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**Closure Report  
Lime Rock Resources II-A, L.P.:**

**Hawk 8 Federal #46 Gas Line  
|30-015-28301|2RP-3945|**

December 21, 2016

**Prepared By:**

Sheldon L. Hitchcock  
TALON/LPE  
408 W. Texas Avenue  
Artesia, New Mexico 88210

**Prepared For:**

Lime Rock Resources II-A, L.P.

Mr. Mike Bratcher  
NMOCD District 2  
811 S. 1<sup>st</sup> Street  
Artesia, NM 88210

Subject: **Remedial Activities and Closure Report**  
Lime Rock Resources II-A, L.P.  
Hawk 8 Federal #46 Gas Line  
API # 30-015-28301|2RP-3945|

Dear Mr. Bratcher,

Lime Rock Resources II-A, L.P. (Lime Rock) has contracted Talon/LPE (Talon) to perform initial spill response, soil sampling and remediation services at the above referenced location. The incident description, soil sampling results, remediation activities and closure request are submitted herein.

### Site Information

The Hawk 8 Fed #46 Gas Line is located approximately ten (10) miles southeast of Artesia, New Mexico. The legal location for this release is Unit Letter N, Section 5, Township 18 South and Range 27 East in Lea County, New Mexico. More specifically the latitude and longitude for the release are 32.770502 North and -104.304714 West. A site plan is presented in [Appendix I](#).

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Service (NRCS), the soil in this area is made up of gypsum land complex. Per the New Mexico Bureau of Geology and Mineral Resources, the local surface and shallow geology is comprised of older alluvial deposits of the upland plains and piedmont areas. Also calcic soils and eolian cover sediments of the High Plains region. Drainage courses in this area are normally dry.

### Ground Water and Site Ranking

The New Mexico State Engineer database indicates that ground water in the project vicinity is at a depth of 140-feet below ground surface (BGS). See [Appendix II](#) for the referenced groundwater data.

Therefore the ranking for this site is a **0** based on the following:

Depth to ground water	>100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

## Incident Description

On October 14, 2016, a poly gas line ruptured resulting in the release approximately 20bbbls of mixed fluids. The fluid impacted a draw and ran 600-feet down gradient. Crews were dispatched to the site to contain the area and prevent further spread of fluid. An oil sorbent boom was placed at the bottom of the impacted area to prevent the spread of hydrocarbons should a precipitation event occur. Soil samples were collected within the draw in order to fully define the extent of the impacts. The laboratory results from the soil sampling events are summarized in the table below.

## Laboratory Results

See [Appendix V](#) for complete report of laboratory results.

### October 20, 2016 Initial Soil Sampling

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	0	ND	768	ND	11.3
S-2	0	ND	1250	ND	103
S-2 Refusal	1	ND	224	ND	65.1
S-3	0	12.6	1920	753	23800
S-3 Refusal	1	ND	240	ND	10.7
S-4	0	198	2800	2640	25000
S-4	1	ND	496	ND	ND
S-4 Refusal	2	ND	ND	ND	ND

### October 28, 2016 Post 1<sup>st</sup> Flush Soil Sampling

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-2	0	ND	176	ND	ND
S-3	0	ND	185	49.6	1210
S-4	0	ND	725	16.3	654

### November 30, 2016 Post 2<sup>nd</sup> Flush Soil Sampling

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-3	0	--	--	ND	74.5

(--) Analyte Not Tested

(ND) Analyte Not Detected

Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 5,000 mg/kg for TPH, and 1,000 mg/kg for Chlorides.

## Remedial Actions

- Based on analytical results obtained from the initial soil sampling event on October 20, 2016 a sump was built at the end of the impacted area to act as a catchment for water used to flush the draw.
- October 26, 2016, the draw was flushed 6 loads of water containing biodegradable surfactants and 4 loads of fresh water. All of the water used in the flushing was contained by the sump and recovered utilizing vacuum trucks.
- October 28, 2016, the draw was sampled to determine the effectiveness of the flushing.
- November 16, 2016, personnel from NMOCD, Lime Rock, and Talon met onsite to inspect the area and discuss the laboratory results from the soil sampling on October 28, 2016. Based on this meeting it was concluded that the draw should be re-flushed and another soil sample should be taken at sample location S-3 to be analyzed for TPH following the second flushing event.
- November 22, 2016, the draw was flushed for a second time using 2 loads of water containing biodegradable surfactants and 2 loads of fresh water.
- November 30, 2016, a confirmation soil sample was taken at sample location S-3 and analyzed for TPH.
- Based on the confirmation sampling NMOCD and BLM granted permission to remove the sump and reclaim the area disturbed by equipment accessing the draw.
- December 20, 2016, the disturbed area was contoured to match the surrounding terrain and seeded with BLM #4 seed mixture. Seed labels can be found in [Appendix IV](#).

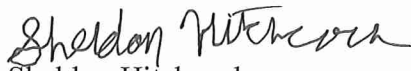
## Closure

On behalf of Lime Rock Resources II-A, L.P we respectfully request that no further actions be required and that closure with regard to this release be granted.

If we can provide additional information or be of further assistance, please contact our office at (575)-746-8768.

