCD. To address activities related to crude oil releases, the New Mexico EMNRD OCD utilizes the *Guidelines for Remediation of Leaks, Spills and Releases* as guidance, in addition to the OCD rules, specifically NMAC 19-15-30 Remediation. These guidance documents establish investigation and abatement action requirements for sites subject to reporting and/or corrective action.

A search of the New Mexico Water Rights (NMWRRS) database maintained by the New Mexico Office of the State Engineer (NMOSE), provided information for Section 28, Township 23S, Range 33E. The provided information indicated that groundwater should be encountered at approximately 400 feet below ground surface (bgs). A search of the NMWRRS database indicated there are no water wells within 1000 feet of the release. There are no surface water bodies within 5000 feet of the release. Based on depth to groundwater and proximity to surface water, the site received a ranking of zero (0). Guidelines for this release site are listed below:

Compound	**Remediation Threshold**
Benzene	10 mg/kg (ppm)
BTEX	50 mg/kg (ppm)
TPH	5000 mg/kg (ppm)

2.0 INITIAL SITE ACTIVITIES

On July 10, 2016, Enterprise personnel dispatched a vacuum truck to collect all free crude oil. The recovered oil was returned to the Enterprise pipeline system. A utility line locate was placed, prior to excavation and remediation activities. Based on olfactory and visual observations, the horizontal extent was determined to be approximately 250 square feet. The vertical extent was approximately six (6) inches below ground surface (bgs). Talon personnel conducted an initial assessment of the site and initiated site excavation activities.

3.0 SOIL EXCAVATION, REMEDIATION, AND BACKFILL ACTIVITIES

3.1 Remedial Excavation Activities

On July 13, 2016 Talon conducted soil excavation activities. During that time, impacted soil was excavated utilizing hand tools. Approximately five (5) cubic yards of impacted soil was stockpiled on site prior to disposal via dump truck to Sundance Disposal (Sundance) in Eunice, New Mexico on August 3, 2016.

The final excavation limits were initially determined using visual and olfactory senses. Laboratory analyses of samples collected at the bottom of the excavation were used to confirm when regulatory cleanup levels were achieved. Details of the soil sampling activities and laboratory results are presented in Section 4.0 of this report.

The final excavation limits measured approximately 250 square feet. Vertical depth was determined to be approximately six (6) inches bgs. Photographic Documentation of excavation activities is presented in Appendix C. Copies of the Waste Manifests is presented in Appendix F.

3.2 Backfill Activities

On August 4, 2016, the excavated area was backfilled and graded to match pre-release conditions. Fresh soil procured from Ramirez and Son in Hobbs, New Mexico was utilized as backfill material. Backfill activities were completed by utilizing hand tools.

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4.0 SOIL SAMPLING ACTIVITIES

4.1 Sample Collection

Following excavation activities, confirmation soil samples were collected on July 13, 2016. Three (3) confirmation soil samples were collected and designated as (BH-1, BH-2, and BH-3). The soil samples were collected by Talon personnel using industry accepted, standard operating procedures. These procedures include wearing new, clean nitrile gloves, and collecting laboratory samples using decontaminated or disposable hand tools (when applicable) to prevent cross-contamination.

Talon personnel collected soil samples for benzene, toluene, ethylbenzene and total xylenes (BTEX), total petroleum hydrocarbons (TPH), and chlorides (Cl) concentrations. The samples were collected in laboratory provided sample containers, immediately placed in an ice-chilled cooler, and transported to Xenco Laboratories in Midland, Texas.

4.2 Analytical Results

Initial laboratory analytical results indicated that TPH concentrations for all samples collected ranged from 229 mg/Kg to 915 mg/Kg, which is well below the regulatory clean up levels of 5,000 mg/Kg. Laboratory results indicated that BTEX concentrations for all soils samples were below the remediation threshold of 50 mg/Kg. Laboratory results for the soil samples collected indicated that Cl levels were below the recommended clean up levels of 3,000 mg/Kg.

Copies of the laboratory analytical results and chain of custody documentation are presented in Appendix D. A summary of the excavation confirmation soil sample analytical results are presented on Table 1 and Table 2 in Appendix B.

