

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



#8434

FOR OGCC USE ONLY

RECEIVED
5/15/2014

OGCC Employee:

Spill Complaint
Inspection NOAV

Tracking No: **2147658**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

OGCC Operator Number: _____	Contact Name and Telephone: _____
Name of Operator: _____	_____
Address: _____	No: _____
City: _____ State: _____ Zip: _____	Fax: _____
API Number: _____	County: _____
Facility Name: _____	Facility Number: _____
Well Name: _____	Well Number: _____
Location: (QtrQtr, Sec, Twp, Rng, Meridian): _____ Latitude: _____ Longitude: _____	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): _____

Site Conditions: Is location within a sensitive area (according to Rule 901e)? ☐ Y ☐ N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): _____

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: _____

Potential receptors (water wells within 1/4 mi, surface waters, etc.): _____

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
Soils	_____	_____
Vegetation	_____	_____
Groundwater	_____	_____
Surface Water	_____	_____

REMEDIALTION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Describe how source is to be removed:

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:



Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

REMEDIATION WORKPLAN (Cont.)

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? Y N If yes, describe:

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: _____ Date Site Investigation Completed: _____ Date Remediation Plan Submitted: _____
Remediation Start Date: _____ Anticipated Completion Date: _____ Actual Completion Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: _____ Signed: _____

Title: _____ Date: _____

OGCC Approved: _____ Title: **EPS** Date: **5/19/2014**



April 10, 2014

Mr. Raul Sanchez
Base Construction Foreman
Noble Energy, Inc.
804 Grand Avenue
Platteville, Colorado 80651

Mr. Jacob Evans
Senior Environmental Specialist
Noble Energy, Inc.
1625 Broadway, Suite 2200
Denver, Colorado 80202

RE: **Remediation Activity Summary**
Fritzler 12-34 Tank Battery
Weld County, Colorado
COGCC Tracking #2147658

Dear Mr. Sanchez and Mr. Evans:

LT Environmental, Inc. (LTE), under the direction of Noble Energy, Inc. (Noble), conducted environmental remediation and confirmation soil sampling following the identification of petroleum hydrocarbon impacted soil at the Fritzler 12-34 Tank Battery (Site). This correspondence describes the remediation work conducted in February 2014. The Site is located approximately 0.2 miles south of County Road 16 and 0.05 miles east of County Road 55 in Weld County, Colorado. The legal site description is the northwest quarter of the northwest quarter of Section 34, Township 2 North, Range 64 West, 6th Principal Meridian. The Site Location Map is provided as Figure 1.

Site History and Excavation Scope of Work

Petroleum hydrocarbon impacted soil from a surface release was discovered at the Site on February 5, 2014. As a result, LTE personnel, under the direction of Noble, were on site to oversee and document excavation activities, direct excavation work, field screen excavated soil, collect confirmation soil samples, and provide health and safety oversight. The contractor operating the excavation equipment was BG Services, LLC of Fort Lupton, Colorado. The excavated soil was field screened for volatile organic compounds using a photo-ionization detector (PID).

The excavation activity was initiated on February 25, 2014, and completed on February 27, 2014. The excavation was located in the area of the tank battery. The Site Map is provided as Figure 2. Excavated soil consisted primarily of clayey sands from ground surface to total depth of the excavation at approximately 7 feet below ground surface (bgs). The PID readings ranged from 0.25 parts per million (ppm) at SS06 at 6 feet bgs (SS06@6') to 1,184 ppm at SS08@6'. Excavation soil field screening results are presented on Figure 3 and summarized in Table 1. Petroleum hydrocarbon odor was observed from surface to total depth throughout the excavation. The total extent of the excavation was within an area approximately 50 feet east-west by 60 feet

north-south to a total depth of 7 feet bgs. Groundwater was encountered at approximately 6 feet bgs. There was no sheen or petroleum hydrocarbon odor observed in the groundwater. A total of 200 pounds of a carbon-based amendment (BOS 200[®]) was applied to the floor of the excavation prior to backfilling. A total of 129 truckloads (approximately 1,290 cubic yards) of soil was removed from the Site and transported to the Waste Management Buffalo Ridge Landfill in Keenesburg, Colorado, for final disposal.

Confirmation Soil Sampling

LTE personnel, under the direction of Noble, collected ten discrete confirmation soil samples from the excavation sidewalls once PID readings indicated that petroleum hydrocarbon impacted soil had been removed. All confirmation soil samples were collected, placed on ice, and submitted with a complete chain of custody form to Origins Laboratory, Inc. (Origins) of Denver, Colorado, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), total petroleum hydrocarbons (TPH) as gasoline range organics (GRO), and naphthalene by United States Environmental Protection Agency (EPA) Method 8260C, and TPH as diesel range organics (DRO) by EPA Method 8015C.

Excavation Groundwater Sampling

One groundwater grab sample was collected from the floor of the excavation on February 25, 2014. The sample was collected, placed on ice, and submitted with a complete chain of custody form to Origins for analysis of BTEX by EPA Method 8260C.

Excavation Soil Analytical Results

The Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 standards for BTEX, naphthalene, and TPH in soil are 0.17 milligrams per kilogram (mg/kg), 85 mg/kg, 100 mg/kg, 175 mg/kg, 23 mg/kg, and 500 mg/kg, respectively. Excavation soil analytical results indicate soil samples SS01@6' and SS08@6' exceeded the COGCC Table 910-1 standard for benzene at concentrations of 5.8 mg/kg and 8.4 mg/kg, respectively. Soil samples SS01@6' and SS08@6' exceeded the COGCC Table 910-1 standard for TPH at concentrations of 2,330 mg/kg and 1,455 mg/kg, respectively. All remaining confirmation samples were in compliance with applicable COGCC Table 910-1 standards. After receiving results from SS01@6' and SS08@6', additional excavation was conducted to ensure petroleum hydrocarbon impacted soil was removed. Discrete confirmation soil samples were collected following the additional excavation. The soil analytical results are presented on Figure 4 and summarized in Table 2. The laboratory analytical reports are attached.

Excavation Groundwater Analytical Results

The Colorado Department of Public Health and Environment Water Quality Control Commission has established Regulation 41-The Basic Standards for Ground Water (WQCC Reg 41) for BTEX at concentrations of 5.0 micrograms per liter (µg/L), 560 µg/L, 700 µg/L, 1,400 µg/L, respectively. Laboratory groundwater analytical results indicate grab sample GW01 exceeded WQCC Reg 41 for benzene at a concentration of 169 µg/L. Groundwater analytical results are presented on Figure 5 and summarized in Table 3. The laboratory analytical reports are included as an attachment.

Summary

LTE, under the direction of Noble, conducted oversight of source removal of petroleum hydrocarbon impacted soil at the Site. Per the excavation activities conducted and confirmation soil sample laboratory analytical results, the impacted soil exceeding applicable COGCC Table 910-1 standards was removed. Approximately 1,290 cubic yards of petroleum hydrocarbon impacted soil was removed from the excavation and transported to the Waste Management Buffalo Ridge Landfill in Keenesburg, Colorado, for final disposal. Groundwater was encountered during the excavation and a total of 200 pounds of a carbon-based amendment (BOS 200®) was applied to the floor of the excavation prior to backfilling. Groundwater monitoring wells will be installed and monitored on a quarterly basis to document the performance of the remediation efforts and to ensure the protection of public health and the environment. Groundwater monitoring will be conducted until four consecutive quarters of laboratory analytical results are in compliance with applicable WQCC Reg 41 standards. Groundwater monitoring results will be discussed in future reports.

LTE appreciates the opportunity to provide environmental services to Noble. Please call us at 303-433-9788 if you have any questions or comments regarding this report.

Sincerely,

LT ENVIRONMENTAL, INC.