Respectfully submitted,

TALON/LPE

  
Sheldon Hitchcock  
Project Manager

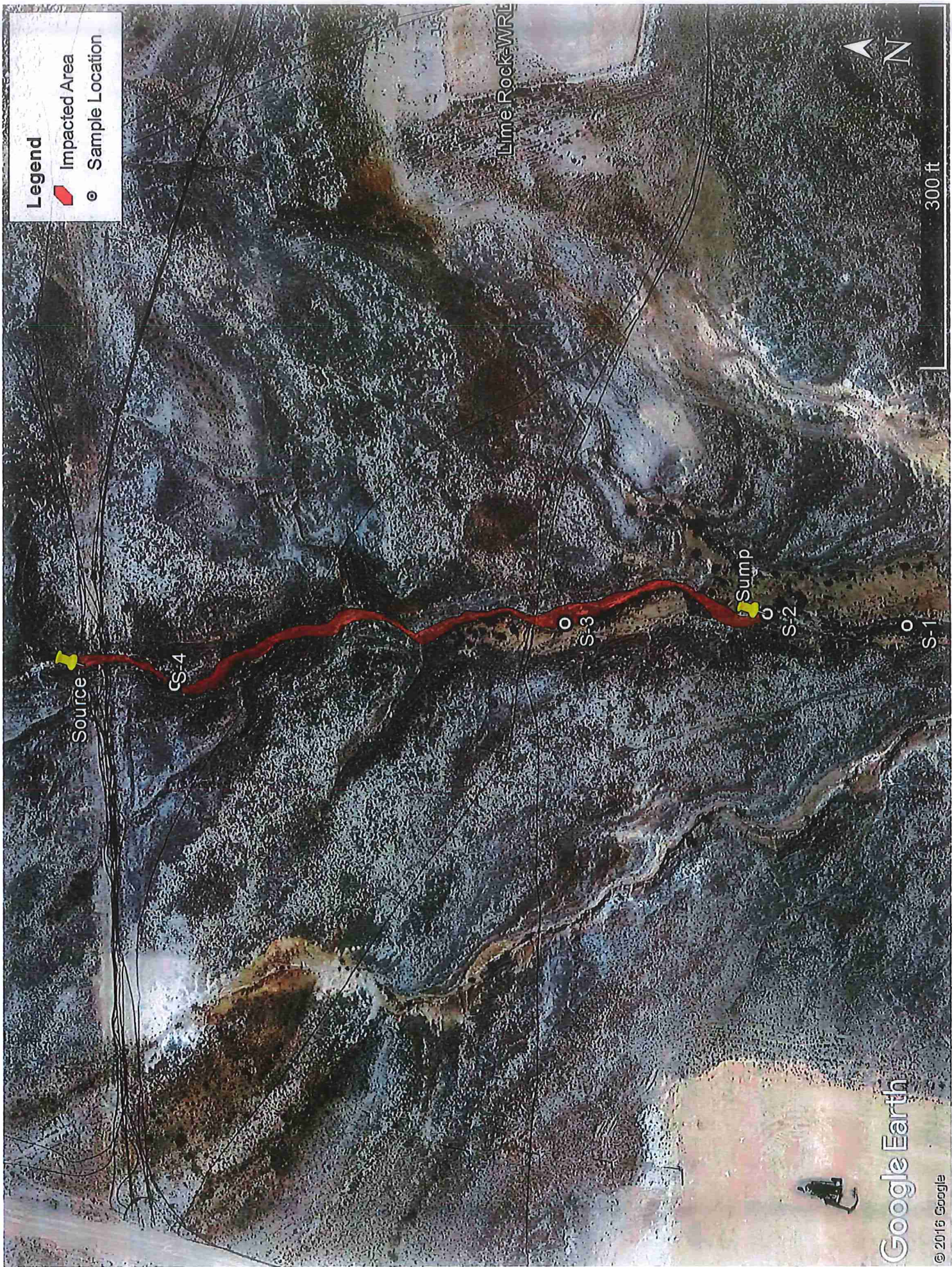
  
David J. Adkins  
District Manager

## Attachments

Appendix I Site Plan  
Appendix II Groundwater Data  
Appendix III Initial & Final C-141  
Appendix IV Seed Label  
Appendix V Laboratory Results

# APPENDIX I

## SITE PLAN



**Legend**

Impacted Area

Sample Location

# **APPENDIX II**

## **GROUNDWATER DATA**



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW##### in the  
POD suffix indicates the  
POD has been replaced  
& no longer serves a  
water right file.)

(R=POD has  
been replaced,  
O=orphaned,  
C=the file is  
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
<a href="#">RA 03661</a>			ED	3	2	3	32	17S	27E	565186	3628038*	1890	330	140	190

Average Depth to Water: 140 feet

Minimum Depth: 140 feet

Maximum Depth: 140 feet

Record Count: 1

### Basin/County Search:

County: Eddy

### UTMNAD83 Radius Search (in meters):

Easting (X): 565307

Northing (Y): 3626151

Radius: 1900

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

**APPENDIX III**  
**INITIAL C-141**  
**&**  
**FINAL C-141**

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: Lime Rock Resources	Contact: Michael Barrett
Address: P.O. Box 2147, Roswell, NM 88202	Telephone No.: 505.353.2644
Facility Name: Hawk 8 No. 46	Facility Type: Gas Line

Surface Owner: BLM	Mineral Owner State	Lease No.
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#### LOCATION OF RELEASE

Unit Letter	Section 5	Township 18S	Range 27E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
-------------	--------------	-----------------	--------------	---------------	------------------	---------------	----------------	----------------

Latitude 32.77049 Longitude -104.30511

#### NATURE OF RELEASE

Type of Release: mixed fluids	Volume of Release: 20 BBLs	Volume Recovered 0
Source of Release: gas line	Date and Hour of Occurrence 10/14/16	Date and Hour of Discovery 10/14/16 4pm
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. 20 BBL	

If a Watercourse was Impacted, Describe Fully.\*

A dry water course, ravine/draw leading to the Pecos River was impacted. However no fluids reached the river.

Describe Cause of Problem and Remedial Action Taken.\*


The line was immediately shut in. Talon/LPE was contracted to perform site assessment and sampling activities. A work plan will be generated and submitted to the NMOCD and BLM for review.

