COMPLIANCE / ENGINEERING / REMEDIATION

LT Environmental Inc.

4600 West 60th Avenue
Arvada, Colorado 80003
T 303.433.9788 / F 303.433.1432

GROUNDWATER MONITORING REPORT
JULY 2014

STATE 16-16I4 FLOW LINE
COGCC REMEDIATION #8264

LT Environmental, Inc. (LTE), under the direction of Noble Energy, Inc. (Noble), conducted groundwater monitoring activities at the State 16-16I4 Flow Line (Site). The Site is located approximately 0.4 miles west of the intersection of County Road 44 and County Road 55 in Weld County, Colorado. The legal site description is the southwest quarter of the southeast quarter of Section 16, Township 4 North, Range 64 West, 6th Principal Meridian. The Site Location Map is provided as Figure 1. Site history and remediation activities were described in preceding reports.

On January 22, 2014, five soil borings (SB01 through SB05) were advanced and completed as temporary monitoring wells. On February 19 and April 21, 2014, seven monitoring wells (SB06 through SB12) were installed to delineate the potential extent of dissolved-phase petroleum hydrocarbon impact at the Site.

On July 21 and 28, 2014, LTE personnel, under the direction of Noble, conducted groundwater monitoring activities in 12 monitoring wells (SB01 through SB12). Prior to purging, depth to groundwater was measured and recorded for calculating well-specific target purge volumes and groundwater elevations. Depth to groundwater ranged from 5.66 feet below top of casing (btoc) in monitoring well SB05 to 6.21 feet btoc in monitoring well SB08. On August 25, 2014, Bohannon Huston, Inc. personnel, under the direction of LTE, were on site to survey the monitoring wells in order to calculate groundwater elevations. Bohannon Huston, Inc. personnel conducting the survey included a Professional Land Surveyor licensed in the State of Colorado. During the July 2014 monitoring event, groundwater was calculated to flow north with an average hydraulic gradient of 0.005 feet per foot. The Groundwater Elevation Map is provided as Figure 2. Following purging, groundwater samples were collected, placed on ice, then submitted with a complete chain of custody form to Origins Laboratory, Inc. for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency Method 8260C.

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 5.0 micrograms per liter (µg/L), 560 µg/L, 700 µg/L, and 1,400 µg/L, respectively. Laboratory groundwater analytical results indicated monitoring wells SB02, SB03, and SB06 exceeded the WQCC Reg 41 standard for benzene at concentrations of 500 µg/L, 194 µg/L, and 159 µg/L, respectively. All remaining samples were in compliance with applicable WQCC Reg 41 standards. Groundwater analytical results are presented on Figure 3 and summarized in Table 1. The laboratory groundwater analytical reports are attached.

The excavation activities, in conjunction with the laboratory analytical results of soil samples collected from the monitoring well installations, indicated that all impacted soil has been removed. Groundwater remediation efforts will be described in future reports. LTE, under the direction of Noble, will continue to conduct quarterly groundwater monitoring with the goal of obtaining four consecutive quarters with laboratory analytical results in compliance with applicable WQCC Reg 41 standards. The next quarterly groundwater monitoring event is scheduled for October 2014.