Charles Greeson
Staff Environmental Scientist



Chris Roy
Project Manager

Attachments

Figure 1	Site Location Map
Figure 2	Site Map
Figure 3	Excavation Soil Field Screening Results
Figure 4	Excavation Soil Analytical Results
Figure 5	Excavation Groundwater Analytical Results
Table 1	Excavation Soil Field Screening Results
Table 2	Excavation Soil Analytical Results
Table 3	Excavation Groundwater Analytical Results
Attachment	Laboratory Analytical Reports

FIGURES

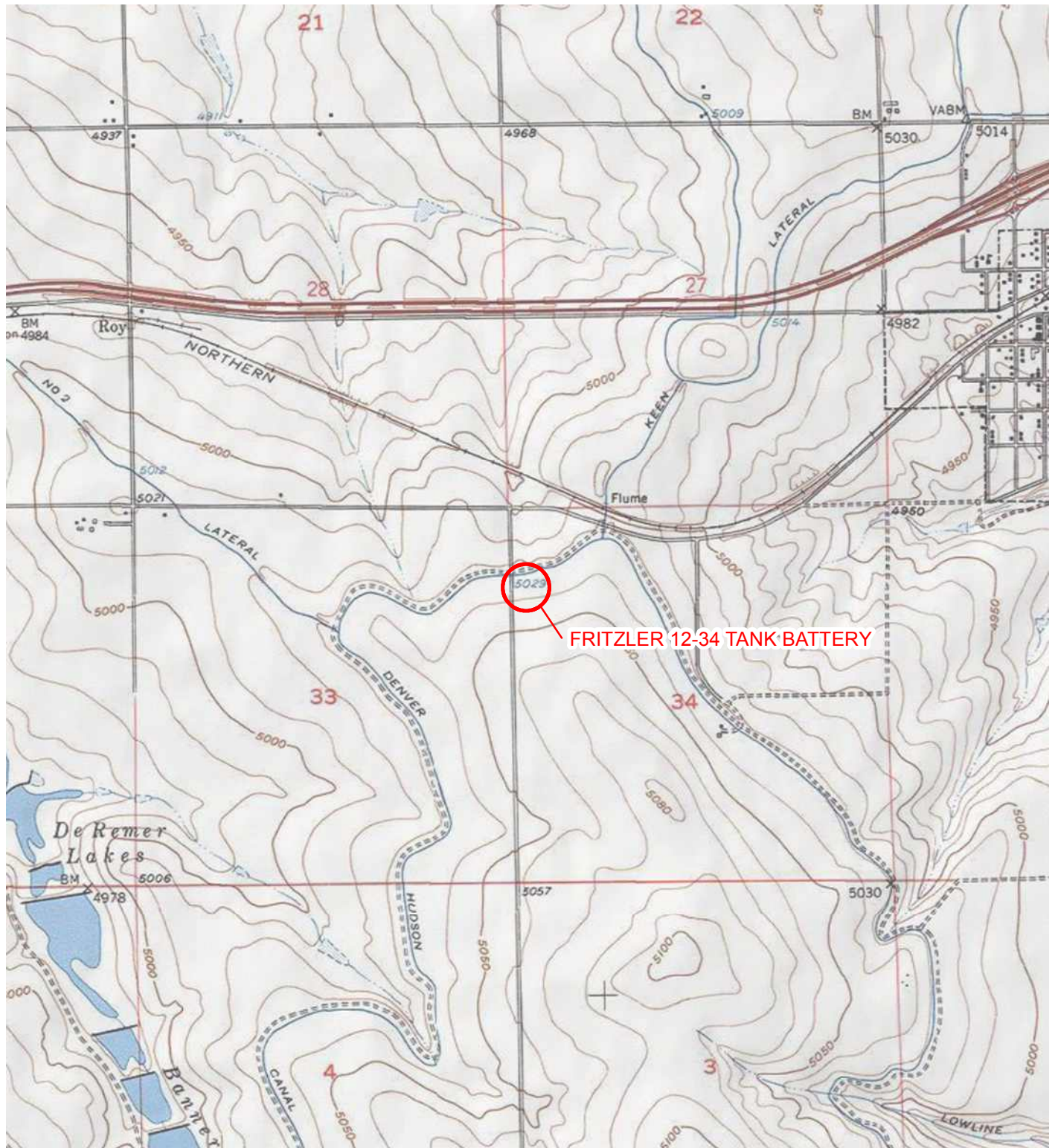


IMAGE COURTESY OF ESRI/USGS

LEGEND

○ SITE LOCATION

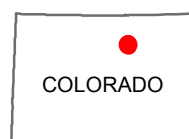
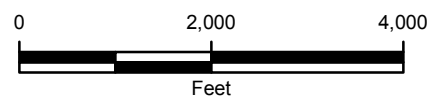


FIGURE 1
SITE LOCATION MAP
FRITZLER 12-34 TANK BATTERY
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.



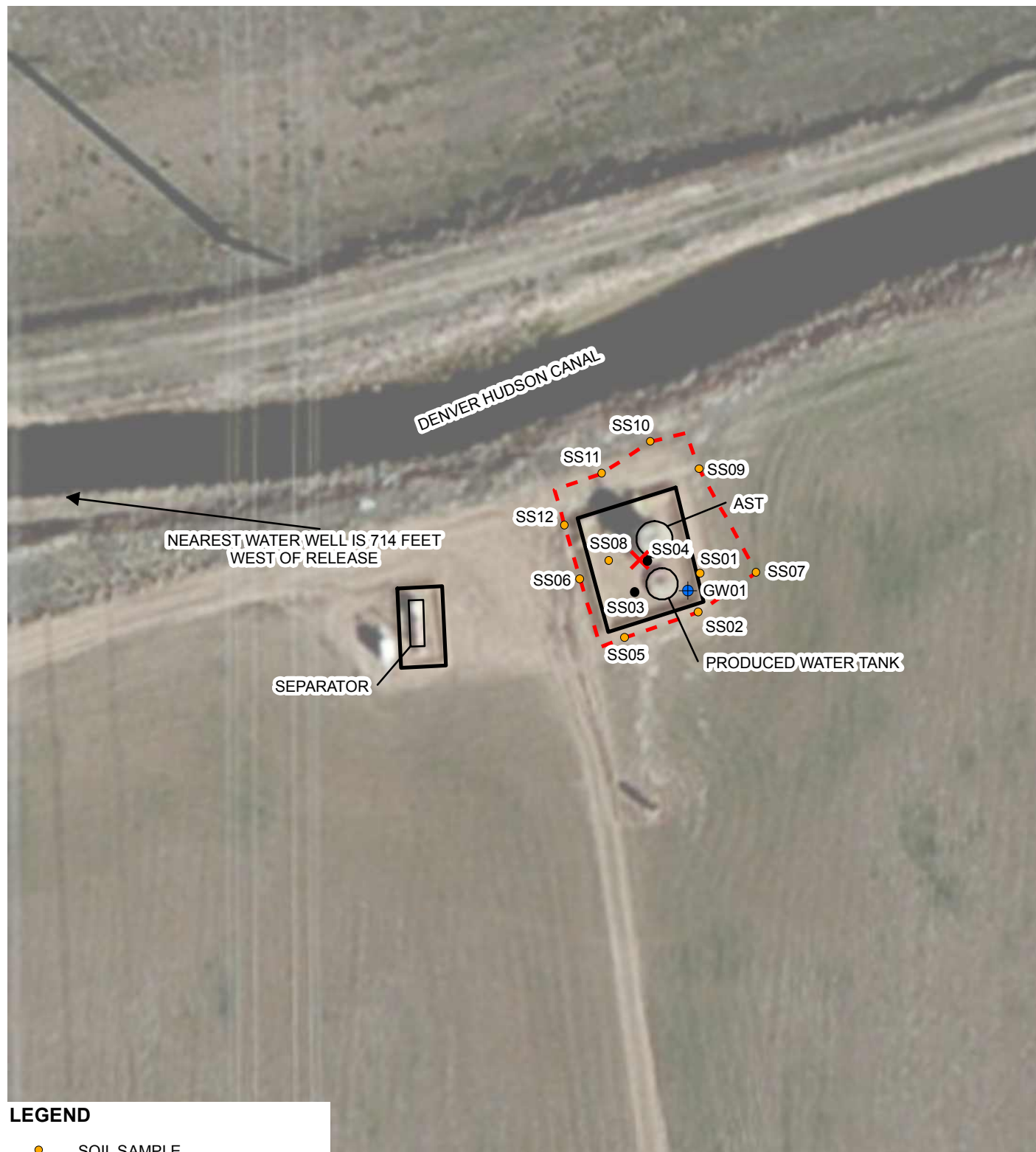


IMAGE COURTESY OF ESRI

LEGEND

- SOIL SAMPLE
- FIELD SCREENING SOIL SAMPLE
- ⊕ GROUNDWATER SAMPLE
- ✕ RELEASE
- - - EXCAVATION EXTENT
- BERM

AST: ABOVEGROUND STORAGE TANK

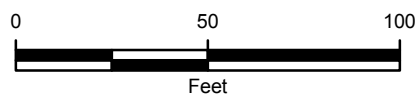


FIGURE 2
SITE MAP
FRITZLER 12-34 TANK BATTERY
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.