Describe Area Affected and Cleanup Action Taken.\*

The affected area was the draw only. Fluids migrated several hundred feet but did not reach the river. Oil absorbent booms will be placed in the event of rainfall. A sump will be constructed and the impacted portion of the draw will be flushed with fresh water to mitigate impacts as initial remedial actions. The water will be picked up with vac trucks and properly disposed of.

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.

#### OIL CONSERVATION DIVISION

Signature: 

Printed Name: Michael Barrett

Title: Production Superintendent

E-mail Address: mbarrett@limerockresources.com

Date: 10/17/2016

Phone: 505.353.2644

Approved by District Supervisor:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

\* Attach Additional Sheets If Necessary

Received 12/13/2016

NMOCD Dist 2

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, 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

Oil Conservation Division  
1220 South St. Francis Dr.  
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Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

nAB1629541723

**OPERATOR**☐ Initial Report ☒ Final Report

Name of Company: Lime Rock Resources	Contact: Michael Barrett
Address: P.O. Box 2147, Roswell, NM 88202	Telephone No.: 505.353.2644
Facility Name: Hawk 8 No. 46	Facility Type: Gas Line

Surface Owner: BLM	Mineral Owner State	Lease No.
--------------------	---------------------	-----------

**LOCATION OF RELEASE**

Unit Letter	Section 5	Township 18S	Range 27E	Feet from the	North/South Line	Feet from the	East/West Line	County Eddy
-------------	--------------	-----------------	--------------	---------------	------------------	---------------	----------------	----------------

Latitude 32.77049 Longitude -104.30511

**NATURE OF RELEASE**

Type of Release: mixed fluids	Volume of Release: 20 BBLs	Volume Recovered 0
Source of Release: gas line	Date and Hour of Occurrence 10/14/16	Date and Hour of Discovery 10/14/16 4pm
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse. 20 BBL	

If a Watercourse was Impacted, Describe Fully.\*

A dry water course, ravine/draw leading to the Pecos River was impacted. However no fluids reached the river.

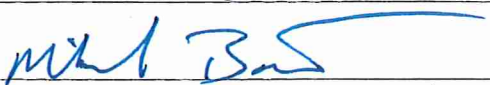

Describe Cause of Problem and Remedial Action Taken.\*

The line was immediately shut in. Talon/LPE was contracted to perform site assessment and sampling activities within the draw. BLM was consulted prior to any dirt work in the area to insure cultural resources were adequately protected.

Describe Area Affected and Cleanup Action Taken.\*

The affected area was the draw only. Fluids migrated several hundred feet but did not reach the river. Oil absorbent booms were placed down gradient to contain the movement of oil in the event of rainfall. After receiving analytical data from the soil sampling event a sump was constructed within the draw at the end of the flow path. The draw was then flushed with 6 loads of water containing biodegradable surfactants followed by 6 load of freshwater. On November 16, 2016 personnel from NMOCD, Talon/LPE, and Lime Rock conducted a site inspection. It was determined that the draw should be flushed again and that the soil at sample location S-3 should be resampled after the second flush and analyzed for TPH. November 22, 2016 the draw was flushed again with 2 loads of water containing biodegradable surfactants and 4 loads of freshwater. On November 30, 2016 S-3 was sampled and analyzed for TPH per NMOCD stipulations.

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: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Michael Barrett	Approved by District Supervisor: 	
Title: Production Superintendent	Approval Date: 12/13/16	Expiration Date: N/A
E-mail Address: mbarrett@limerockresources.com	Conditions of Approval: Like approval BLM	
Date: 12/6/2016	Phone: 505.353.2644	Attached <input type="checkbox"/>
Final		

2RP-3945

# **APPENDIX IV**

## **SEED LABELS**

**Curtis and Curtis, Inc.**  
 4500 North Prince  
 Clovis, NM 88101  
 Phone: (575) 762-4759  
 www.curtisseed.com

XL  
 12/20/16

Talon / LPE, LTD  
 5 Acres BLM #4, Drilled Rate  
 5 - 1 Acre Bags @ 22.83 Bulk Pounds Each  
 Job: Lime Rock-Hawk 8 Fed #46  
 Legal: N-5-18S-27E  
 Job #: 701307.093.01

Lot# M-14065

Item	Origin	Purity	Germ	Dormant	Total Germination	Test Date	Total PLS Pounds
Alkali Sacaton VNS	New Mexico	7.30%	23.00%	67.00%	90.00%	03/16	7.50
Four-Wing Saltbush VNS	New Mexico	66.11%	18.00%	35.00%	53.00%	06/16	40.00
Total Bulk Pounds:							114

Other Crop: 0.57% There Are 5 Bags For This Mix  
 Weed Seed: 0.01% This Bag Weighs 22.83 Bulk Pounds  
 Inert Matter: 26.01% Use This Bag For 1 Acres

**Curtis and Curtis, Inc.**  
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 Clovis, NM 88101  
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XL  
 12/20/16

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 5 Acres BLM #4, Drilled Rate  
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 Legal: N-5-18S-27E  
 Job #: 701307.093.01

Lot# M-14065

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**Curtis and Curtis, Inc.**

4500 North Prince  
Clovis, NM 88101  
Phone: (575) 762-4759  
www.curtisseed.com

Talon / LPE, LTD  
5 Acres BLM #4, Drilled Rate  
5 - 1 Acre Bags @ 22.83 Bulk Pounds Each  
Job: Line Rock-Hawk 8 Fed #46  
Legal: N-5-18S-27E  
Job #: 701307093.01

Lot#: M-14065

Item	Origin	Purity	Germ	Dormant	Total Germination	Test Date	Total PLS Pounds
Alkali Sacaton VNS	New Mexico	7.30%	23.00%	67.00%	90.00%	03/16	7.50
Four-Wing Saltbush VNS	New Mexico	66.11%	18.00%	35.00%	53.00%	06/16	40.00