FIGURES

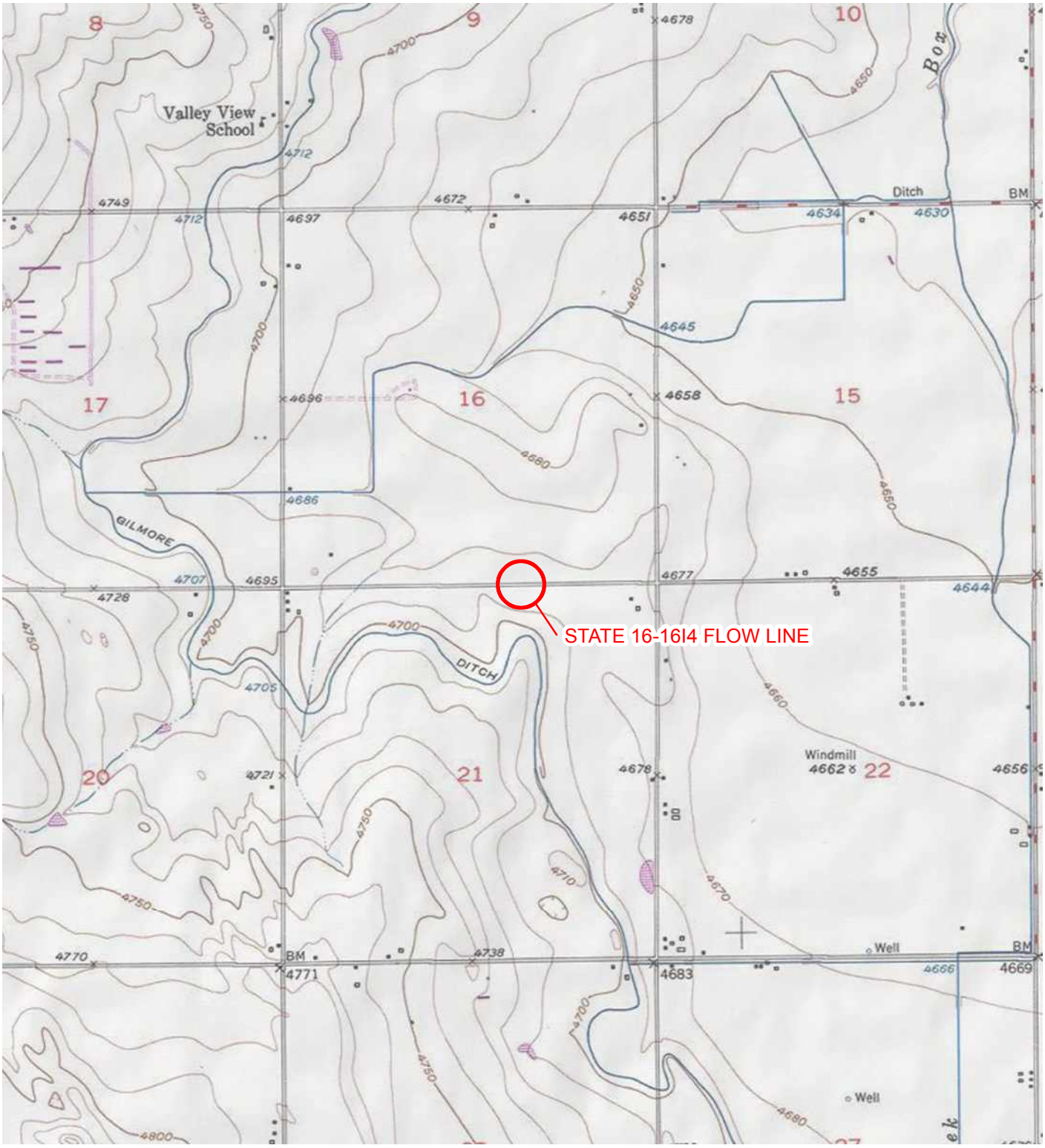


IMAGE COURTESY OF ESRI/USGS

LEGEND

SITE LOCATION

0 2,000 4,000

Feet

N

COLORADO

FIGURE 1
SITE LOCATION MAP
STATE 16-16I4 FLOW LINE
WELD COUNTY, COLORADO

NOBLE ENERGY, INC.