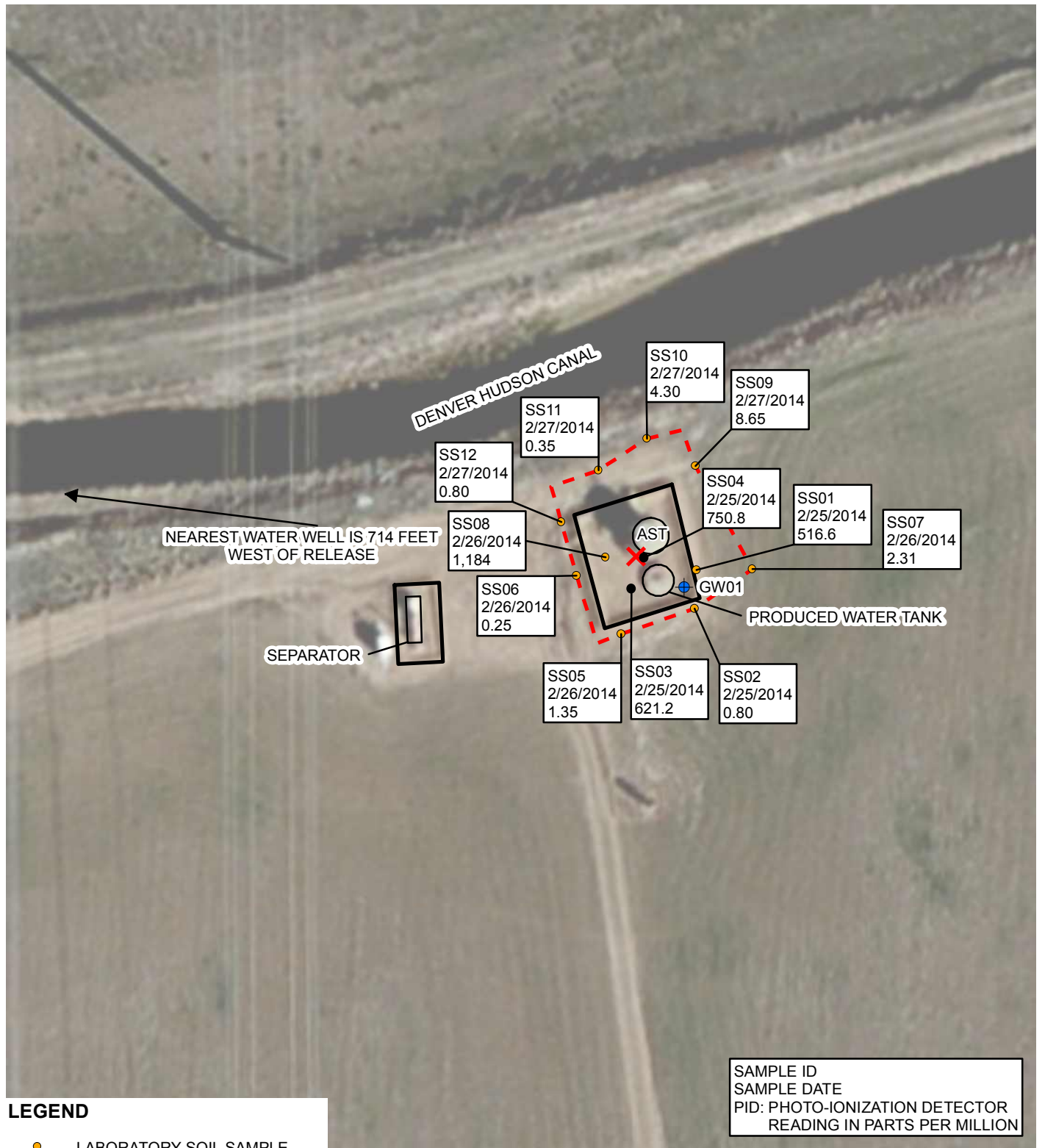


FIGURE 3
EXCAVATION SOIL FIELD SCREENING RESULTS
FRITZLER 12-34 TANK BATTERY
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.