5.0 CONCLUSION

5.1 Conclusions

- A crude oil release was reported by Enterprise at the site on July 10, 2016, as a result of driver error during truck unloading activities. Enterprise personnel estimated that 20 bbl of crude oil were released and 10 bbl were recovered, resulting in a net loss of 10 bbl of crude oil.

- Excavation activities were conducted by Talon personnel on July 13, 2016. Excavated material was transported to Sundance in Carlsbad, New Mexico.

- The excavated area was backfilled and graded to match pre-release conditions with uncontaminated material procured from Ramirez and Son. Backfill activities were completed by utilizing hand tools.

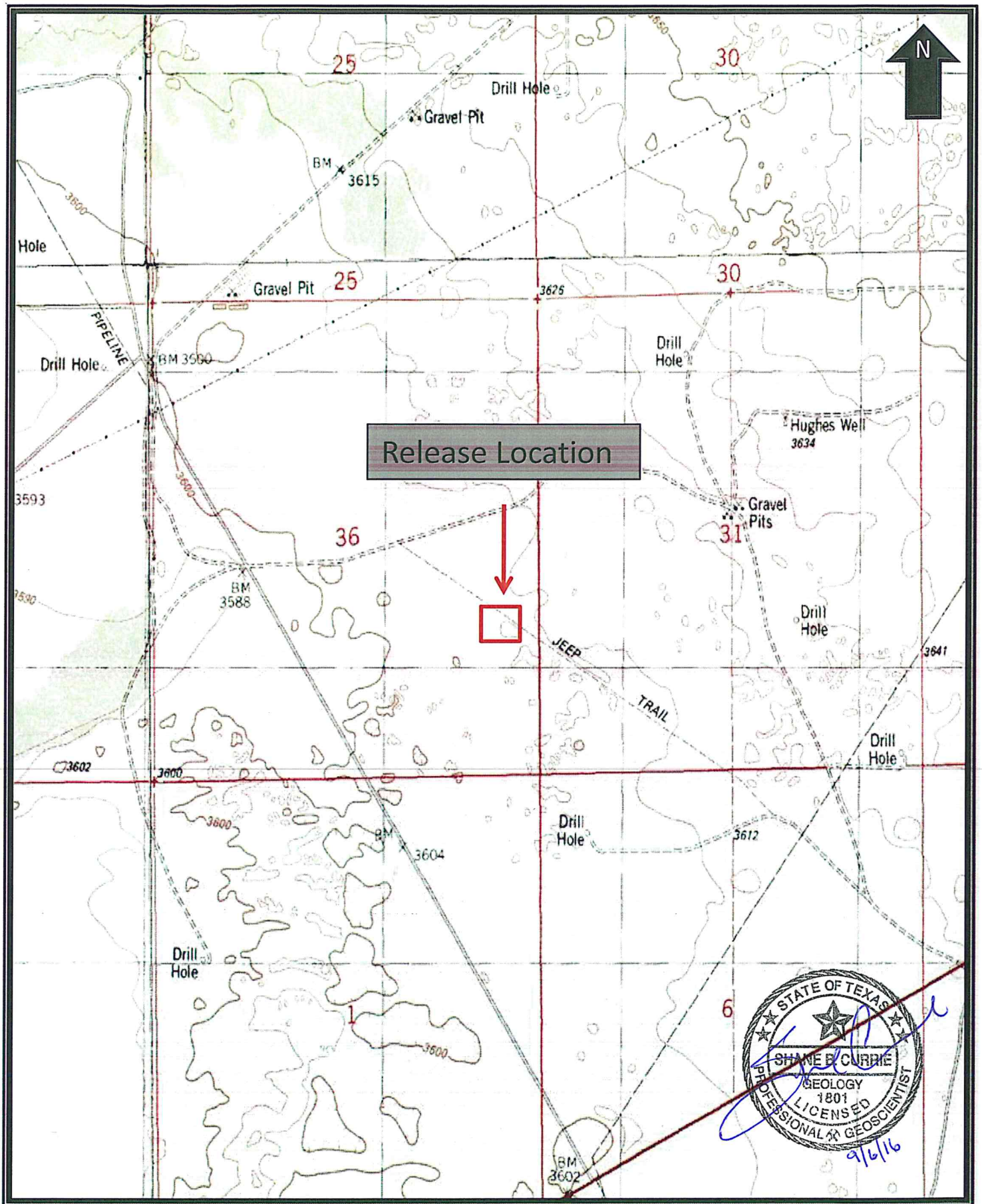
5.2 Recommendations

Based on laboratory analytical results of soil samples collected from the excavation limits, the vertical extent of the release area is delineated so that TPH, BTEX, and Cl concentrations are below the soil cleanup level.

