



02097890

# 4370

## REMEDIATION SUMMARY REPORT

### LARSON STATE COMPRESSOR WELD COUNTY, COLORADO

SEPTEMBER 2008

Prepared for:

NOBLE ENERGY, INC.  
804 Grand Avenue  
Platteville, CO 80651

Prepared by:

LT ENVIRONMENTAL, INC.  
4600 West 60<sup>th</sup> Avenue  
Arvada, Colorado 80003  
(303) 433-9788



## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	ii
SECTION 1.0 INTRODUCTION .....	1-1
1.1 SITE DESCRIPTION .....	1-1
1.2 SURROUNDING LAND USE.....	1-1
1.3 SCOPE OF WORK.....	1-1
SECTION 2.0 SUMMARY OF FIELD ACTIVITIES.....	2-1
2.1 IMPACTED SOIL REMOVAL .....	2-1
2.2 IMPACTED GROUNDWATER REMOVAL.....	2-1
SECTION 3.0 ANALYTICAL RESULTS.....	3-1
SECTION 4.0 SUMMARY AND CONCLUSIONS .....	4-1

### TABLE

TABLE 1	SOIL ANALYTICAL RESULTS
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### FIGURES

FIGURE 1	SITE LOCATION MAP
FIGURE 2	EXCAVATION EXTENT AND SOIL SAMPLE LOCATION MAP

### APPENDICES

APPENDIX A	SITE PHOTOGRAPHS
APPENDIX B	LABORATORY ANALYTICAL REPORTS

## EXECUTIVE SUMMARY

This report was prepared by LT Environmental, Inc. (LTE), on behalf of Noble Energy, Inc. (Noble), to document remediation activities at the Larson State Compressor (Site).

The Site is located in the southeast quarter of the northeast quarter of Section 36, Township 6 North, Range 64 West of the 6<sup>th</sup> principal meridian (Figure 1). The Site is surrounded by agricultural land approximately 300 feet west of County Road 61 between County Road 64 and County Road 62 in Gill, Colorado (Figure 2).

The scope of work for this project included the excavation/removal of hydrocarbon impacted soils resulting from an above ground storage tank failure. Current use of the Site includes oil and gas compression and conveyance, surrounded by agriculture.

On July 18, 2008, Noble contractors began excavating impacted soil at the Site. Noble and LTE personnel were onsite for field observation, documentation, and oversight activities including collecting soil samples and directing soil removal from the impacted area. Impacted soils were hauled off to the Noble Land Treatment Facility in Weld County, Colorado and replaced with clean structural fill provided by Varra Company, Inc. A total volume of 140 cubic yards of impacted soil was excavated and removed during the project.

Nine confirmation soil samples were collected from the base of the excavation, following the completion of excavation activities. Based on analytical results, all samples exhibited benzene, toluene, ethylbenzene, total xylenes and total petroleum hydrocarbon-gasoline range organics concentrations below the Colorado Oil and Gas Conservation Commission Sensitive Area Standard and Colorado Department of Labor and Employment – Division of Oil and Public Safety Risk Based Screening Levels.

Groundwater was not encountered during the excavation, which reached a maximum depth of 3 feet. Due to the absence of groundwater in the excavation, no future groundwater investigation is planned for the Site.



## **SECTION 1.0**

### **INTRODUCTION**

This report was prepared by LT Environmental, Inc. (LTE) for Noble Energy, Inc. (Noble) to document excavation activities at the Larson State Compressor (Site) (Figure 1). The purpose of this project was to remove hydrocarbon impacted soils from the Site.

#### **1.1 SITE DESCRIPTION**

The Site is located in the southeast quarter of the northeast quarter of Section 36, Township 6 North, Range 64 West of the 6<sup>th</sup> principal meridian (Figure 1). The Site is approximately 300 feet west of County Road 61 between County Road 64 and County Road 62 in Gill, Colorado (Figure 2). A residence exists 0.5 miles south on County Road 61.

The Site geology was predominantly observed as fine to medium grained sand that extended from the ground surface to depths ranging from approximately 0.5 feet to 3 feet below ground surface (bgs). Groundwater was not encountered during excavation activities.

The Site is located at an elevation of approximately 4,630 feet above mean sea level in an area where topography slopes gently north and appears slightly modified for agricultural purposes.

#### **1.2 SURROUNDING LAND USE**

The Site is currently surrounded by land with irrigation systems used for farming operations. A residence exists 0.5 miles south of the Site.

#### **1.3 SCOPE OF WORK**

The scope of work for this remediation project entailed the removal of impacted soils and replacement with clean fill. Impacted soils were hauled off to the Noble Land Treatment Facility and replaced with clean fill, provided by Varra Company, Inc. (Varra) of Greeley, Colorado.