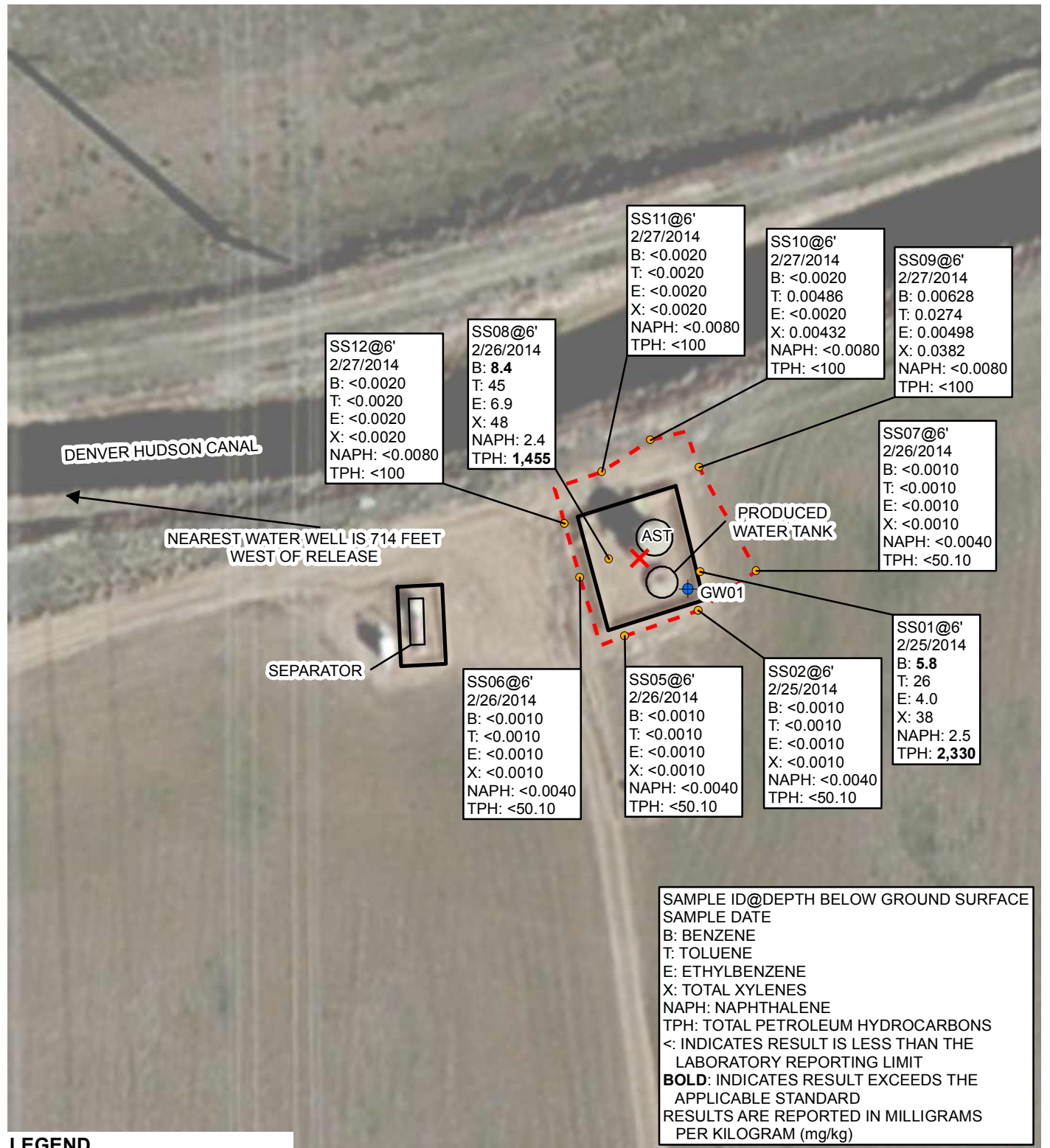


IMAGE COURTESY OF ESRI

LEGEND

- LABORATORY SOIL SAMPLE
- + GROUNDWATER SAMPLE
- X RELEASE
- EXCAVATION EXTENT
- BERM

AST: ABOVEGROUND STORAGE TANK

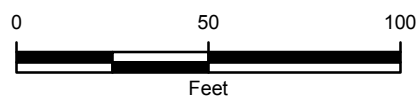


FIGURE 4
EXCAVATION SOIL ANALYTICAL RESULTS
FRITZLER 12-34 TANK BATTERY
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.



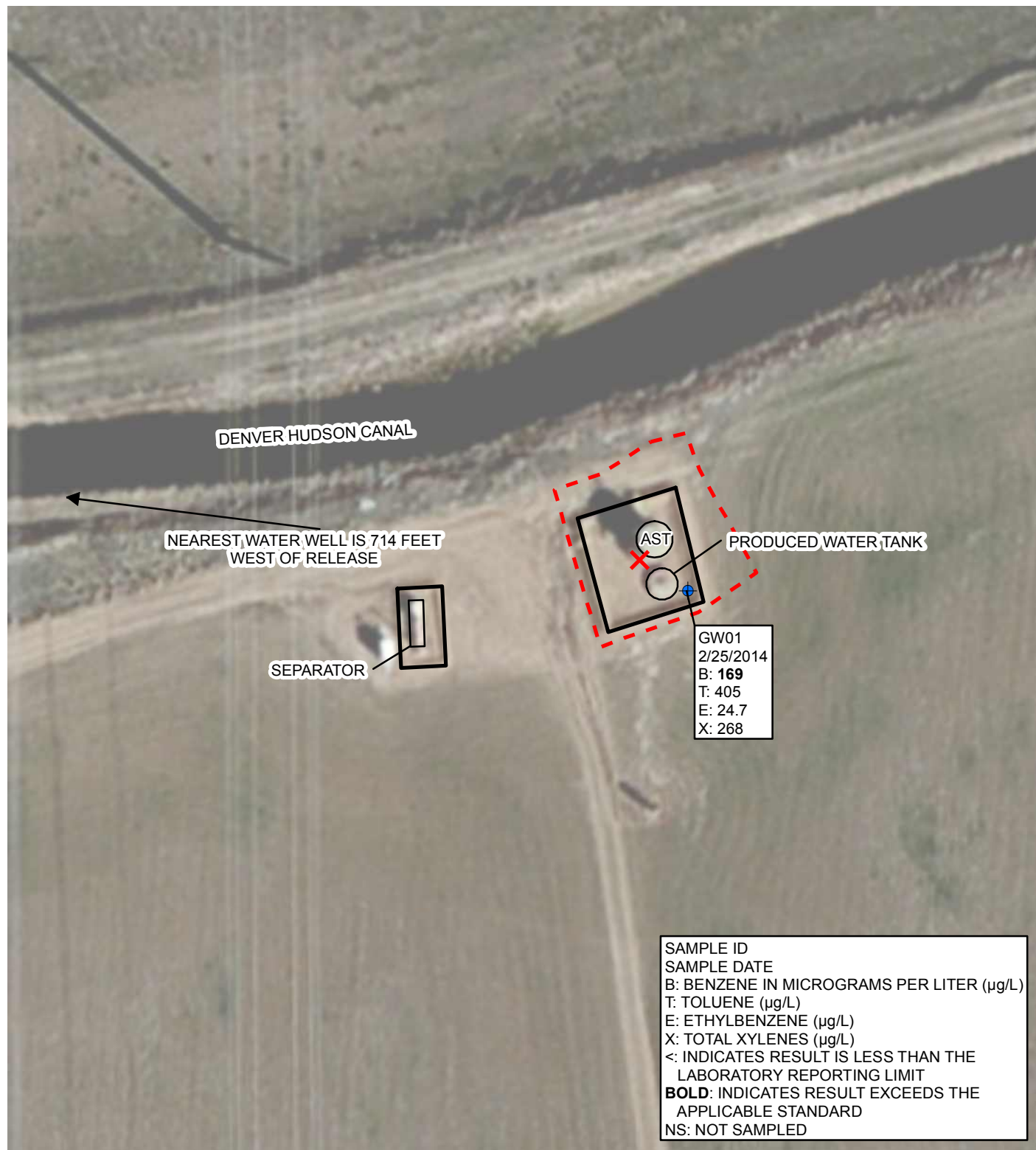


IMAGE COURTESY OF ESRI

LEGEND

- GROUNDWATER SAMPLE
- RELEASE
- EXCAVATION EXTENT
- BERM

AST: ABOVEGROUND STORAGE TANK

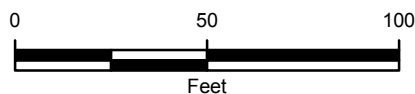


FIGURE 5
EXCAVATION GROUNDWATER ANALYTICAL RESULTS
FRITZLER 12-34 TANK BATTERY
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.



TABLES

TABLE 1

**EXCAVATION SOIL FIELD SCREENING RESULTS
FRITZLER 12-34 TANK BATTERY
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

Soil Sample	Date	PID Reading (ppm)
SS01@6'	2/25/2014	516.6
SS02@6'	2/25/2014	0.80
SS03@6'	2/25/2014	621.2
SS04@6'	2/25/2014	750.8
SS05@6'	2/26/2014	1.35
SS06@6'	2/26/2014	0.25
SS07@6'	2/26/2014	2.31
SS08@6'	2/26/2014	1,184
SS09@6'	2/27/2014	8.65
SS10@6'	2/27/2014	4.30
SS11@6'	2/27/2014	0.35
SS12@6'	2/27/2014	0.80

NOTES:

PID - photo-ionization detector

ppm - parts per million

TABLE 2

**EXCAVATION SOIL ANALYTICAL RESULTS
FRITZLER 12-34 TANK BATTERY
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

Soil Sample	Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	TPH (mg/kg)
SS01 @6'	2/25/2014	5.8	26	4.0	38	2.5	670	1,660	2,330
SS02 @6'	2/25/2014	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.10	<50.0	<50.10
SS05 @6'	2/26/2014	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.100	<50.0	<50.10
SS06 @6'	2/26/2014	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.100	<50.0	<50.10
SS07 @6'	2/26/2014	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.100	<50.0	<50.10
SS08 @6'	2/26/2014	8.4	45	6.9	48	2.4	1,100	355	1,455
SS09 @6'	2/27/2014	0.0063	0.0274	0.005	0.0382	<0.0040	<0.100	<50.0	<50.100
SS10 @6'	2/27/2014	<0.0010	0.0049	<0.0010	0.0043	<0.0040	<0.100	<50.0	<50.100
SS11 @6'	2/27/2014	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.100	<50.0	<50.100
SS12 @6'	2/27/2014	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.100	<50.0	<50.100
COGCC Table 910-1 Standard		0.17	85	100	175	23	--	--	500