This report will be the final documentation regarding the release. Based on the remediation activities and data presented in this report, no further action is proposed for this site.

APPENDIX A

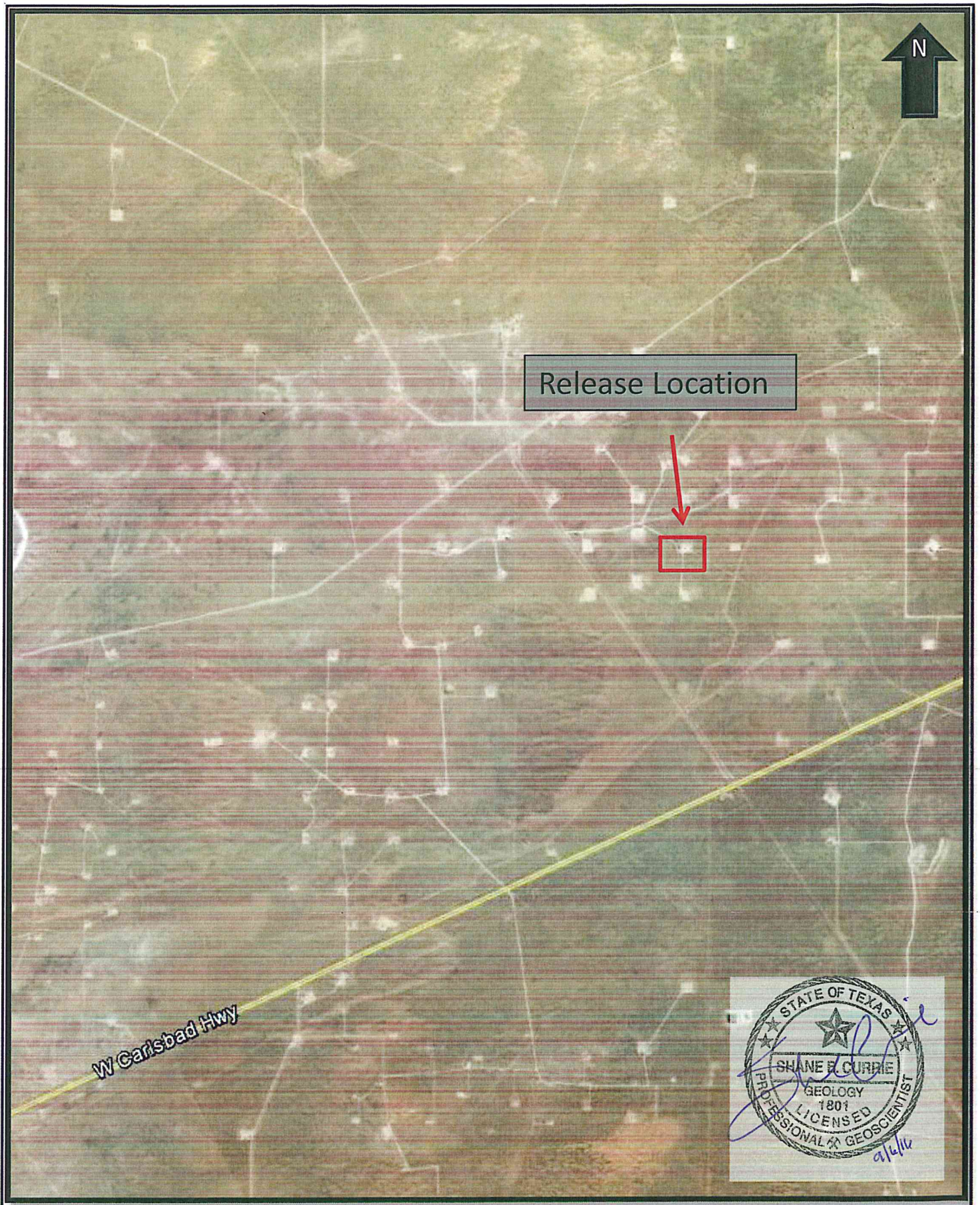