During onsite activities, LTE personnel conducted field screening of soils, soil sampling, oversight of the excavation, health and safety monitoring, and documentation activities.

A summary of field activities, analytical results from soil sampling, and conclusions is presented in subsequent sections.



## **SECTION 2.0**

### **SUMMARY OF FIELD ACTIVITIES**

#### **2.1 IMPACTED SOIL REMOVAL**

Excavation activities were initiated on July 18, 2008. LTE personnel conducted field screening of organic vapor concentrations using a photoionization detector (PID) and collected confirmation soil samples as Noble contractors removed impacted soil at the Site. Photographs of excavation activities are included as Appendix A.

The dimensions of the final excavation were approximately 60 feet long by 55 feet wide. The total depth of the excavation ranged from the 0.5 feet to 3 feet bgs. A total volume of 140 cubic yards of impacted soil was excavated and transported off site to the Noble Land Treatment Facility located in Weld County, Colorado.

Soil samples were collected from the base of the excavation. Each sample was field-screened for organic vapor concentrations with a PID to determine if additional excavation was required. Once PID measurements indicated that impacted soil had been removed, a confirmation sample was collected for submittal to an analytical laboratory. Figure 2 presents the excavation extent and the locations of the soil samples collected in the excavation.

A total of 9 samples were collected from the excavation. The soil samples collected were sent to Origins Laboratory, Inc. (Origins) of Denver, Colorado for analysis of total petroleum hydrocarbons - gasoline range organics (TPH-GRO) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) using Environmental Protection Agency (EPA) Method 8260B.

After confirmation sampling results indicated the impacted soils had been removed, the excavation was backfilled with fill provided by Varra.

#### **2.2 IMPACTED GROUNDWATER REMOVAL**

Groundwater was not encountered during excavation activities, which reached a maximum depth of 3 feet bgs. Due to the absence of groundwater during source removal activities, post remediation groundwater monitoring wells were not installed.

## SECTION 3.0

### ANALYTICAL RESULTS

Soil samples were collected to define the extent of the excavation and confirm that impacted soils above regulatory standards were removed. Confirmation soil samples were collected from the base of the excavation. Soil sample locations are illustrated on Figure 2. Soil samples were sent to Origins for analysis of TPH-GRO and BTEX using EPA Method 8260B.

Analytical results indicate TPH-GRO were not detected above the COGCC Sensitive Area Standard of 1,000 milligrams per kilogram (mg/kg) and BTEX compounds were not detected above the Colorado Department of Labor and Employment – Division of Oil and Public Safety (CDLE-OPS) Risk Based Screening Levels (RBSLs). Soil sample SB-6 exhibited TPH-GRO concentration of 0.201 mg/kg, which is above the laboratory detection limit of 0.2 mg/kg, but below the COGCC Sensitive Area Standard. Soil sample SB-1 exhibited a total xylenes concentration of 0.00504 mg/kg and soil sample SB-5 exhibited a toluene concentration of 0.00644 mg/kg. While these concentrations are above the laboratory method detection limits, they are well below the CDLE-OPS RBSLs of 1,900 mg/kg and 170 mg/kg, respectively. All other analytical results were below laboratory method detection limits. Soil analytical results are summarized in Table 1. Copies of the laboratory analytical reports are included as Appendix B.

## SECTION 4.0

### SUMMARY AND CONCLUSIONS

On July 18, 2008, Noble excavated and removed 140 cubic yards of impacted surface soil from the Site.

During remediation activities, evidence of impact to the subsurface was observed across the Site ranging in depth from the surface to 3 feet bgs. LTE conducted field-screening of organic vapor concentrations and collection of soil confirmation samples for laboratory analysis from the excavated area.

Impacted soils were excavated and transported to the Noble Land Treatment Facility. Clean fill material was provided by Varra and used as backfill in the excavation.

LTE collected soil samples following completion of the soil excavation activities. Analytical results from these soil samples indicate that the petroleum impacted soils have been removed to below the COGCC Sensitive Area Standard and CDLE-OPS RBSLs. Soil samples SB-1, SB-5, and SB-6 exhibit TPH-GRO or BTEX concentrations above laboratory detection limits, but well below COGCC and CDLE-OPS standards.

Groundwater was not encountered during excavation activities. Due to the absence of groundwater in the excavation, groundwater monitoring activities were not conducted.

As shown by the work conducted at the Site and the results presented in this report, the Site has been successfully remediated and is compliant with all appropriate, relevant and applicable requirements.