P:\Noble Energy Inc\GIS\MXDs\008313110_STATE_16-16I4\008313110_FIG01_SL.mxd

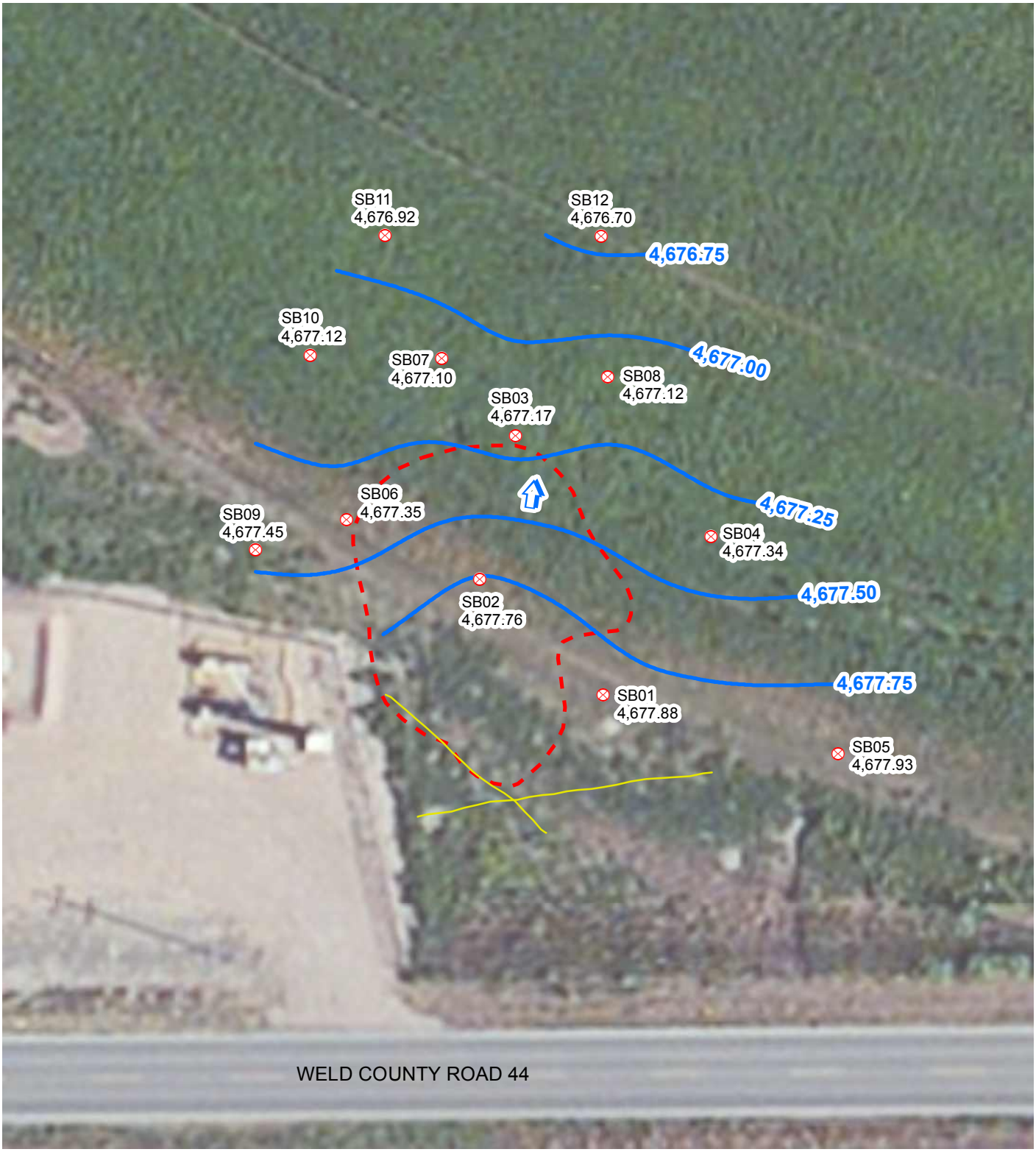


IMAGE COURTESY OF ESRI

LEGEND

- MONITORING WELL
- CALCULATED GROUNDWATER FLOW DIRECTION
- FLOW LINE
- EXCAVATION EXTENT
- GROUNDWATER ELEVATION CONTOUR

CONTOUR INTERVAL = 0.25 FEET
GRADIENT = 0.005 FEET/FOOT

0 40 80
Feet

N

FIGURE 2
GROUNDWATER ELEVATION MAP
STATE 16-16I4 FLOW LINE
JULY 21 & 28, 2014
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.

P:\Noble Energy Inc\GIS\MXDs\008313110_STATE_16-16I4\008313110_FIG03_SURVEYED_GWE_2014_Q3.mxd