FIGURES



TALON LPE

Date:	07/25/2016
Scale:	Not to Scale
Drawn By:	BHP

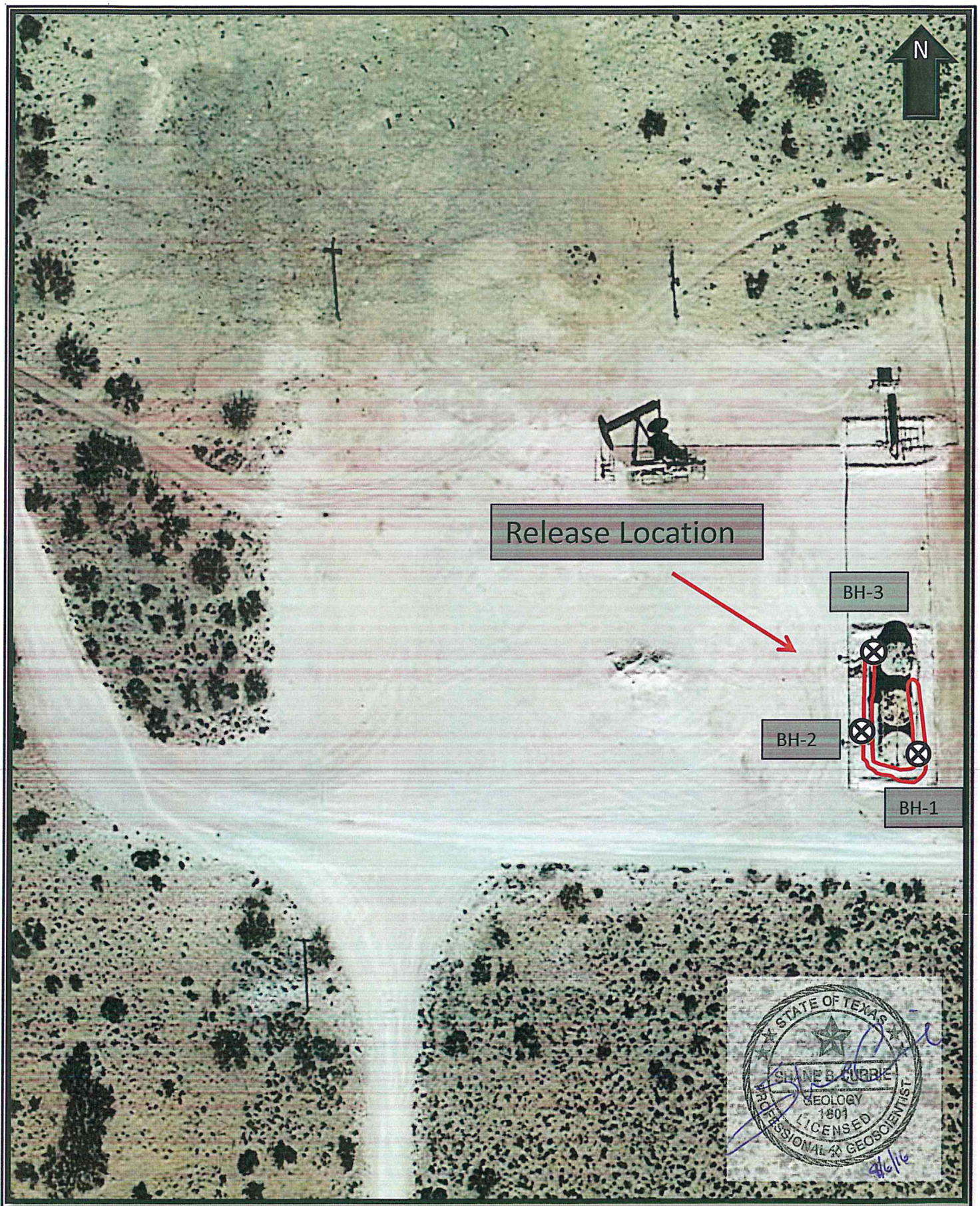
FIGURE 1
TOPOGRAPHIC MAP
Cimarex Penzoil 36 #1
Prepared For: Enterprise Crude Oil
Lea County, New Mexico