TABLE

TABLE 1

**SOIL ANALYTICAL RESULTS  
LARSON STATE COMPRESSOR  
WELD COUNTY, COLORADO  
NOBLE ENERGY, INC.**

Soil Boring ID	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH-GRO (mg/kg)
SB-1	7/18/2008	<0.005	<0.005	<0.005	0.00504	<0.2
SB-2	7/18/2008	<0.005	<0.005	<0.005	<0.015	<0.2
SB-3	7/18/2008	<0.005	<0.005	<0.005	<0.015	<0.2
SB-4	7/18/2008	<0.005	<0.005	<0.005	<0.015	<0.2
SB-5	7/18/2008	<0.005	0.00644	<0.005	<0.015	<0.2
SB-6	7/18/2008	<0.005	<0.005	<0.005	<0.015	0.201
SB-7	7/18/2008	<0.005	<0.005	<0.005	<0.015	<0.2
SB-8	7/18/2008	<0.005	<0.005	<0.005	<0.015	<0.2
SB-9	7/18/2008	<0.005	<0.005	<0.005	<0.015	<0.2

**CDLE-OPS RBSLs****0.26****170****200****1,900****COGCC Sensitive Area Standard\*****1,000****NOTES:**

Benzene, toluene, ethylbenzene, total xylenes analyzed by EPA Method 8260B

TVH-GRO - Total volatile hydrocarbons - gasoline range organics analyzed by EPA Method 8260B

mg/kg - milligrams per kilogram

&lt; indicates result is less than the stated laboratory method detection limit

CDLE-OPS RBSLs - Colorado Department of Labor and Employment, Division of Oil and Public Safety  
Risk-Based Screening Levels

COGCC - Colorado Oil and Gas Conservation Commission

\*Applies to contaminated subsurface soil >2 feet below ground surface (bgs)  
and where the distance to groundwater is < 20 feet bgs