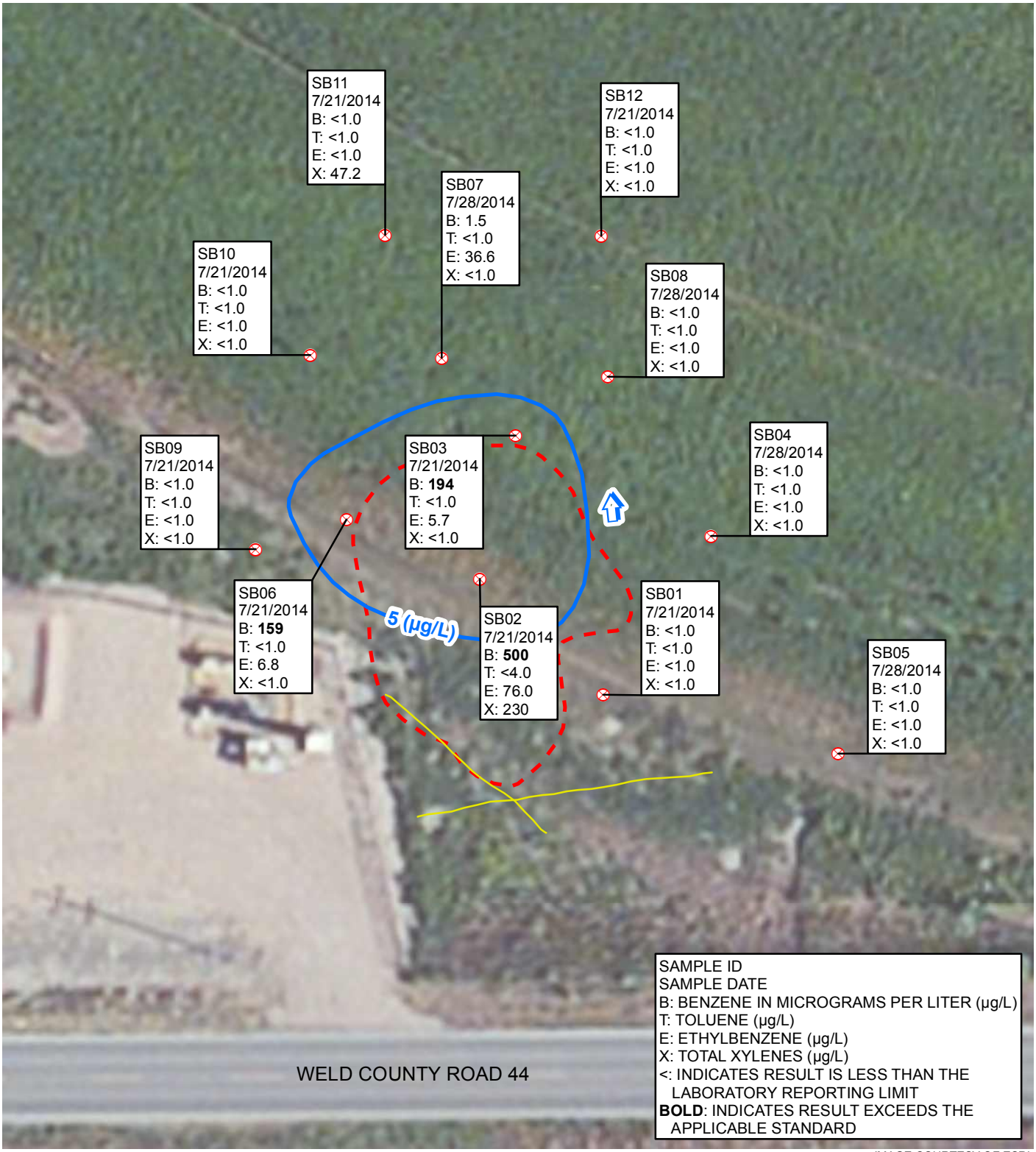


IMAGE COURTESY OF ESRI

LEGEND

- MONITORING WELL
- CALCULATED GROUNDWATER FLOW DIRECTION
- FLOW LINE
- BENZENE ISOCONCENTRATION CONTOUR
- EXCAVATION EXTENT

0 40 80
Feet

N

FIGURE 3
GROUNDWATER ANALYTICAL RESULTS
STATE 16-16I4 FLOW LINE
JULY 21 & 28, 2014
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.

P:\Noble Energy Inc\GIS\MXDs\008313110_STATE_16-16I4\008313110_FIG03_GWA_2014_Q3.mxd

TABLE

TABLE 1

GROUNDWATER ANALYTICAL RESULTS
STATE 16-16I4 FLOW LINE
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.