TALON LPE

Date:	07/25/2016
Scale:	Not to Scale
Drawn By:	BHP

FIGURE 2
AERIAL MAP
Cimarex Penzoil 36 #1
Prepared For: Enterprise Crude Oil
Lea County, New Mexico



TALON LPE

Date:	07/25/2016
Scale:	Not to Scale
Drawn By:	BHP

FIGURE 3
Site Details
Cimarex Penzoil 36 #1
Prepared For: Enterprise Crude Oil
Lea County, New Mexico

APPENDIX B

TABLES

TABLE 1

CONCENTRATIONS OF TPH AND BTEX IN SOIL

CIMAREX PENZOIL 36 #1
ENTERPISE CRUDE OIL
28.3 MILES SOUTHWEST OF HOBBS, NEW MEXICO

TALON/LPE PROJECT NUMBER: 700348.345.01

SAMPLE LOCATION	SAMPLE DATE	METHOD: 8015M			METHOD: 8021			
		DRO (mg/Kg)	GRO (mg/Kg)	TOTAL TPH (mg/Kg)	Benzene	Toulene	Ethyl-benzene	Total Xylenes
BH-1	7/13/2016	574	64	638	ND	0.0746	0.918	2.35
BH-2	7/13/2016	211	18	229	ND	ND	0.0113	0.0403
BH-3	7/13/2016	744	171	915	ND	3.1	4.88	9.36
Remedial Threshold				**5,000**	**10**			

(ND) = (Non-Detectable)
* **Bolded** values are in excess of the NMOCD Remediation Thresholds

TABLE 2

CONCENTRATIONS OF CHLORIDE IN SOIL

CIMAREX PENZOIL 36 #1
ENTERPRISE CRUDE OIL
28.3 MILES SOUTHWEST OF HOBBS, NEW MEXICO

TALON/LPE PROJECT NUMBER: 700348.345.01

SAMPLE LOCATION	SAMPLE DATE	METHOD: 300.0
		CHLORIDE (mg/Kg)
BH-1	7/13/2016	ND
BH-2	7/13/2016	17.7
BH-3	7/13/2016	ND
NMOCD Remedial Threshold		**250**

(ND) = (Non-Detectable)

* **Bolded** values are in excess of the NMOCD Remediation Thresholds

APPENDIX C

PHOTOGRAPHIC DOCUMENTATION

Photograph No. 1

Direction:
West

Description:
Source of crude oil release and flowpath.

Photograph No. 2

Direction:
Northeast

Description:
Crude oil flowpath inside tank battery berm

Photograph No. 3

Direction:
North

Description:
Crude oil flow path following vacuum truck activities.

Photograph No. 4

Direction:
North

Description:
Crude oil flow path following vacuum truck activities.

Photograph No. 5

Direction:
North

Description:
Impacted area following excavation activities.

Photograph No. 6

Direction:
East

Description:
Impacted area following excavation activities.

Photograph No. 7

Direction:
North

Description:
Impacted area following excavation activities.

Photograph No. 8

Direction:
Northeast

Description:
Release site following backfilling activities.

APPENDIX D

LABORATORY ANALYTICAL DATA REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

Analytical Report 533357

for

Talon/LPE Co.

Project Manager: Brian Payton

Enterprise-Cimarex Pen 36 #1

700348.345.01

20-JUL-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

20-JUL-16

Project Manager: **Brian Payton**
Talon/LPE Co.
2901 S State Highway 349
Midland, TX 79706

Reference: XENCO Report No(s): **533357**
Enterprise-Cimarex Pen 36 #1
Project Address: Lea Co., New Mexico

Brian Payton:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 533357. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 533357 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 533357

Talon/LPE Co., Midland, TX

Enterprise-Cimarex Pen 36 #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1	S	07-13-16 13:00	- 6 In	533357-001
BH-2	S	07-13-16 13:30	- 6 In	533357-002
BH-3	S	07-13-16 14:00	- 6 In	533357-003

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 533357

Talon/LPE Co., Midland, TX

Project Name: Enterprise-Cimarex Pen 36 #1

Project Id: 700348.345.01
Contact: Brian Payton
Project Location: Lea Co., New Mexico

Date Received in Lab: Thu Jul-14-16 08:35 am
Report Date: 20-JUL-16
Project Manager: Kelsey Brooks