**FIGURES**



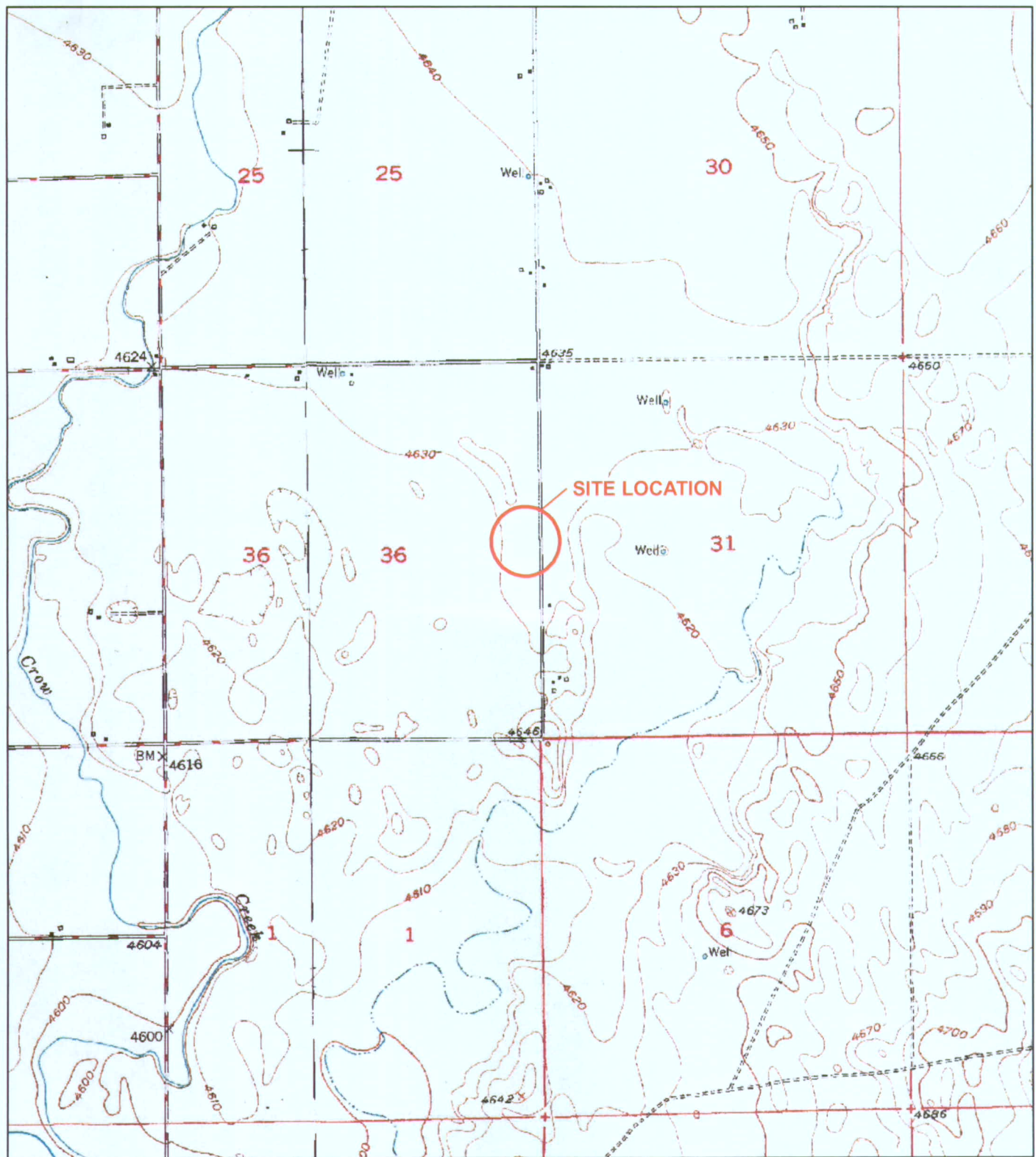


IMAGE COURTESY OF USDA/NRCS, VARIOUS DATES

0 2,000 4,000  
Feet



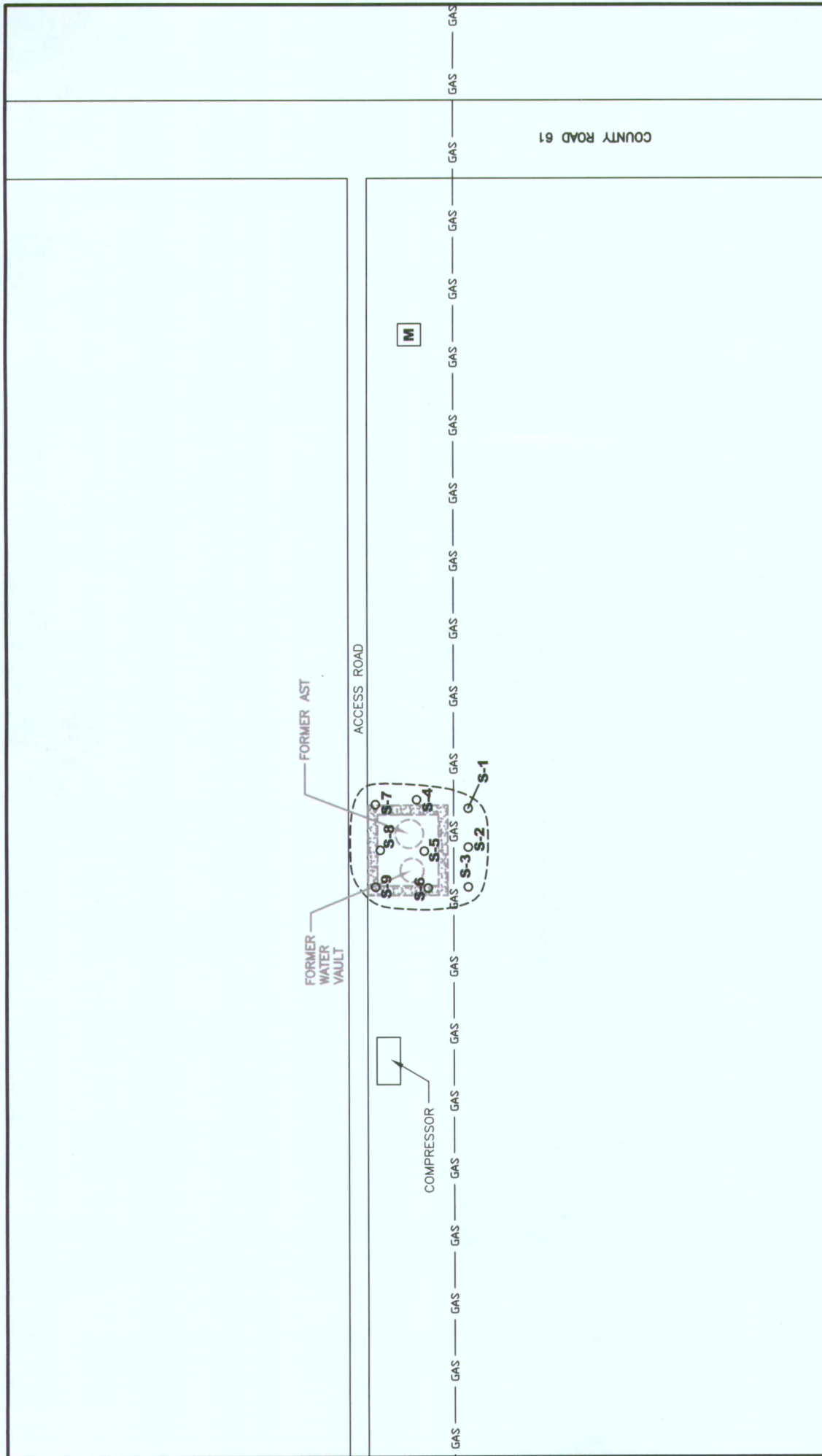
# LEGEND

 SITE LOCATION

## FIGURE 1 SITE LOCATION MAP LARSON STATE COMPRESSOR WELD COUNTY, COLORADO

NOBLE ENERGY INC.