NOTES:

mg/kg - milligrams per kilogram

DRO - diesel range organics analyzed by EPA Method 8015C

GRO - gasoline range organics analyzed by EPA Method 8260C

TPH - total petroleum hydrocarbons

TPH is the sum of GRO and DRO

< - indicates result is less than the stated laboratory reporting limit

-- - not applicable

BOLD - indicates result exceeds the applicable standard

COGCC - Colorado Oil and Gas Conservation Commission

Benzene, toluene, ethylbenzene, total xylenes, and naphthalene analyzed by EPA Method 8260C

TABLE 3

**EXCAVATION GROUNDWATER ANALYTICAL RESULTS
FRITZLER 12-34 TANK BATTERY
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

Groundwater Sample	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
GW01	2/25/2014	169	405	24.7	268
COGCC Table 910-1 Standard		5	560	700	1,400

NOTES:

µg/L - micrograms per liter

< - indicates result is less than the stated laboratory reporting limit

BOLD indicates result exceeds the applicable standard

COGCC - Colorado Oil and Gas Conservation Commission

Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260C

ATTACHMENT
LABORATORY ANALYTICAL REPORTS



February 26, 2014

LT Environmental, Inc.

Dan Hosler

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Fritzler 12-34

Project Number - 008314006

Attached are your analytical results for Noble - Fritzler 12-34 received by Origins Laboratory, Inc. February 25, 2014. This project is associated with Origins project number X402240-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01 @ 6'	X402240-01	Soil	February 25, 2014 10:40	02/25/2014 14:00
SS02 @ 6'	X402240-02	Soil	February 25, 2014 10:45	02/25/2014 14:00
GW01	X402240-03	Water	February 25, 2014 11:30	02/25/2014 14:00

Origins Laboratory, Inc.

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.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

ORIGINS
LABORATORY, INC

www.originslaboratory.com

X400240

page 1 of 1

Client: LTE
Address: _____
Telephone Number: 303-433-7788
Project Manager/Send Report To: Dan Hosler
Email Address: dhosler@ltenv.com
Project Name/Number: Fritzler 12-34
Samples Collected By: DHosler

Fax: 303.265.9645 | Phone: 303.433.1322 | Denver, CO 80211 | 1725 Elk Place

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis/Method	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #		
SS0106'	2/25/14	1040	1						X		BTEX	1
SS0206'	2/25/14	1045	1						X		GRD	2
GW01	2/25/14	1130	3					X			GRD	3
												4
												5
												6
												7
												8
												9
												10

Relinquished By: <u>[Signature]</u>	Date: <u>2/25/14</u>	Time: <u>1400</u>	Received By: <u>[Signature]</u>	Date: <u>2/25/14</u>	Time: <u>1400</u>
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____

Turnaround Time:	Same Day <input checked="" type="checkbox"/>	24 Hr <input type="checkbox"/>
	48 Hr <input type="checkbox"/>	72 Hr <input type="checkbox"/>
	Standard <input type="checkbox"/>	

Comments:

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order X402240

Client: LTE

Client Project ID: Fritzler 12-34

Checklist Completed by: Jose Smith

Shipped Via: H/O

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 2/25/14 14:00

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☒ Water ☐ Other: _____

Cooler Number/Temperature: 10.1 °C 1 °C 1 °C (Describe) 1 °C

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Samples will be analyzed within 7 Days of collection
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

2/20/14 5:41
Date/Time Reviewed

Origins Laboratory, Inc.

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.

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

Dan Hosler
 Project Number: 008314006
 Project: Noble - Fritzler 12-34

SS01 @ 6'

2/25/2014 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	--------------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc.
X402240-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	1660	50.0	mg/kg	1	4B25009	02/25/2014	02/25/2014	
Surrogate: o-Terphenyl	72.6 %	59-131			"	"	"	

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	670	50	mg/kg	500	4B25008	02/25/2014	02/25/2014	
Benzene	5.8	0.50	"	"	"	"	"	
Toluene	26	0.50	"	"	"	"	"	
Ethylbenzene	4.0	0.50	"	"	"	"	"	
Xylenes, total	38	0.50	"	"	"	"	"	
Naphthalene	2.5	2.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	98.4 %	70-130			"	"	"	
Surrogate: Toluene-d8	109 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

Origins Laboratory, Inc.

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.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

SS02 @ 6'

2/25/2014 10:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory, Inc. X402240-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B25009	02/25/2014	02/25/2014
Surrogate: o-Terphenyl	92.9 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.10	mg/kg	1	4B25008	02/25/2014	02/25/2014
Benzene	ND	0.0010	"	"	"	"	"
Toluene	ND	0.0010	"	"	"	"	"
Ethylbenzene	ND	0.0010	"	"	"	"	"
Xylenes, total	ND	0.0010	"	"	"	"	"
Napthalene	ND	0.0040	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"	"
Surrogate: Toluene-d8	111 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"

Origins Laboratory, Inc.

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.

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

Dan Hosler
 Project Number: 008314006
 Project: Noble - Fritzler 12-34

GW01

2/25/2014 11:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. X402240-03 (Water)

BTEX by EPA 8260C

Benzene	169	4.0	ug/L	4	4B25010	02/25/2014	02/25/2014
Toluene	405	4.0	"	"	"	"	"
Ethylbenzene	24.7	4.0	"	"	"	"	"
Xylenes, total	268	4.0	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	101 %	84-121			"	"	"
Surrogate: Toluene-d8	102 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	106 %	84-114			"	"	"

Origins Laboratory, Inc.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B25008 - EPA 5030 (soil)										
Blank (4B25008-BLK1)					Prepared: 02/25/2014 Analyzed: 02/25/2014					
Gasoline Range Hydrocarbons	ND	0.10	mg/kg							
Benzene	ND	0.0010	"							
Toluene	ND	0.0010	"							
Ethylbenzene	ND	0.0010	"							
Xylenes, total	ND	0.0010	"							
Naphthalene	ND	0.0040	"							
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		102	70-130			
Surrogate: Toluene-d8	68		"	62.5		109	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	70-130			

Origins Laboratory, Inc.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B25008 - EPA 5030 (soil)										
LCS (4B25008-BS1)					Prepared: 02/25/2014 Analyzed: 02/25/2014					
Benzene	0.11	0.0010	mg/kg	0.100		107	70-130			
Toluene	0.10	0.0010	"	0.100		102	70-130			
Ethylbenzene	0.088	0.0010	"	0.100		87.5	70-130			
m,p-Xylene	0.17	0.0020	"	0.200		83.3	70-130			
o-Xylene	0.088	0.0010	"	0.100		88.0	70-130			
Naphthalene	0.088	0.0040	"	0.100		88.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		ug/kg	62.5		99.0	70-130			
Surrogate: Toluene-d8	68		"	62.5		109	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	70-130			

Origins Laboratory, Inc.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B25008 - EPA 5030 (soil)										
Matrix Spike (4B25008-MS1)		Source: X402203-01			Prepared: 02/25/2014 Analyzed: 02/25/2014					
Benzene	0.10	0.0010	mg/kg	0.100	ND	101	70-130			
Toluene	0.099	0.0010	"	0.100	ND	98.7	70-130			
Ethylbenzene	0.078	0.0010	"	0.100	ND	78.1	70-130			
m,p-Xylene	0.15	0.0020	"	0.200	ND	75.9	70-130			
o-Xylene	0.079	0.0010	"	0.100	ND	79.0	70-130			
Naphthalene	0.084	0.0040	"	0.100	ND	84.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	71		"	62.5		113	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	70-130			

Origins Laboratory, Inc.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B25008 - EPA 5030 (soil)										
Matrix Spike Dup (4B25008-MSD1)			Source: X402203-01		Prepared: 02/25/2014 Analyzed: 02/25/2014					
Benzene	0.098	0.0010	mg/kg	0.100	ND	97.5	70-130	3.78	20	
Toluene	0.094	0.0010	"	0.100	ND	94.5	70-130	4.33	20	
Ethylbenzene	0.077	0.0010	"	0.100	ND	77.2	70-130	1.13	20	
m,p-Xylene	0.15	0.0020	"	0.200	ND	75.7	70-130	0.172	20	
o-Xylene	0.078	0.0010	"	0.100	ND	78.4	70-130	0.788	20	
Naphthalene	0.083	0.0040	"	0.100	ND	83.2	70-130	1.46	20	
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		104	70-130			
Surrogate: Toluene-d8	70		"	62.5		111	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		105	70-130			

Origins Laboratory, Inc.