Analysis Requested									
	Lab Id:	533357-001		533357-002		533357-003			
	Field Id:	BH-1		BH-2		BH-3			
	Depth:	6 In		6 In		6 In			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jul-13-16 13:00		Jul-13-16 13:30		Jul-13-16 14:00			
BTEX by EPA 8021B	***Extracted:***	Jul-18-16 19:00		Jul-18-16 19:00		Jul-18-16 19:00			
	Analyzed:	Jul-19-16 18:21		Jul-19-16 16:42		Jul-19-16 04:34			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		ND	0.00750	ND	0.00150	ND	0.0747		
Toluene		0.0746	0.0100	ND	0.00200	3.10	0.0996		
Ethylbenzene		0.918	0.0100	0.0113	0.00200	4.88	0.0996		
m,p-Xylenes		1.62	0.0100	0.0240	0.00200	6.71	0.0996		
o-Xylene		0.728	0.0150	0.0163	0.00299	2.65	0.149		
Total Xylenes		2.35	0.0100	0.0403	0.00200	9.36	0.0996		
Total BTEX		3.34	0.00750	0.0516	0.00150	17.3	0.0747		
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jul-19-16 12:00		Jul-19-16 12:00		Jul-19-16 12:00			
	Analyzed:	Jul-19-16 13:26		Jul-19-16 13:34		Jul-19-16 13:58			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		ND	10.0	17.7	10.0	ND	10.0		
TPH by SW 8015B	***Extracted:***	Jul-18-16 13:00		Jul-18-16 13:00		Jul-18-16 13:00			
	Analyzed:	Jul-18-16 19:44		Jul-18-16 20:14		Jul-18-16 20:38			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
C6-C10 Gasoline Range Hydrocarbons		64.3	15.0	18.3	15.0	171	15.0		
C10-C28 Diesel Range Hydrocarbons		574	15.0	211	15.0	744	15.0		
Total TPH		638	15.0	229	15.0	915	15.0		

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Form 2 - Surrogate Recoveries

Project Name: Enterprise-Cimarex Pen 36 #1

Work Orders : 533357,

Project ID: 700348.345.01

Lab Batch #: 998275 **Sample:** 533357-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/16 19:44

SURROGATE RECOVERY STUDY

TPH by SW 8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.9	99.8	88	70-135	
o-Terphenyl	42.1	49.9	84	70-135	

Lab Batch #: 998275 **Sample:** 533357-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/16 20:14

SURROGATE RECOVERY STUDY

TPH by SW 8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.9	99.8	90	70-135	
o-Terphenyl	44.6	49.9	89	70-135	

Lab Batch #: 998275 **Sample:** 533357-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/16 20:38

SURROGATE RECOVERY STUDY

TPH by SW 8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

Lab Batch #: 998349 **Sample:** 533357-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/19/16 04:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0266	0.0300	89	80-120	
4-Bromofluorobenzene	0.0334	0.0300	111	80-120	

Lab Batch #: 998349 **Sample:** 533357-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/19/16 16:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Enterprise-Cimarex Pen 36 #1

Work Orders : 533357,

Project ID: 700348.345.01

Lab Batch #: 998349 **Sample:** 533357-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/19/16 18:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0297	0.0300	99	80-120	

Lab Batch #: 998275 **Sample:** 711071-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/18/16 16:21

SURROGATE RECOVERY STUDY

TPH by SW 8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.3	100	87	70-135	
o-Terphenyl	45.0	50.0	90	70-135	

Lab Batch #: 998349 **Sample:** 711121-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/18/16 23:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 998275 **Sample:** 711071-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/18/16 16:49

SURROGATE RECOVERY STUDY

TPH by SW 8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 998349 **Sample:** 711121-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/18/16 21:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0246	0.0300	82	80-120	
4-Bromofluorobenzene	0.0254	0.0300	85	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Enterprise-Cimarex Pen 36 #1

Work Orders : 533357,

Project ID: 700348.345.01

Lab Batch #: 998275 **Sample:** 711071-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/18/16 17:19

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	108	100	108	70-135	
o-Terphenyl	47.7	50.0	95	70-135	

Lab Batch #: 998349 **Sample:** 711121-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 07/18/16 22:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 998275 **Sample:** 533510-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/16 18:17