# LEGEND

- S-1 ○ SOIL SAMPLE LOCATION
- M METER HOUSE
- BERM
- EXTENT OF EXCAVATION
- GAS — GAS SALES LINE

FIGURE 2  
EXCAVATION EXTENT AND SOIL SAMPLE LOCATION MAP  
LARSON STATE COMPRESSOR  
WELD COUNTY, COLORADO  
NOBLE ENERGY, INC

SOURCE:  
GOOGLEMAP.COM



NEP083001 8/08

**APPENDIX A**  
**SITE PHOTOGRAPHS**







Photograph 1: Excavation activities beneath the former above ground storage tank.



Photograph 2: Excavation of impacted soils adjacent to the water vault.



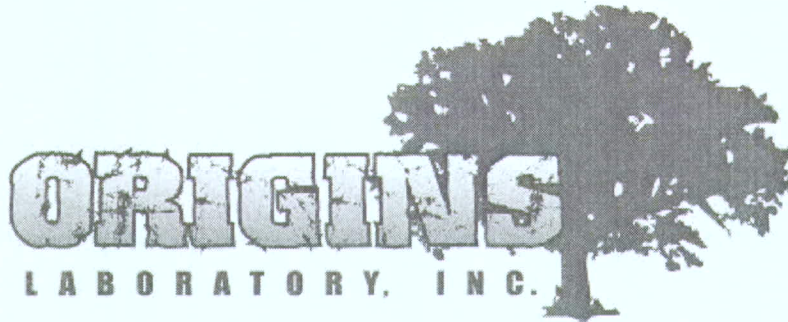
Photograph 3: Completed excavation prior to backfilling operations.



**APPENDIX B**  
**LABORATORY ANALYTICAL REPORTS**







4640 Pecos Street | Unit C | Denver, Colorado 80211  
303.433.1322 Phone 303.265.9645 Fax

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July 30, 2008

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LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

Brian Dodek

Project Number: NEP

Project: Larson State Compressor

---

Attached are the analytical results for Larson State Compressor received by Origins Laboratory, Inc. 7/21/2008 11:23:00AM. Please let us know if you have any questions, or if we can help with anything at all.

Laboratory Manager

Noelle E Doyle

The analytical results in the following report were analyzed under the guidelines of EPA Methods specified in SW-846. The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. This laboratory report is intended solely for the above addressee and it is only to be used and or reproduced in its entirety.

4640 Pecos Street | Unit C  
Denver, Colorado 80211  
303.433.1322 | Laboratory  
303.265.9645 | Fax



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

#### CROSS REFERENCE REPORT

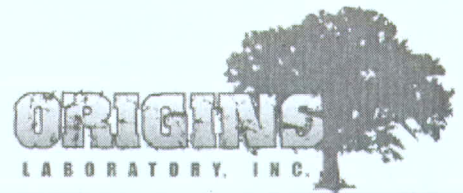
Laboratory ID	Sample ID	Matrix	Sampled	Date Received
S-1	X807068-01	Soil	7/18/2008 5:50:00PM	07/21/2008 11:23
S-2	X807068-02	Soil	7/18/2008 5:51:00PM	07/21/2008 11:23
S-3	X807068-03	Soil	7/18/2008 5:52:00PM	07/21/2008 11:23
S-4	X807068-04	Soil	7/18/2008 5:58:00PM	07/21/2008 11:23
S-5	X807068-05	Soil	7/18/2008 5:59:00PM	07/21/2008 11:23
S-6	X807068-06	Soil	7/18/2008 6:00:00PM	07/21/2008 11:23
S-7	X807068-07	Soil	7/18/2008 6:05:00PM	07/21/2008 11:23
S-8	X807068-08	Soil	7/18/2008 6:06:00PM	07/21/2008 11:23
S-9	X807068-09	Soil	7/18/2008 6:07:00PM	07/21/2008 11:23

Origins Laboratory, Inc.