Other Crop:	0.57%	There Are 5 Bags For This Mix	Total Bulk Pounds:	114
Weed Seed:	0.01%	This Bag Weighs 22.83 Bulk Pounds		
Inert Matter:	26.01%	Use This Bag For 1 Acres		

XL  
12/20/16

# **APPENDIX V**

## **LABORATORY RESULTS**



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

October 24, 2016

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: HAWK 8 #46 GAS LINE

Enclosed are the results of analyses for samples received by the laboratory on 10/21/16 8:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/21/2016	Sampling Date:	10/20/2016
Reported:	10/24/2016	Sampling Type:	Soil
Project Name:	HAWK 8 #46 GAS LINE	Sampling Condition:	Cool & Intact
Project Number:	701307.043.01	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-1 0' (H602372-01)**

BTX 8021B			mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	10/22/2016	ND	1.97	98.6	2.00	0.183		
Toluene*	<0.050	0.050	10/22/2016	ND	2.27	113	2.00	0.467		
Ethylbenzene*	<0.050	0.050	10/22/2016	ND	2.30	115	2.00	0.236		
Total Xylenes*	<0.150	0.150	10/22/2016	ND	6.95	116	6.00	0.317		
Total BTX	<0.300	0.300	10/22/2016	ND						

Surrogate: 4-Bromofluorobenzene (PIL) 104 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	10/21/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/21/2016	ND	179	89.4	200	6.99	
DRO >C10-C28	11.3	10.0	10/21/2016	ND	194	97.0	200	8.01	

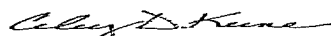
Surrogate: 1-Chlorooctane 111 % 35-147

Surrogate: 1-Chlorooctadecane 128 % 28-171

Cardinal Laboratories

\* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/21/2016	Sampling Date:	10/20/2016
Reported:	10/24/2016	Sampling Type:	Soil
Project Name:	HAWK 8 #46 GAS LINE	Sampling Condition:	Cool & Intact
Project Number:	701307.043.01	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-2 0' (H602372-02)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2016	ND	1.97	98.6	2.00	0.183	
Toluene*	<b>0.054</b>	0.050	10/24/2016	ND	2.27	113	2.00	0.467	
Ethylbenzene*	<b>0.050</b>	0.050	10/24/2016	ND	2.30	115	2.00	0.236	
Total Xylenes*	<0.150	0.150	10/24/2016	ND	6.95	116	6.00	0.317	
Total BTX	<0.300	0.300	10/24/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>1250</b>	16.0	10/21/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/21/2016	ND	179	89.4	200	6.99	
DRO >C10-C28	<b>103</b>	10.0	10/21/2016	ND	194	97.0	200	8.01	

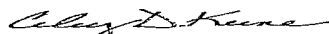
Surrogate: 1-Chlorooctane 71.5 % 35-147

Surrogate: 1-Chlorooctadecane 70.4 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/21/2016	Sampling Date:	10/20/2016
Reported:	10/24/2016	Sampling Type:	Soil
Project Name:	HAWK 8 #46 GAS LINE	Sampling Condition:	Cool & Intact
Project Number:	701307.043.01	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-2 1' REFUSAL (H602372-03)**

BTEx 8021B			mg/kg							Analyzed By: CK	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Benzene*	<0.050	0.050	10/22/2016	ND	1.97	98.6	2.00	0.183			
Toluene*	<0.050	0.050	10/22/2016	ND	2.27	113	2.00	0.467			
Ethylbenzene*	<0.050	0.050	10/22/2016	ND	2.30	115	2.00	0.236			
Total Xylenes*	<0.150	0.150	10/22/2016	ND	6.95	116	6.00	0.317			
Total BTEx	<0.300	0.300	10/22/2016	ND							

Surrogate: 4-Bromofluorobenzene (PIL) 101 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	224	16.0	10/21/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte		Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10		<10.0	10.0	10/21/2016	ND	179	89.4	200	6.99	
DRO >C10-C28		65.1	10.0	10/21/2016	ND	194	97.0	200	8.01	

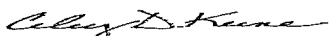
Surrogate: 1-Chlorooctane 109 % 35-147

Surrogate: 1-Chlorooctadecane 129 % 28-171

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/21/2016	Sampling Date:	10/20/2016
Reported:	10/24/2016	Sampling Type:	Soil
Project Name:	HAWK 8 #46 GAS LINE	Sampling Condition:	Cool & Intact
Project Number:	701307.043.01	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-3 0' (H602372-04)**

BTX 8021B			mg/kg							Analyzed By: CK	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier		
Benzene*	<0.500	0.500	10/22/2016	ND	1.97	98.6	2.00	0.183			
Toluene*	<0.500	0.500	10/22/2016	ND	2.27	113	2.00	0.467			
Ethylbenzene*	2.43	0.500	10/22/2016	ND	2.30	115	2.00	0.236			
Total Xylenes*	10.1	1.50	10/22/2016	ND	6.95	116	6.00	0.317			
Total BTX	12.6	3.00	10/22/2016	ND							

Surrogate: 4-Bromofluorobenzene (PIL) 114 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1920	16.0	10/21/2016	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: CK				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	753	100	10/21/2016	ND	179	89.4	200	6.99	
DRO >C10-C28	23800	100	10/21/2016	ND	194	97.0	200	8.01	

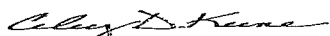
Surrogate: 1-Chlorooctane 199 % 35-147

Surrogate: 1-Chlorooctadecane 658 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