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

Dan Hosler
 Project Number: 008314006
 Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - 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 4B25010 - EPA 5030B (Water)

Blank (4B25010-BLK1)

Prepared: 02/25/2014 Analyzed: 02/25/2014

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5	98.2		84-121			
Surrogate: Toluene-d8	64		"	62.5	103		85-115			
Surrogate: 4-Bromofluorobenzene	68		"	62.5	108		84-114			

Origins Laboratory, Inc.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B25010 - EPA 5030B (Water)										
LCS (4B25010-BS1)					Prepared: 02/25/2014 Analyzed: 02/25/2014					
Benzene	49.4	1.0	ug/L	50.0		98.8	74-130			
Toluene	52.4	1.0	"	50.0		105	76-128			
Ethylbenzene	44.6	1.0	"	50.0		89.1	78-130			
m,p-Xylene	101	2.0	"	100		101	75-134			
o-Xylene	46.7	1.0	"	50.0		93.5	76-129			
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.5	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		103	84-114			

Origins Laboratory, Inc.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - 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 4B25010 - EPA 5030B (Water)

Matrix Spike (4B25010-MS1)		Source: X402179-06			Prepared: 02/25/2014 Analyzed: 02/25/2014					
Benzene	42.9	1.0	ug/L	50.0	ND	85.9	74-130			
Toluene	46.2	1.0	"	50.0	ND	92.4	73-131			
Ethylbenzene	37.8	1.0	"	50.0	ND	75.5	76-132			QM-05
m,p-Xylene	93.2	2.0	"	100	ND	93.2	69-139			
o-Xylene	38.0	1.0	"	50.0	ND	76.1	74-131			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		102	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		105	84-114			

Origins Laboratory, Inc.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B25010 - EPA 5030B (Water)										
Matrix Spike Dup (4B25010-MSD1)			Source: X402179-06		Prepared: 02/25/2014 Analyzed: 02/25/2014					
Benzene	41.8	1.0	ug/L	50.0	ND	83.6	74-130	2.74	20	
Toluene	45.3	1.0	"	50.0	ND	90.6	73-131	1.97	20	
Ethylbenzene	36.6	1.0	"	50.0	ND	73.2	76-132	3.07	20	QM-05
m,p-Xylene	90.9	2.0	"	100	ND	90.9	69-139	2.53	20	
o-Xylene	37.9	1.0	"	50.0	ND	75.8	74-131	0.342	20	
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		100	84-121			
Surrogate: Toluene-d8	63		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	84-114			

Origins Laboratory, Inc.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - 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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Extractable Petroleum Hydrocarbons by 8015M - 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 4B25009 - EPA 3580

Blank (4B25009-BLK1)

Prepared: 02/25/2014 Analyzed: 02/25/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 44 g 50.0 87.7 59-131

LCS (4B25009-BS1)

Prepared: 02/25/2014 Analyzed: 02/25/2014

Diesel (C10-C28) 820 50.0 mg/kg 1000 82.0 64-121

Surrogate: o-Terphenyl 35 g 50.0 69.5 59-131

Matrix Spike (4B25009-MS1)

Source: X402228-02

Prepared: 02/25/2014 Analyzed: 02/25/2014

Diesel (C10-C28) 923 50.0 mg/kg 1000 ND 92.3 53-125

Surrogate: o-Terphenyl 40 g 50.0 80.7 59-131

Matrix Spike Dup (4B25009-MSD1)

Source: X402228-02

Prepared: 02/25/2014 Analyzed: 02/25/2014

Diesel (C10-C28) 928 50.0 mg/kg 1000 ND 92.8 53-125 0.530 20

Surrogate: o-Terphenyl 38 g 50.0 76.7 59-131

Origins Laboratory, Inc.

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LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

Dan Hosler

Project Number: 008314006

Project: Noble - Fritzler 12-34

Notes and Definitions

QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Origins Laboratory, Inc.

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.



February 27, 2014

LT Environmental, Inc.

Dan Hosler

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Fritzler 12-34

Project Number - 008314006

Attached are your analytical results for Noble - Fritzler 12-34 received by Origins Laboratory, Inc. February 26, 2014. This project is associated with Origins project number X402255-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS05 @ 6'	X402255-01	Soil	February 26, 2014 10:30	02/26/2014 17:00
SS06 @ 6'	X402255-02	Soil	February 26, 2014 11:40	02/26/2014 17:00
SS07 @ 6'	X402255-03	Soil	February 26, 2014 14:10	02/26/2014 17:00
SS08 @ 6'	X402255-04	Soil	February 26, 2014 14:30	02/26/2014 17:00

Origins Laboratory, Inc.

—  —
Davi

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.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

ORIGINS LABORATORY, INC

www.originslaboratory.com

page 1 of 1

X400000

Client: LT

Address: _____

Telephone Number: 303-433-9786

Email Address: dhosler@ltenv.com

Project Manager: Dan Hosler

Project Name: Fritzler 12-34

Project Number: 008314006

Samples Collected By: Dan Hosler

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa			Other
SS05C6'	2/26/14	1030	1						X			1	
SS06C6'	↓	1140	1						X			2	
SS07C6'	↓	1410	1						X			3	
SS08C6'	↓	1430	1						X			4	
												5	
												6	
												7	
												8	
												9	
												10	
Reinquisitioned By: <u>[Signature]</u>	Date: <u>2/26/14</u>	Time: <u>1700</u>		Received By: <u>[Signature]</u>	Date: <u>2/26/14</u>	Time: <u>1700</u>		Turnaround Time: <input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard					
Requisitioned By: <u>[Signature]</u>	Date: <u>2/26/14</u>	Time: <u>1700</u>		Received By: <u>[Signature]</u>	Date: <u>2/26/14</u>	Time: <u>1700</u>							

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Dan Hosler, Manager

Origins Laboratory, Inc.

Davi

[Signature]

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.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X402253

Client: LT/E

Client Project ID: Fritzler 12-34

Checklist Completed by: Jeff Smith

Shipped Via: Pick Up

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 2/26/14 17:16

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid

☐ Water

☐ Other:

(Describe)

Cooler Number/Temperature: 14.7 °C

°C

°C

°C

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 5°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Soil
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄ / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Soil
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

2/27/14 4:01
Date/Time Reviewed

Origins Laboratory, Inc.

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.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

SS05 @ 6'

2/26/2014 10:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402255-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B26012	02/26/2014	02/26/2014
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Surrogate: o-Terphenyl	96.2 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	100	ug/kg	1	4B26013	02/26/2014	02/27/2014
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Benzene	ND	1.0	"	"	"	"	"
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Toluene	ND	1.0	"	"	"	"	"
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Ethylbenzene	ND	1.0	"	"	"	"	"
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Xylenes, total	ND	1.0	"	"	"	"	"
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Napthalene	ND	4.0	"	"	"	"	"
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Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	"
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Surrogate: Toluene-d8	115 %	70-130			"	"	"
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Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"
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Origins Laboratory, Inc.

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.

Davi

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

SS06 @ 6'

2/26/2014 11:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402255-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B26012	02/26/2014	02/26/2014
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Surrogate: o-Terphenyl	85.6 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	100	ug/kg	1	4B26013	02/26/2014	02/27/2014
Benzene	ND	1.0	"	"	"	"	"
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"
Napthalene	ND	4.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	102 %	70-130			"	"	"
Surrogate: Toluene-d8	113 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"

Origins Laboratory, Inc.