Noelle E Doyle, Laboratory Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

4640 Pecos Street | Unit C  
Denver, Colorado 80211  
303.433.1322 | Laboratory  
303.265.9645 | Fax



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

X807068

page 1 of 1

originslaboratory.com

Client	LT Environmental	Project Manager	BDD
Address	4600 W 60th Ave	Project Name	Larson State Compressor
Telephone Number	Arvada, CO 80003	Project Number	NEP
E-Mail Address	On file	Samples Collected by	BDD

Sample ID - Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix		Analysis	Sample Instructions
				Unpreserved	HNO <sub>3</sub>	Other	Chloroform	Soil	Air		
5-1	7/18/05	17:50	1	X						X GLO BLO	X807068
5-2		17:51	1							X GLO BLO	
5-3		17:52	1							X GLO BLO	
5-4		17:58	1							X GLO BLO	
5-5		17:59	1							X GLO BLO	
5-6		18:00	1							X GLO BLO	
5-7		18:05	1							X GLO BLO	
5-8		18:06	1							X GLO BLO	
5-9		18:07	1							X GLO BLO	
Relinquished by	Ben Dole	7/18	17:50								
Relinquished by											

4640 North Pecos Street Unit C Denver, Colorado 80211 Laboratory 303.433.1322 Fax 303.265.9645

Origins Laboratory, Inc.

Noelle E Doyle, Laboratory Manager

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Denver, Colorado 80211  
303.433.1322 | Laboratory  
303.265.9645 | Fax



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

S-1  
X807068-01 (Soil)

Analyte	Reporting							
	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

GBTEX by EPA 8260B

Gasoline Range Hydrocarbons	ND	200	ug/kg	1	8G22001	07/22/2008	07/22/2008	
Benzene	ND	5.00	"	"	"	"	"	
Toluene	ND	5.00	"	"	"	"	"	
Ethylbenzene	ND	5.00	"	"	"	"	"	
m,p-Xylene	ND	10.0	"	"	"	"	"	
o-Xylene	5.04	5.00	"	"	"	"	"	

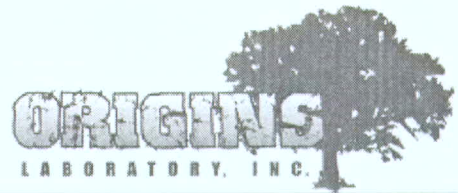
Surrogate: 1,2-Dichloroethane-d4	101 %	70.3-123			"	"	"	
Surrogate: Toluene-d8	98.2 %	75.9-123			"	"	"	
Surrogate: 4-Bromofluorobenzene	92.5 %	83-123			"	"	"	

Origins Laboratory, Inc.

Noelle E Doyle, Laboratory Manager

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Denver, Colorado 80211  
303.433.1322 | Laboratory  
303.265.9645 | Fax



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

S-2  
X807068-02 (Soil)

Analyte	Reporting				Batch	Prepared	Analyzed	Notes
	Result	Limit	Units	Dilution				

Origins Laboratory, Inc.

GBTEX by EPA 8260B

Gasoline Range Hydrocarbons	ND	200	ug/kg	1	8G22001	07/22/2008	07/22/2008
Benzene	ND	5.00	"	"	"	"	"
Toluene	ND	5.00	"	"	"	"	"
Ethylbenzene	ND	5.00	"	"	"	"	"
m,p-Xylene	ND	10.0	"	"	"	"	"
o-Xylene	ND	5.00	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	94.5 %	70.3-123	"	"	"
Surrogate: Toluene-d8	104 %	75.9-123	"	"	"
Surrogate: 4-Bromofluorobenzene	94.9 %	83-123	"	"	"

Origins Laboratory, Inc.

Noelle E Doyle, Laboratory Manager

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Denver, Colorado 80211  
303.433.1322 | Laboratory  
303.265.9645 | Fax



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

S-3  
X807068-03 (Soil)

Analyte	Reporting				Batch	Prepared	Analyzed	Notes
	Result	Limit	Units	Dilution				

Origins Laboratory, Inc.

GBTEX by EPA 8260B

Gasoline Range Hydrocarbons	ND	200	ug/kg	1	8G22001	07/22/2008	07/22/2008
Benzene	ND	5.00	"	"	"	"	"
Toluene	ND	5.00	"	"	"	"	"
Ethylbenzene	ND	5.00	"	"	"	"	"
m,p-Xylene	ND	10.0	"	"	"	"	"
o-Xylene	ND	5.00	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	93.0 %	70.3-123	"	"	"
Surrogate: Toluene-d8	104 %	75.9-123	"	"	"
Surrogate: 4-Bromofluorobenzene	94.9 %	83-123	"	"	"

Origins Laboratory, Inc.

Noelle E Doyle, Laboratory Manager

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Denver, Colorado 80211  
303.433.1322 | Laboratory  
303.265.9645 | Fax



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

S-4

X807068-04 (Soil)

Analyte	Reporting							Notes
	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	

Origins Laboratory, Inc.