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 998349 **Sample:** 533390-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/16 22:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0335	0.0300	112	80-120	

Lab Batch #: 998275 **Sample:** 533510-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/18/16 18:46

SURROGATE RECOVERY STUDY

TPH by SW 8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	99.9	118	70-135	
o-Terphenyl	53.2	50.0	106	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Enterprise-Cimarex Pen 36 #1

Work Orders : 533357, **Project ID:** 700348.345.01

Lab Batch #: 998349 **Sample:** 533390-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 07/19/16 19:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	80-120	
4-Bromofluorobenzene	0.0280	0.0300	93	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Enterprise-Cimarex Pen 36 #1

Work Order #: 533357 **Project ID:** 700348.345.01

Analyst: PJB **Date Prepared:** 07/18/2016 **Date Analyzed:** 07/18/2016

Lab Batch ID: 998349 **Sample:** 711121-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.100	0.0995	100	0.100	0.0997	100	0	70-130	35	
Toluene	<0.00200	0.100	0.106	106	0.100	0.101	101	5	70-130	35	
Ethylbenzene	<0.00200	0.100	0.110	110	0.100	0.101	101	9	71-129	35	
m,p-Xylenes	<0.00200	0.200	0.220	110	0.200	0.214	107	3	70-135	35	
o-Xylene	<0.00300	0.100	0.107	107	0.100	0.104	104	3	71-133	35	

Analyst: MNR **Date Prepared:** 07/19/2016 **Date Analyzed:** 07/19/2016

Lab Batch ID: 998322 **Sample:** 711120-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	275	110	250	270	108	2	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Enterprise-Cimarex Pen 36 #1

Work Order #: 533357 **Project ID:** 700348.345.01

Analyst: ARM **Date Prepared:** 07/18/2016 **Date Analyzed:** 07/18/2016

Lab Batch ID: 998275 **Sample:** 711071-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	865	87	1000	852	85	2	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	980	98	1000	970	97	1	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Enterprise-Cimarex Pen 36 #1

Work Order # : 533357 **Project ID:** 700348.345.01

Lab Batch ID: 998349 **QC- Sample ID:** 533390-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/18/2016 **Date Prepared:** 07/18/2016 **Analyst:** PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00149	0.0994	0.0711	72	0.0998	0.0827	83	15	70-130	35	
Toluene	<0.00199	0.0994	0.0717	72	0.0998	0.0839	84	16	70-130	35	
Ethylbenzene	<0.00199	0.0994	0.0718	72	0.0998	0.0831	83	15	71-129	35	
m,p-Xylenes	<0.00199	0.199	0.157	79	0.200	0.168	84	7	70-135	35	
o-Xylene	<0.00298	0.0994	0.0831	84	0.0998	0.0839	84	1	71-133	35	

Lab Batch ID: 998322 **QC- Sample ID:** 533505-010 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/19/2016 **Date Prepared:** 07/19/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	41.5	250	283	97	250	280	95	1	80-120	20	

Lab Batch ID: 998275 **QC- Sample ID:** 533510-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 07/18/2016 **Date Prepared:** 07/18/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW 8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<15.0	1000	818	82	999	834	83	2	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	926	93	999	929	93	0	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)

Dallas, Texas (214-902-0300)

Service Center - San Antonio, Texas (210-509-3334)

Odessa, Texas (432-563-1800)

Norcross, Georgia (770-449-8800)

Lakeland, Florida (863-646-8526)

Tampa, Florida (813-620-2000)

www.xenco.com

Xenco Quote #

Xenco Job # 533357

Client / Reporting Information

Company Name / Branch: Talon LPE

Company Address: Midland TX

Email: bpayton@talonlpe.com, caspore@pepsd.com

Phone No:

Project Contact: Brian Payton

Samplers's Name: Brian Payton

Project Information 700348.345.01

Project Name/Number: Enterprise Comanche Pen 36 #1

Project Location: Lea Co New Mexico

Invoice To: Accounting

PO Number:

Analytical Information

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	DIEG	TPH GRO-DRO	BTEX	Cl								Field Comments
1	BH-1	6"	7-13-16	1300	S	1									X	X	X								
2	BH-2	6"	↓	1330	↓	↓									X	X	X								
3	BH-3	6"	↓	1400	↓	↓									X	X	X								
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	BA	7-14-16 835	1 MG	2		2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: X

Temp: 3.4°C IR ID:R-8
C/F:0
Corrected Temp: 3.4°C

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Talon/LPE Co.