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.

Davi

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

SS07 @ 6'

2/26/2014 2:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402255-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B26012	02/26/2014	02/26/2014
Surrogate: o-Terphenyl	104 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	100	ug/kg	1	4B26013	02/26/2014	02/27/2014
Benzene	ND	1.0	"	"	"	"	"
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"
Napthalene	ND	4.0	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	103 %	70-130			"	"	"
Surrogate: Toluene-d8	117 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	108 %	70-130			"	"	"

Origins Laboratory, Inc.

—  —
Davi

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.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

SS08 @ 6'

2/26/2014 2:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402255-04 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	355	50.0	mg/kg	1	4B26012	02/26/2014	02/26/2014
Surrogate: o-Terphenyl	81.5 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	1100000	25000	ug/kg	250	4B26013	02/26/2014	02/27/2014
Benzene	8400	250	"	"	"	"	"
Toluene	45000	250	"	"	"	"	"
Ethylbenzene	6900	250	"	"	"	"	"
Xylenes, total	48000	250	"	"	"	"	"
Naphthalene	2400	1000	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	107 %	70-130			"	"	"
Surrogate: Toluene-d8	121 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"

Origins Laboratory, Inc.

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.

Davi

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B26013 - EPA 5030 (soil)										
Blank (4B26013-BLK1)					Prepared: 02/26/2014 Analyzed: 02/27/2014					
Gasoline Range Hydrocarbons	ND	100	ug/kg							
Benzene	ND	1.0	"							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Naphthalene	ND	4.0	"							
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	70-130			
Surrogate: Toluene-d8	71		"	62.5		114	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

Origins Laboratory, Inc.



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.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B26013 - EPA 5030 (soil)										
LCS (4B26013-BS1)					Prepared: 02/26/2014 Analyzed: 02/27/2014					
Benzene	120	1.0	ug/kg	100		116	70-130			
Toluene	110	1.0	"	100		113	70-130			
Ethylbenzene	89	1.0	"	100		89.4	70-130			
m,p-Xylene	170	2.0	"	200		85.7	70-130			
o-Xylene	92	1.0	"	100		91.8	70-130			
Naphthalene	97	4.0	"	100		96.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		101	70-130			
Surrogate: Toluene-d8	70		"	62.5		112	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		105	70-130			

Origins Laboratory, Inc.



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.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - 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 4B26013 - EPA 5030 (soil)

Matrix Spike (4B26013-MS1)		Source: X402255-02			Prepared: 02/26/2014 Analyzed: 02/27/2014					
Benzene	120	1.0	ug/kg	100	ND	121	70-130			
Toluene	120	1.0	"	100	ND	120	70-130			
Ethylbenzene	88	1.0	"	100	ND	88.3	70-130			
m,p-Xylene	170	2.0	"	200	ND	84.1	70-130			
o-Xylene	88	1.0	"	100	ND	87.7	70-130			
Naphthalene	89	4.0	"	100	ND	88.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5		108	70-130			
Surrogate: Toluene-d8	73		"	62.5		117	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		108	70-130			

Origins Laboratory, Inc.



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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B26013 - EPA 5030 (soil)										
Matrix Spike Dup (4B26013-MSD1)			Source: X402255-02		Prepared: 02/26/2014 Analyzed: 02/27/2014					
Benzene	120	1.0	ug/kg	100	ND	120	70-130	1.11	20	
Toluene	120	1.0	"	100	ND	119	70-130	0.872	20	
Ethylbenzene	89	1.0	"	100	ND	89.1	70-130	0.879	20	
m,p-Xylene	170	2.0	"	200	ND	83.2	70-130	1.05	20	
o-Xylene	89	1.0	"	100	ND	88.7	70-130	1.13	20	
Naphthalene	94	4.0	"	100	ND	93.7	70-130	5.30	20	
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	70-130			
Surrogate: Toluene-d8	73		"	62.5		117	70-130			
Surrogate: 4-Bromofluorobenzene	68		"	62.5		108	70-130			

Origins Laboratory, Inc.



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.

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

Dan Hosler
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - 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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Extractable Petroleum Hydrocarbons by 8015M - 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 4B26012 - EPA 3580

Blank (4B26012-BLK1)

Prepared: 02/26/2014 Analyzed: 02/26/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 51 g 50.0 103 59-131

LCS (4B26012-BS1)

Prepared: 02/26/2014 Analyzed: 02/26/2014

Diesel (C10-C28) 917 50.0 mg/kg 1000 91.7 64-121

Surrogate: o-Terphenyl 37 g 50.0 74.4 59-131

Matrix Spike (4B26012-MS1)

Source: X402255-02

Prepared: 02/26/2014 Analyzed: 02/26/2014

Diesel (C10-C28) 835 50.0 mg/kg 1000 ND 83.5 53-125

Surrogate: o-Terphenyl 73 g 50.0 146 59-131

Matrix Spike Dup (4B26012-MSD1)

Source: X402255-02

Prepared: 02/26/2014 Analyzed: 02/26/2014

Diesel (C10-C28) 855 50.0 mg/kg 1000 ND 85.5 53-125 2.40 20

Surrogate: o-Terphenyl 37 g 50.0 75.0 59-131

Origins Laboratory, Inc.

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Davi

LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

Dan Hosler

Project Number: 008314006

Project: Noble - Fritzler 12-34

Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

Origins Laboratory, Inc.



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.

Davi



February 28, 2014

LT Environmental, Inc.

Chris Roy

4600 West 60th Avenue

Arvada

CO 80003

Project Name - Noble - Fritzler 12-34

Project Number - 008314006

Attached are your analytical results for Noble - Fritzler 12-34 received by Origins Laboratory, Inc. February 27, 2014. This project is associated with Origins project number X402273-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

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

Chris Roy
Project Number: 008314006
Project: Noble - Fritzler 12-34

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS09 @ 6'	X402273-01	Soil	February 27, 2014 9:30	02/27/2014 17:00
SS10 @ 6'	X402273-02	Soil	February 27, 2014 9:15	02/27/2014 17:00
SS11 @ 6'	X402273-03	Soil	February 27, 2014 13:15	02/27/2014 17:00
SS12 @ 6'	X402273-04	Soil	February 27, 2014 13:30	02/27/2014 17:00

Origins Laboratory, Inc.



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.

Ross S Hutto For Noelle Doyle Mathis, President

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

Chris Roy
Project Number: 008314006
Project: Noble - Fritzler 12-34

www.originslaboratory.com page 1 of 1

X402273

ORIGINS LABORATORY, INC

Client: LT Environmental
Address: 4600 W. 60th Ave, Arvada, CO
Telephone Number:
Email Address: croy@ltenv.com, dhoster@ltenv.com, bfinn@ltenv.com

Project Manager: Chris Roy
Project Name: Fritzler 12-34
Project Number: 008314006
Samples Collected By: B. Finn

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #	Other	BTEX	Geo	ORO	
SS09@6'	2/27/14	0930	1	X					X				X	X	1
SS10@6'		0915	1	X					X				X	X	2
SS11@6'		1315	1	X					X				X	X	3
SS12@6'		1330	1	X					X				X	X	4
															5
															6
															7
															8
															9
															10
Relinquished By:	Date: 2/27/2014	Time: 1700													Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>
Relinquished By:	Date:	Time:													

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

1725 Elk Place

Origins Laboratory, Inc.

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.

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

Chris Roy
Project Number: 008314006
Project: Noble - Fritzler 12-34

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X402273

Client: LTE

Client Project ID: Fritzler 12-34

Checklist Completed by: Jesse Smith

Shipped Via: Pick up
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 2/27/14 17:18

Airbill #: NA

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other:

Cooler Number/Temperature: 15.4 °C 1 °C 1 °C (Describe) °C

Thermometer ID: T002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?				
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	Soil
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄ / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			X	Soil
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

02-27-14 1726
Date/Time Reviewed

Origins Laboratory, Inc.

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.