GBTEX by EPA 8260B

Gasoline Range Hydrocarbons	ND	200	ug/kg	1	8G22001	07/22/2008	07/22/2008
Benzene	ND	5.00	"	"	"	"	"
Toluene	ND	5.00	"	"	"	"	"
Ethylbenzene	ND	5.00	"	"	"	"	"
m,p-Xylene	ND	10.0	"	"	"	"	"
o-Xylene	ND	5.00	"	"	"	"	"

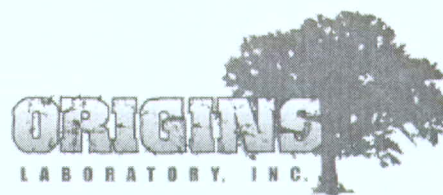
Surrogate: 1,2-Dichloroethane-d4	94.7 %	70.3-123	"	"	"
Surrogate: Toluene-d8	104 %	75.9-123	"	"	"
Surrogate: 4-Bromofluorobenzene	94.1 %	83-123	"	"	"

Origins Laboratory, Inc.

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Noelle E Doyle, Laboratory Manager

4640 Pecos Street | Unit C  
Denver, Colorado 80211  
303.433.1322 | Laboratory  
303.265.9645 | Fax



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

S-5  
X807068-05 (Soil)

Analyte	Reporting							Notes
	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	

Origins Laboratory, Inc.

GBTEX by EPA 8260B

Gasoline Range Hydrocarbons	ND	200	ug/kg	1	8G22001	07/22/2008	07/22/2008
Benzene	ND	5.00	"	"	"	"	"
Toluene	6.44	5.00	"	"	"	"	"
Ethylbenzene	ND	5.00	"	"	"	"	"
m,p-Xylene	ND	10.0	"	"	"	"	"
o-Xylene	ND	5.00	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	94.7 %	70.3-123	"	"	"
Surrogate: Toluene-d8	102 %	75.9-123	"	"	"
Surrogate: 4-Bromofluorobenzene	93.5 %	83-123	"	"	"

Origins Laboratory, Inc.

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Noelle E Doyle, Laboratory Manager

4640 Pecos Street | Unit C  
Denver, Colorado 80211  
303.433.1322 | Laboratory  
303.265.9645 | Fax



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

S-6  
X807068-06 (Soil)

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
	Result	Limit						

Origins Laboratory, Inc.

GBTEX by EPA 8260B

Gasoline Range Hydrocarbons	201	200	ug/kg	1	8G22001	07/22/2008	07/22/2008	
Benzene	ND	5.00	"	"	"	"	"	
Toluene	ND	5.00	"	"	"	"	"	
Ethylbenzene	ND	5.00	"	"	"	"	"	
m,p-Xylene	ND	10.0	"	"	"	"	"	
o-Xylene	ND	5.00	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	92.1 %	70.3-123			"	"	"	
Surrogate: Toluene-d8	99.5 %	75.9-123			"	"	"	
Surrogate: 4-Bromofluorobenzene	92.8 %	83-123			"	"	"	

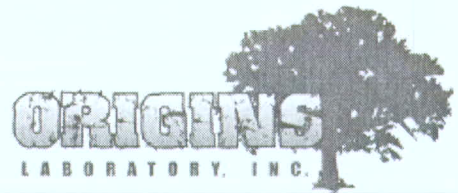
Origins Laboratory, Inc.

Noelle E Doyle, Laboratory Manager

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4640 Pecos Street | Unit C  
Denver, Colorado 80211  
303.433.1322 | Laboratory  
303.265.9645 | Fax



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

S-7

X807068-07 (Soil)

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

GBTEX by EPA 8260B

Gasoline Range Hydrocarbons	ND	200	ug/kg	1	8G22001	07/22/2008	07/22/2008
Benzene	ND	5.00	"	"	"	"	"
Toluene	ND	5.00	"	"	"	"	"
Ethylbenzene	ND	5.00	"	"	"	"	"
m,p-Xylene	ND	10.0	"	"	"	"	"
o-Xylene	ND	5.00	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	100 %	70.3-123	"	"	"
Surrogate: Toluene-d8	102 %	75.9-123	"	"	"
Surrogate: 4-Bromofluorobenzene	90.4 %	83-123	"	"	"

Origins Laboratory, Inc.

Noelle E Doyle, Laboratory Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

4640 Pecos Street | Unit C  
Denver, Colorado 80211  
303.433.1322 | Laboratory  
303.265.9645 | Fax



LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO 80003

Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

S-8  
X807068-08 (Soil)

Analyte	Reporting							Notes
	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	

Origins Laboratory, Inc.