TALON LPE  
DAVID ADKINS  
408 W. TEXAS AVE.  
ARTESIA NM, 88210  
Fax To: (575) 745-8905

Received:	10/21/2016	Sampling Date:	10/20/2016
Reported:	10/24/2016	Sampling Type:	Soil
Project Name:	HAWK 8 #46 GAS LINE	Sampling Condition:	Cool & Intact
Project Number:	701307.043.01	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-3 1' REFUSAL (H602372-05)**

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2016	ND	1.97	98.6	2.00	0.183	
Toluene*	<0.050	0.050	10/22/2016	ND	2.27	113	2.00	0.467	
Ethylbenzene*	<0.050	0.050	10/22/2016	ND	2.30	115	2.00	0.236	
Total Xylenes*	<0.150	0.150	10/22/2016	ND	6.95	116	6.00	0.317	
Total BTEX	<0.300	0.300	10/22/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 103 % 73.6-140

Chloride, SM4500Cl-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	240	16.0	10/21/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/21/2016	ND	179	89.4	200	6.99	
DRO >C10-C28	10.7	10.0	10/21/2016	ND	194	97.0	200	8.01	

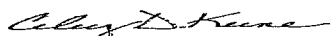
Surrogate: 1-Chlorooctane 96.8 % 35-147

Surrogate: 1-Chlorooctadecane 112 % 28-171

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/21/2016	Sampling Date:	10/20/2016
Reported:	10/24/2016	Sampling Type:	Soil
Project Name:	HAWK 8 #46 GAS LINE	Sampling Condition:	Cool & Intact
Project Number:	701307.043.01	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-4 0' (H602372-06)**

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	4.99	2.00	10/22/2016	ND	1.97	98.6	2.00	0.183	
Toluene*	41.5	2.00	10/22/2016	ND	2.27	113	2.00	0.467	
Ethylbenzene*	47.7	2.00	10/22/2016	ND	2.30	115	2.00	0.236	
Total Xylenes*	104	6.00	10/22/2016	ND	6.95	116	6.00	0.317	
Total BTEX	198	12.0	10/22/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIL) 107 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2800	16.0	10/21/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	2640	100	10/21/2016	ND	179	89.4	200	6.99		
DRO >C10-C28	25000	100	10/21/2016	ND	194	97.0	200	8.01		

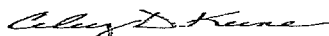
Surrogate: 1-Chlorooctane 190 % 35-147

Surrogate: 1-Chlorooctadecane 729 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM; 88210  
 Fax To: (575) 745-8905

Received:	10/21/2016	Sampling Date:	10/20/2016
Reported:	10/24/2016	Sampling Type:	Soil
Project Name:	HAWK 8 #46 GAS LINE	Sampling Condition:	Cool & Intact
Project Number:	701307.043.01	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-4 1' (H602372-07)**

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/24/2016	ND	1.97	98.6	2.00	0.183	
Toluene*	<b>0.079</b>	0.050	10/24/2016	ND	2.27	113	2.00	0.467	
Ethylbenzene*	<0.050	0.050	10/24/2016	ND	2.30	115	2.00	0.236	
Total Xylenes*	<0.150	0.150	10/24/2016	ND	6.95	116	6.00	0.317	
Total BTX	<0.300	0.300	10/24/2016	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 100 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>496</b>	16.0	10/21/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/21/2016	ND	179	89.4	200	6.99	
DRO >C10-C28	<10.0	10.0	10/21/2016	ND	194	97.0	200	8.01	

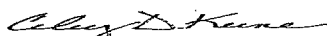
Surrogate: 1-Chlorooctane 104 % 35-147

Surrogate: 1-Chlorooctadecane 94.1 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

 TALON LPE  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	10/21/2016	Sampling Date:	10/20/2016
Reported:	10/24/2016	Sampling Type:	Soil
Project Name:	HAWK 8 #46 GAS LINE	Sampling Condition:	Cool & Intact
Project Number:	701307.043.01	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

**Sample ID: S-4 2' REFUSAL (H602372-08)**

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	10/22/2016	ND	1.97	98.6	2.00	0.183	
Toluene*	<0.050	0.050	10/22/2016	ND	2.27	113	2.00	0.467	
Ethylbenzene*	<0.050	0.050	10/22/2016	ND	2.30	115	2.00	0.236	
Total Xylenes*	<0.150	0.150	10/22/2016	ND	6.95	116	6.00	0.317	
Total BTEX	<0.300	0.300	10/22/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	10/21/2016	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	10/21/2016	ND	179	89.4	200	6.99	
DRO >C10-C28	<10.0	10.0	10/21/2016	ND	194	97.0	200	8.01	

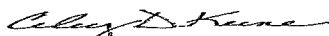
Surrogate: 1-Chlorooctane 91.7 % 35-147

Surrogate: 1-Chlorooctadecane 97.5 % 28-171

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

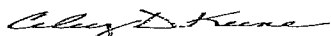
S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

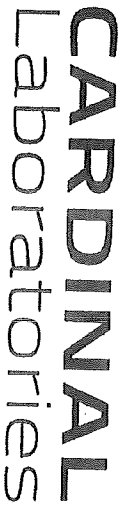
\*=Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