Date/ Time Received: 07/14/2016 08:35:00 AM

Work Order #: 533357

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3.4
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron
Mary Negron
Date: 07/15/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 07/15/2016

APPENDIX E

NMOCD RELEASE NOTIFICATION AND CORRECTIVE ACTION (C-141)

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

RECEIVED
By JKeyes at 10:03 am, Jul 11, 2016

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company Enterprise Crude Oil	Contact Christopher A Spore, P.G.
Address 4600 E Hwy 80, Midland, TX, 79706	Telephone No. 432-214-3264
Facility Name Cimarex Penzoil 36 State COM 1	Facility Type Tank Battery

Surface Owner Cimarex	Mineral Owner	API No. 30-025-29918

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	S36	T19S	33E	1980'	South	660'	East	Lea

Latitude 32.614490° **Longitude** -103.610110°

NATURE OF RELEASE

Type of Release Crude Oil	Volume of Release 20 bbl	Volume Recovered 10 bbl
Source of Release Crude oil storage tank	Date and Hour of Occurrence 7/10/16 ~0400	Date and Hour of Discovery Immediately
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Enterprise truck driver opened an incorrect valve that was connected to a tank that was out of service for repair. Oil flowed from the in service tank into the out of service tank and was released from the open manway. All released crude remained within the confines of the tank battery's secondary containment.
A vacuum truck was dispatched, and was able to recover 10 bbl from the secondary containment. The 10 bbl was returned to the ECO pipeline system.

Describe Area Affected and Cleanup Action Taken.*
The impacts were limited to the caliche floor within the tank batter secondary containment. Upon the clearance of the utility locate, the impacted material will be disposed of at an approved disposal facility. Confirmation samples will be collected from the excavated area to demonstrate remediation is complete. Clean material will be hauled in and the excavation will be returned to pre spill conditions.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Chris A Spore	OIL CONSERVATION DIVISION	
Printed Name: Christopher A. Spore, P.G.	Approved by Environmental Specialist:	
Title: Senior Field Environmental Scientist	Approval Date: 07/11/2016	Expiration Date: 09/11/2016
E-mail Address: caspore@eprod.com	Conditions of Approval: Discrete samples only. Delineate and remediate per NMOCD guidelines.	Attached ☐ 1RP 4343
Date: 7/10/16 Phone: 432-214-3264		

* Attach Additional Sheets If Necessary

nJXK1619336071
pJXK1619336145

APPENDIX F

WASTE MANIFEST

SUNDANCE SERVICES, Inc.

P.O. Box 1737 Eunice, New Mexico 88231
(575) 394-2511

TICKET No. 392617

LEASE OPERATOR/SHIPPER/COMPANY: Enterprise Crude Oil Lea
LEASE NAME: Cimarex Penzoil #1
TRANSPORTER COMPANY: Talon
TIME: 4:05 AM/PM
DATE: 8-3-16 VEHICLE NO: 180901
GENERATOR COMPANY MAN'S NAME: Brian Payton
CHARGE TO: Talon # 700348.345.01
RIG NAME AND NUMBER

TYPE OF MATERIAL

[ ] Production Water	[ ] Drilling Fluids	[ ] Rinsate
[ ] Tank Bottoms	[X] Contaminated Soil	[ ] Jet Out
[ ] Solids	[ ] BS&W Content:	[ ] Call Out

Description: OLD

RRC or API # 30-025-29918 C-133#

VOLUME OF MATERIAL [ ] BBLS. _____ : [X] YARD 10 : [ ] _____

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET. TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY *that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.*

DRIVER: _____ (SIGNATURE)

FACILITY REPRESENTATIVE: D. De La Cruz (SIGNATURE)

White - Sundance Canary - Sundance Acct #1 Pink - Transporter

392617

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number

GENERATOR

5. Generator's Name and Mailing Address

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name — U.S. EPA ID Number

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

Facility's Phone:

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.						
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name — Signature — Month Day Year

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month Day Year

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Sundance Services, Inc.
P.O. Box 1737
Eunice, NM 88231
575-394-2511
Permit # NM-01-0003

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month Day Year