GBTEX by EPA 8260B

Gasoline Range Hydrocarbons	ND	200	ug/kg	1	8G22001	07/22/2008	07/22/2008
Benzene	ND	5.00	"	"	"	"	"
Toluene	ND	5.00	"	"	"	"	"
Ethylbenzene	ND	5.00	"	"	"	"	"
m,p-Xylene	ND	10.0	"	"	"	"	"
o-Xylene	ND	5.00	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	95.4 %	70.3-123	"	"	"
Surrogate: Toluene-d8	102 %	75.9-123	"	"	"
Surrogate: 4-Bromofluorobenzene	87.9 %	83-123	"	"	"

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Brian Dodek  
Project Number: NEP  
Project: Larson State Compressor

S-9  
X807068-09 (Soil)

Analyte	Result	Reporting			Dilution	Batch	Prepared	Analyzed	Notes
		Limit	Units						

Origins Laboratory, Inc.

GBTEX by EPA 8260B

Gasoline Range Hydrocarbons	ND	200	ug/kg	1	8G22001	07/22/2008	07/22/2008
Benzene	ND	5.00	"	"	"	"	"
Toluene	ND	5.00	"	"	"	"	"
Ethylbenzene	ND	5.00	"	"	"	"	"
m,p-Xylene	ND	10.0	"	"	"	"	"
o-Xylene	ND	5.00	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	92.2 %	70.3-123	"	"	"
Surrogate: Toluene-d8	102 %	75.9-123	"	"	"
Surrogate: 4-Bromofluorobenzene	90.0 %	83-123	"	"	"

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Project: Larson State Compressor

Volatile Organic Compounds by EPA Method 8260B – Quality Control  
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8G22001 – EPA 5030B										
Blank (8G22001–BLK1) Prepared: 07/22/2008 Analyzed: 07/22/2008										
Gasoline Range Hydrocarbons	ND	200	ug/kg							
Benzene	ND	5.00	"							
Toluene	ND	5.00	"							
Ethylbenzene	ND	5.00	"							
m,p-Xylene	ND	10.0	"							
o-Xylene	ND	5.00	"							
Surrogate: 1,2-Dichloroethane-d4	59.0		ug/L	62.5		94.5	70.3-123			
Surrogate: Toluene-d8	63.7		"	62.5		102	75.9-123			
Surrogate: 4-Bromofluorobenzene	64.9		"	62.5		104	83-123			
LCS (8G22001–BS1) Prepared: 07/22/2008 Analyzed: 07/22/2008										
Benzene	141	5.00	ug/kg	200		70.5	64.2-124			
Toluene	140	5.00	"	200		70.1	63.9-119			
Surrogate: 1,2-Dichloroethane-d4	60.8		ug/L	62.5		97.3	70.3-123			
Surrogate: Toluene-d8	62.3		"	62.5		99.7	75.9-123			
Surrogate: 4-Bromofluorobenzene	61.4		"	62.5		98.2	83-123			
Matrix Spike (8G22001–MS1) Source: X807071–01 Prepared: 07/22/2008 Analyzed: 07/22/2008										
Benzene	132	5.00	ug/kg	200	ND	65.9	64.2-124			
Toluene	139	5.00	"	200	0.92	69.1	63.9-119			
Surrogate: 1,2-Dichloroethane-d4	58.6		ug/L	62.5		93.7	70.3-123			
Surrogate: Toluene-d8	64.8		"	62.5		104	75.9-123			
Surrogate: 4-Bromofluorobenzene	60.8		"	62.5		97.2	83-123			
Matrix Spike Dup (8G22001–MSD1) Source: X807071–01 Prepared: 07/22/2008 Analyzed: 07/22/2008										
Benzene	139	5.00	ug/kg	200	ND	69.7	64.2-124	5.60	25	
Toluene	151	5.00	"	200	0.92	75.2	63.9-119	8.43	25	
Surrogate: 1,2-Dichloroethane-d4	59.6		ug/L	62.5		95.4	70.3-123			
Surrogate: Toluene-d8	64.8		"	62.5		104	75.9-123			

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Brian Dodek  
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Project: Larson State Compressor

Volatile Organic Compounds by EPA Method 8260B – Quality Control  
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8G22001 – EPA 5030B

Matrix Spike Dup (8G22001-MSD1)

Source: X807071-01

Prepared: 07/22/2008 Analyzed: 07/22/2008

Surrogate: 4-Bromofluorobenzene	59.8	ug/L	62.5	95.7	83-123
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Origins Laboratory, Inc.

Noelle E Doyle, Laboratory Manager

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#### Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit  
RPD Relative Percent Difference

Origins Laboratory, Inc.

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