<b>Company Name:</b> Talon/LPE				<b>P.O. #:</b>		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																
<b>Project Manager:</b> D. Adams																								
<b>Address:</b> 408 W. Texas Ave.																								
<b>City:</b> Artesia				<b>State:</b> NM		<b>zip:</b> 88210																		
<b>Phone #:</b> 575-746-8768				<b>Fax #:</b> 575-746-8905																				
<b>Project #:</b> 701307.04301				<b>Project Owner:</b> Line Rock																				
<b>Project Name:</b> Helix 8 # 46 Gas Line																								
<b>Project Location:</b>																								
<b>Sampler Name:</b> S. Hitchcock																								
<b>FOR LAB USE ONLY</b>																								
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV	SAMPLING	DATE	TIME	TPH	BTX	Chlorides								
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :															
HBO2572	1 5-10'	G	1	<input checked="" type="checkbox"/>								10/24/16	3:00	/	/	/								
	2 5-20'	G	1	<input checked="" type="checkbox"/>								3:20		/	/	/								
	3 5-21' refusal	G	1	<input checked="" type="checkbox"/>								3:40		/	/	/								
	4 5-30'	G	1	<input checked="" type="checkbox"/>								4:00		/	/	/								
	5 5-31' refusal	G	1	<input checked="" type="checkbox"/>								4:20		/	/	/								
	6 5-40'	G	1	<input checked="" type="checkbox"/>								4:40		/	/	/								
	7 5-41'	G	1	<input checked="" type="checkbox"/>								5:00		/	/	/								
	8 5-42' refusal	G	1	<input checked="" type="checkbox"/>								5:30		/	/	/								

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<b>Relinquished By:</b>		<b>Received By:</b>	
Shirley Price		Jodi Gordon	
<b>Date:</b> 8/14/16		<b>Date:</b> 10/24/16	
<b>Time:</b>		<b>Time:</b>	
<b>Delivered By: (Circle One)</b>		<b>Sample Condition</b>	
Sampler - UPS - Bus - Other:		Cool Intact Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
1.7c		CHECKED BY: (initials) <i>[Signature]</i>	
<b>REMARKS:</b>  RUSH			

# **Analytical Report 539457**

**for  
Talon LPE**

**Project Manager: Sheldon Hitckcock**

**HAWK 8 Fed #46**

**02-NOV-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)



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02-NOV-16

Project Manager: **Sheldon Hitckcock**

**Talon LPE**

408 W. Texas St.

Artesia, NM 88210

Reference: XENCO Report No(s): **539457**

**HAWK 8 Fed #46**

Project Address:

**Sheldon Hitckcock:**

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) 539457. 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. 539457 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

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## Sample Cross Reference 539457



**Talon LPE, Artesia, NM**

**HAWK 8 Fed #46**

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-2	S	10-28-16 15:00		539457-001
S-3	S	10-28-16 15:10		539457-002
S-4	S	10-28-16 15:20		539457-003



## CASE NARRATIVE



**Client Name:** *Talon LPE*

**Project Name:** *HAWK 8 Fed #46*

**Project ID:**

**Work Order Number(s):** 539457

**Report Date:** 02-NOV-16

**Date Received:** 10/29/2016

---

**Sample receipt non conformances and comments:**

---

**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3003040 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



# Certificate of Analysis Summary 539457

Talon LPE, Artesia, NM

Project Name: HAWK 8 Fed #46



Date Received in Lab: Sat Oct-29-16 12:00 pm

Report Date: 02-NOV-16

Project Manager: Kelsey Brooks

Project Id:

Contact: Sheldon Hitecock

Project Location:

Analysis Requested		Lab Id:	539457-001	539457-002	539457-003		
		Field Id:	S-2	S-3	S-4		
		Depth:					
		Matrix:	SOIL	SOIL	SOIL		
		Sampled:	Oct-28-16 15:00	Oct-28-16 15:10	Oct-28-16 15:20		
BTEX by EPA 8021B	Extracted:	Oct-31-16 14:10	Oct-31-16 14:10	Oct-31-16 14:10	Oct-31-16 14:10		
	Analyzed:	Nov-01-16 08:34	Nov-01-16 09:10	Oct-31-16 20:54	Oct-31-16 20:54		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	Benzene	ND 0.00150	ND 0.00149	ND 0.00149	ND 0.00149		
	Toluene	ND 0.00200	ND 0.00198	ND 0.00199	ND 0.00199		
Inorganic Anions by EPA 300/300.1	Ethylbenzene	ND 0.00200	ND 0.00198	ND 0.00199	ND 0.00199		
	m,p-Xylenes	ND 0.00200	ND 0.00198	ND 0.00199	ND 0.00199		
	o-Xylene	ND 0.00299	ND 0.00298	ND 0.00299	ND 0.00299		
Total BTEX	Total Xylenes	ND 0.00200	ND 0.00198	ND 0.00199	ND 0.00199		
	Total BTEX	ND 0.00150	ND 0.00149	ND 0.00149	ND 0.00149		
TPH By SW8015B Mod	Extracted:	Oct-31-16 17:14	Oct-31-16 17:14	Oct-31-16 17:14	Oct-31-16 17:14		
	Analyzed:	Oct-31-16 18:43	Oct-31-16 18:50	Oct-31-16 18:57	Oct-31-16 18:57		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C10 Gasoline Range Hydrocarbons	Chloride	176 50.0	185 50.0	725 50.0	725 50.0		
	Extracted:	Oct-31-16 16:00	Oct-31-16 16:00	Oct-31-16 16:00	Oct-31-16 16:00		
	Analyzed:	Nov-01-16 08:36	Nov-01-16 09:01	Nov-01-16 09:25	Nov-01-16 09:25		
C10-C28 Diesel Range Hydrocarbons	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
	C6-C10 Gasoline Range Hydrocarbons	ND 14.9	49.6 15.0	16.3 15.0	16.3 15.0		
Total TPH	C10-C28 Diesel Range Hydrocarbons	ND 14.9	1210 15.0	634 15.0	634 15.0		
	Total TPH	ND 14.9	1270 15.0	670 15.0	670 15.0		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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*Kelsey Brooks*

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

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(210) 509-3334	(210) 509-3335
(432) 563-1800	(432) 563-1713
(602) 437-0330	