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

Chris Roy
Project Number: 008314006
Project: Noble - Fritzler 12-34

SS09 @ 6'

2/27/2014 9:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402273-01 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B27012	02/27/2014	02/27/2014
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Surrogate: o-Terphenyl	78.9 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	4B27013	02/27/2014	02/27/2014
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Benzene	0.0063	0.0010	"	"	"	"	"
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Toluene	0.0274	0.0010	"	"	"	"	"
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Ethylbenzene	0.0050	0.0010	"	"	"	"	"
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Xylenes, total	0.0382	0.0010	"	"	"	"	"
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Naphthalene	ND	0.0040	"	"	"	"	"
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Surrogate: 1,2-Dichloroethane-d4	111 %	70-130			"	"	"
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Surrogate: Toluene-d8	103 %	70-130			"	"	"
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Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"
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Origins Laboratory, Inc.



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.

Ross S Hutto For Noelle Doyle Mathis, President

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

Chris Roy
Project Number: 008314006
Project: Noble - Fritzler 12-34

SS10 @ 6'

2/27/2014 9:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402273-02 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B27012	02/27/2014	02/27/2014
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Surrogate: o-Terphenyl	78.3 %	59-131			"	"	"
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	4B27013	02/27/2014	02/27/2014
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Benzene	ND	0.0010	"	"	"	"	"
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Toluene	0.0049	0.0010	"	"	"	"	"
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Ethylbenzene	ND	0.0010	"	"	"	"	"
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Xylenes, total	0.0043	0.0010	"	"	"	"	"
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Naphthalene	ND	0.0040	"	"	"	"	"
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Surrogate: 1,2-Dichloroethane-d4	113 %	70-130			"	"	"
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Surrogate: Toluene-d8	101 %	70-130			"	"	"
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Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"
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Origins Laboratory, Inc.



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Ross S Hutto For Noelle Doyle Mathis, President

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

Chris Roy
Project Number: 008314006
Project: Noble - Fritzler 12-34

SS11 @ 6'

2/27/2014 1:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402273-03 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B27012	02/27/2014	02/27/2014
Surrogate: o-Terphenyl	79.1 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	4B27013	02/27/2014	02/27/2014
Benzene	ND	0.0010	"	"	"	"	"
Toluene	ND	0.0010	"	"	"	"	"
Ethylbenzene	ND	0.0010	"	"	"	"	"
Xylenes, total	ND	0.0010	"	"	"	"	"
Napthalene	ND	0.0040	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	"
Surrogate: Toluene-d8	102 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

Origins Laboratory, Inc.



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Ross S Hutto For Noelle Doyle Mathis, President

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

Chris Roy
Project Number: 008314006
Project: Noble - Fritzler 12-34

SS12 @ 6'

2/27/2014 1:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X402273-04 (Soil)

Diesel Range Organics (DRO/TEPH) by EPA 8015C

Diesel (C10-C28)	ND	50.0	mg/kg	1	4B27012	02/27/2014	02/27/2014
Surrogate: o-Terphenyl	72.7 %	59-131			"	"	"

GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	4B27013	02/27/2014	02/27/2014
Benzene	ND	0.0010	"	"	"	"	"
Toluene	ND	0.0010	"	"	"	"	"
Ethylbenzene	ND	0.0010	"	"	"	"	"
Xylenes, total	ND	0.0010	"	"	"	"	"
Napthalene	ND	0.0040	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	110 %	70-130			"	"	"
Surrogate: Toluene-d8	102 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"

Origins Laboratory, Inc.



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Ross S Hutto For Noelle Doyle Mathis, President

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

Chris Roy
Project Number: 008314006
Project: Noble - Fritzler 12-34

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B27013 - EPA 5030 (soil)										
Blank (4B27013-BLK1)					Prepared: 02/27/2014 Analyzed: 02/27/2014					
Gasoline Range Hydrocarbons	ND	0.100	mg/kg							
Benzene	ND	0.0010	"							
Toluene	ND	0.0010	"							
Ethylbenzene	ND	0.0010	"							
Xylenes, total	ND	0.0010	"							
Naphthalene	ND	0.0040	"							
Surrogate: 1,2-Dichloroethane-d4	66		ug/kg	62.5		106	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B27013 - EPA 5030 (soil)										
LCS (4B27013-BS1)					Prepared: 02/27/2014 Analyzed: 02/27/2014					
Benzene	0.103	0.0010	mg/kg	0.100		103	70-130			
Toluene	0.105	0.0010	"	0.100		105	70-130			
Ethylbenzene	0.103	0.0010	"	0.100		103	70-130			
m,p-Xylene	0.204	0.0020	"	0.200		102	70-130			
o-Xylene	0.102	0.0010	"	0.100		102	70-130			
Naphthalene	0.0994	0.0040	"	0.100		99.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - 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 4B27013 - EPA 5030 (soil)

Matrix Spike (4B27013-MS1)		Source: X402273-01			Prepared: 02/27/2014 Analyzed: 02/27/2014					
Benzene	0.111	0.0010	mg/kg	0.100	0.0063	105	70-130			
Toluene	0.130	0.0010	"	0.100	0.0274	103	70-130			
Ethylbenzene	0.108	0.0010	"	0.100	0.0050	103	70-130			
m,p-Xylene	0.228	0.0020	"	0.200	0.0287	99.5	70-130			
o-Xylene	0.113	0.0010	"	0.100	0.0095	103	70-130			
Naphthalene	0.110	0.0040	"	0.100	ND	110	70-130			
Surrogate: 1,2-Dichloroethane-d4	68		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4B27013 - EPA 5030 (soil)										
Matrix Spike Dup (4B27013-MSD1)			Source: X402273-01		Prepared: 02/27/2014 Analyzed: 02/27/2014					
Benzene	0.111	0.0010	mg/kg	0.100	0.0063	105	70-130	0.198	20	
Toluene	0.142	0.0010	"	0.100	0.0274	114	70-130	8.80	20	
Ethylbenzene	0.114	0.0010	"	0.100	0.0050	109	70-130	5.03	20	
m,p-Xylene	0.265	0.0020	"	0.200	0.0287	118	70-130	15.1	20	
o-Xylene	0.123	0.0010	"	0.100	0.0095	114	70-130	8.96	20	
Naphthalene	0.113	0.0040	"	0.100	ND	113	70-130	2.63	20	
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		100	70-130			

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Volatile Organic Compounds by GC/MS SW846 8260C - 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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Extractable Petroleum Hydrocarbons by 8015M - 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 4B27012 - EPA 3580

Blank (4B27012-BLK1)

Prepared: 02/27/2014 Analyzed: 02/27/2014

Diesel (C10-C28) ND 50.0 mg/kg

Surrogate: o-Terphenyl 41 g 50.0 82.1 59-131

LCS (4B27012-BS1)

Prepared: 02/27/2014 Analyzed: 02/27/2014

Diesel (C10-C28) 867 50.0 mg/kg 1000 86.7 64-121

Surrogate: o-Terphenyl 40 g 50.0 80.7 59-131

LCS Dup (4B27012-BSD1)

Prepared: 02/27/2014 Analyzed: 02/27/2014

Diesel (C10-C28) 792 50.0 mg/kg 1000 79.2 64-121 9.09 20

Surrogate: o-Terphenyl 34 g 50.0 68.8 59-131

Matrix Spike (4B27012-MS1)

Source: X402253-01

Prepared: 02/27/2014 Analyzed: 02/27/2014

Diesel (C10-C28) 878 50.0 mg/kg 1000 ND 87.8 53-125

Surrogate: o-Terphenyl 38 g 50.0 76.1 59-131

Matrix Spike Dup (4B27012-MSD1)

Source: X402253-01

Prepared: 02/27/2014 Analyzed: 02/27/2014

Diesel (C10-C28) 891 50.0 mg/kg 1000 ND 89.1 53-125 1.47 20

Surrogate: o-Terphenyl 38 g 50.0 76.3 59-131

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4600 West 60th Avenue

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Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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