## Form 2 - Surrogate Recoveries

Project Name: HAWK 8 Fed #46

Work Orders : 539457,

Lab Batch #: 3003040

Sample: 539457-003 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/16 20:54

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0321	0.0300	107	80-120	

Lab Batch #: 3003034

Sample: 539457-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/16 08:36

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	116	99.6	116	70-135	
o-Terphenyl	61.2	49.8	123	70-135	

Lab Batch #: 3003040

Sample: 539457-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/16 08:54

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 3003034

Sample: 539457-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/16 09:01

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	116	99.7	116	70-135	
o-Terphenyl	61.0	49.9	122	70-135	

Lab Batch #: 3003040

Sample: 539457-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/16 09:10

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0304	0.0300	101	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: HAWK 8 Fed #46

Work Orders : 539457,

Lab Batch #: 3003034

Sample: 539457-003 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/16 09:25

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	99.9	115	70-135	
o-Terphenyl	61.0	50.0	122	70-135	

Lab Batch #: 3003040

Sample: 715592-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/16 16:29

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0282	0.0300	94	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	80-120	

Lab Batch #: 3003034

Sample: 715582-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/16 23:28

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	61.8	50.0	124	70-135	

Lab Batch #: 3003040

Sample: 715592-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/16 14:13

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 3003034

Sample: 715582-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/16 23:53

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	100	128	70-135	
o-Terphenyl	63.3	50.0	127	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: HAWK 8 Fed #46

Work Orders : 539457,

Project ID:

Lab Batch #: 3003040

Sample: 715592-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 10/31/16 14:29

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0274	0.0300	91	80-120	

Lab Batch #: 3003034

Sample: 715582-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 11/01/16 00:17

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	63.7	50.0	127	70-135	

Lab Batch #: 3003040

Sample: 539437-013 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/16 15:30

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

Lab Batch #: 3003034

Sample: 539437-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/16 01:06

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	99.9	126	70-135	
o-Terphenyl	62.0	50.0	124	70-135	

Lab Batch #: 3003040

Sample: 539437-013 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 10/31/16 15:47

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0346	0.0300	115	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: HAWK 8 Fed #46

Work Orders : 539457,

Lab Batch #: 3003034

Sample: 539437-001 SD / MSD

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 11/01/16 01:31

### SURROGATE RECOVERY STUDY

TPH By SW8015B Mod  Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	99.7	124	70-135	
o-Terphenyl	64.0	49.9	128	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.



## BS / BSD Recoveries

Project Name: HAWK 8 Fed #46



Work Order #: 539457

Analyst: PJB

Lab Batch ID: 3003040

Units: mg/kg

Date Prepared: 11/01/2016

Sample: 715592-1-BKS Batch #: 1

Project ID:

Date Analyzed: 10/31/2016

Matrix: Solid

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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
BTEX by EPA 8021B											
Benzene	<0.00150	0.100	0.102	102	0.100	0.0897	90	13	70-130	35	
Toluene	<0.00200	0.100	0.102	102	0.100	0.0882	88	15	70-130	35	
Ethylbenzene	<0.00200	0.100	0.106	106	0.100	0.0934	93	13	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.217	109	0.200	0.191	96	13	70-135	35	
o-Xylene	<0.00300	0.100	0.107	107	0.100	0.0944	94	13	71-133	35	

Date Prepared: 10/31/2016

Analyst: MNR Lab Batch ID: 3003036

Sample: 715579-1-BKS

Units: mg/kg

Date Analyzed: 10/31/2016

Matrix: Solid

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

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
Inorganic Anions by EPA 300/300.1											
Chloride	<5.00	250	259	104	250	261	104	1	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: HAWK 8 Fed #46



Work Order #: 539457

Analyst: ARM

Lab Batch ID: 3003034

Units: mg/kg

Sample: 715582-1-BKS

Batch #: 1

Date Prepared: 10/31/2016

Project ID:

Date Analyzed: 10/31/2016

Matrix: Solid

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod  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	951	95	1000	983	98	3	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	1000	969	97	1000	991	99	2	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: HAWK 8 Fed #46

Work Order #: 539457

Project ID:

Lab Batch ID: 3003040

QC- Sample ID: 539437-013 S Batch #: 1 Matrix: Soil

Date Analyzed: 10/31/2016

Date Prepared: 10/31/2016 Analyst: PJB

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

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
BTEX by EPA 8021B											
Benzene	<0.00150	0.0998	0.0852	85	0.0994	0.0930	94	9	70-130	35	
Toluene	<0.00200	0.0998	0.0845	85	0.0994	0.0956	96	12	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.0883	88	0.0994	0.0984	99	11	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.181	91	0.199	0.207	104	13	70-135	35	
o-Xylene	<0.00299	0.0998	0.0888	89	0.0994	0.106	107	18	71-133	35	

Lab Batch ID: 3003036

QC- Sample ID: 539437-018 S Batch #: 1 Matrix: Soil

Date Analyzed: 10/31/2016

Date Prepared: 10/31/2016 Analyst: MNR

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

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
Inorganic Anions by EPA 300/300.1											
Chloride	17.7	250	254	95	250	248	92	2	90-110	20	

Lab Batch ID: 3003036

QC- Sample ID: 539505-001 S Batch #: 1 Matrix: Soil

Date Analyzed: 10/31/2016

Date Prepared: 10/31/2016 Analyst: MNR

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

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
Inorganic Anions by EPA 300/300.1											
Chloride	3890	1250	5110	98	1250	5160	102	1	90-110	20	

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

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

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.



# Form 3 - MS / MSD Recoveries

Project Name: HAWK 8 Fed #46



Work Order #: 539457  
Lab Batch ID: 3003034  
Date Analyzed: 11/01/2016  
Reporting Units: mg/kg

QC- Sample ID: 539437-001 S  
Date Prepared: 10/31/2016  
Project ID: 539437-001 S  
Batch #: 1  
Matrix: Soil  
Analyst: ARM

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod 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	999	962	96	997	996	100	3	70-135	35	
C10-C28 Diesel Range Hydrocarbons	<15.0	999	980	98	997	1020	102	4	70-135	35	

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



**XENCO Laboratories**  
**Prelogin/Nonconformance Report- Sample Log-In**



Client: Talon LPE

Date/ Time Received: 10/29/2016 12:00:00 PM

Work Order #: 539457

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)?	6.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seal present on shipping container/ cooler?	Yes
#5 *Custody Seals intact on shipping container/ cooler?	Yes
#6 Custody Seals intact on sample bottles?	Yes
#7 *Custody Seals Signed and dated?	No
#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)?	N/A
#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:

*Jessica Kramer*

Jessica Kramer

Date: 10/31/2016

Checklist reviewed by:

*Kelsey Brooks*

Kelsey Brooks

Date: 11/01/2016



Serving the Standard since 1990  
Stafford, Texas (281-240-4200)  
Dallas, Texas (214-902-0300)

Service Center - San Antonio, Texas (210-508-3334)

www.xenco.com

# CHAIN OF CUSTODY

Page 1 of 1

Odessa, Texas (432-563-1800)  
Norcross, Georgia (770-448-8800)  
Lakeland, Florida (888-646-8526)  
Tampa, Florida (813-620-2000)

Xenon Quota #  
Xenon Job #

539457

## Client/Reporting Information

Company Name / Branch:

Company Address:

Email:

Phone No:

Invoice To:

## Project Information

Project Name/Number:

Project Location:

PO Number:

TALON/LPE

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

Field Comments

Field ID / Point of Collection

No.

Sample Depth

Date

Time

Matrix

# of bottles

HCl

NaOH/Zn Acetate

HNO3

H2SO4

NaOH

NaHSO4

MeOH

TPH

BTEX

Chlorides

Turnaround Time (Business days)

Same Day TAT

5 Day TAT

Next Day EMERGENCY

2 Day EMERGENCY

3 Day EMERGENCY

Contract TAT

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

Relinquished by Sampler:

Relinquished By:

Date Time:

Received By:

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XENCO Laboratories  
Prelogin/Nonconformance Report- Sample Log-In



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Date/ Time Received: 10/29/2016 12:00:00 PM

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Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

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Analyst:

PH Device/Lot#:

Checklist completed by:

*Jessica Kramer*

Jessica Kramer

Date: 10/31/2016

Checklist reviewed by:

*Kelsey Brooks*

Kelsey Brooks

Date: 11/01/2016



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

---

December 02, 2016

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: HAWK 8 #46 GAS LINE

Enclosed are the results of analyses for samples received by the laboratory on 12/01/16 13:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**

TALON LPE  
 DAVID ADKINS  
 408 W. TEXAS AVE.  
 ARTESIA NM, 88210  
 Fax To: (575) 745-8905

Received:	12/01/2016	Sampling Date:	11/30/2016
Reported:	12/02/2016	Sampling Type:	Soil
Project Name:	HAWK 8 #46 GAS LINE	Sampling Condition:	Cool & Intact
Project Number:	701307.043.01	Sample Received By:	Celey D. Keene
Project Location:	NOT GIVEN		

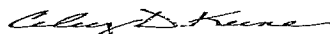
**Sample ID: S-3 0' (H602687-01)**

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	12/01/2016	ND	188	93.9	200	2.53	
<b>DRO &gt;C10-C28</b>	<b>74.5</b>	10.0	12/01/2016	ND	198	99.0	200	2.83	
<hr/>									
Surrogate: 1-Chlorooctane	85.0 %	35-147							
Surrogate: 1-Chlorooctadecane	101 %	28-171							

Cardinal Laboratories

\* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

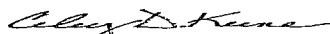
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Cardinal Laboratories

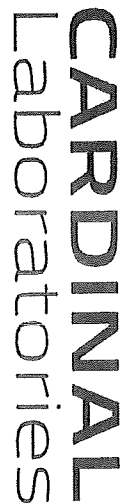
\*—Accredited Analyte

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---

Celey D. Keene, Lab Director/Quality Manager



## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240  
(575) 393-2326 FAX (575) 393-2476

<b>Company Name:</b> Talon/PE <b>Project Manager:</b> J. Adkins <b>Address:</b> 408 W. Texas Ave. <b>City:</b> Artesia <b>State:</b> NM <b>zip:</b> 88210 <b>Phone #:</b> 575-746-8768 <b>Fax #:</b> 575-746-8905 <b>Project #:</b> 701307093.01 <b>Project Owner:</b> Lime Rock <b>Project Name:</b> Hark & Feltch <b>Project Location:</b> <b>Sampler Name:</b> S. Hitchcock <b>FOR LAB USE ONLY</b>				<b>P.O. #:</b> <b>Company:</b> Talon/PE <b>Attn:</b> <b>Address:</b> <b>City:</b> <b>State:</b> <b>Zip:</b> <b>Phone #:</b> <b>Fax #:</b>	
<b>Lab I.D.</b> H000371 015-3 0'		<b>Sample I.D.</b> (G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER : DATE TIME		MATRIX PRESERV SAMPLING	
Delivered By: (Circle One) UPS - Bus - Other:		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No		CHECKED BY: (Initials) 250C 11/24/16 1:40	
Relinquished By: Sheldon Hark Relinquished By:		Received By: S. Hitchcock Date: 12/1/16 Time: 13:20		REMARKS: Rush	