Monitoring Well	Date	Depth to Water (feet btoc)	Groundwater Elevation * (feet AMSL)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
SB01	1/29/2014	6.05	90.25	<4.0	<4.0	<4.0	<4.0
	4/24/2014	6.23	90.07	<1.0	<1.0	<1.0	<1.0
	7/21/2014	5.75	4,677.88	<1.0	<1.0	<1.0	<1.0
SB02	1/29/2014	5.75	90.23	**109**	172	14.6	155
	4/24/2014	5.85	90.13	**444**	6.7	43.1	352
	7/21/2014	5.80	4,677.76	**500**	<4.0	76.0	230
SB03	1/29/2014	5.45	90.45	**262**	<4.0	<4.0	9.4
	4/24/2014	6.18	89.72	**53.7**	<2.0	<2.0	<2.0
	7/21/2014	6.00	4,677.17	**194**	<1.0	5.7	<1.0
SB04	1/29/2014	6.06	90.22	<4.0	<4.0	<4.0	<4.0
	4/24/2014	6.00	90.28	<1.0	<1.0	<1.0	<1.0
	7/28/2014	5.91	4,677.34	<1.0	<1.0	<1.0	<1.0
SB05	1/29/2014	5.68	90.64	<4.0	<4.0	<4.0	<4.0
	4/24/2014	5.92	90.40	<1.0	<1.0	<1.0	<1.0
	7/28/2014	5.66	4,677.93	<1.0	<1.0	<1.0	<1.0
SB06	3/19/2014	5.19	NM	**33.6**	<4.0	<4.0	<4.0
	4/24/2014	6.21	NM	**180**	<1.0	<1.0	6.4
	7/21/2014	5.92	4,677.35	**159**	<1.0	6.8	<1.0
SB07	3/19/2014	5.20	NM	**245**	<4.0	41.8	<4.0
	4/24/2014	6.40	NM	**228**	<2.0	62.7	409
	7/28/2014	6.00	4,677.10	1.5	<1.0	36.6	<1.0
SB08	3/19/2014	5.39	NM	<4.0	<4.0	<4.0	<4.0
	4/24/2014	6.60	NM	<1.0	<1.0	<1.0	<1.0
	7/28/2014	6.21	4,677.12	<1.0	<1.0	<1.0	<1.0
SB09	4/24/2014	6.15	NM	<1.0	<1.0	<1.0	<1.0
	7/21/2014	5.85	4,677.45	<1.0	<1.0	<1.0	<1.0
SB10	4/24/2014	6.43	NM	<1.0	<1.0	<1.0	<1.0
	7/21/2014	5.94	4,677.12	<1.0	<1.0	<1.0	<1.0

TABLE 1 (Continued)

GROUNDWATER ANALYTICAL RESULTS
STATE 16-16I4 FLOW LINE
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.

Monitoring Well	Date	Depth to Water (feet btoc)	Groundwater Elevation * (feet AMSL)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
SB11	4/24/2014	6.61	NM	**6.0**	<1.0	<1.0	6.0
	7/21/2014	5.96	4,676.92	<1.0	<1.0	<1.0	47.2
SB12	4/24/2014	6.40	NM	<1.0	<1.0	<1.0	<1.0
	7/21/2014	6.02	4,676.70	<1.0	<1.0	<1.0	<1.0
CDPHE WQCC Reg 41				**5.0**	**560**	**700**	**1,400**

NOTES:

AMSL - above mean sea level

btoc - below top of casing

µg/L - micrograms per liter

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

NM - not measured

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

BOLD indicates result exceeds the applicable standard

CDPHE WQCC Reg 41 - Colorado Department of Public Health and Environment-Water Quality Control Commission Regulation 41-The Basic Standards for Ground Water

* - groundwater elevations prior to the July 2014 monitoring event were relative to a 100-foot benchmark

ATTACHMENT

LABORATORY ANALYTICAL REPORTS

ORIGINS LABORATORY, INC

July 24, 2014

LT Environmental, Inc.

Charles Greeson

4600 West 60th Avenue

Arvada CO 80003

Project Name - Noble - State 16-16I4 **Project Number -** 008313110

Attached are your analytical results for Noble - State 16-16I4 received by Origins Laboratory, Inc. July 21, 2014. This project is associated with Origins project number X407171-01.

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

THE NELAC INSTITUTE

ACCREDITED
TESTING CERT # 3494.01

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB01	X407171-01	Water	July 21, 2014 14:30	07/21/2014 17:00
SB09	X407171-02	Water	July 21, 2014 14:35	07/21/2014 17:00
SB10	X407171-03	Water	July 21, 2014 14:40	07/21/2014 17:00
SB12	X407171-04	Water	July 21, 2014 14:45	07/21/2014 17:00
SB11	X407171-05	Water	July 21, 2014 14:55	07/21/2014 17:00
SB03	X407171-06	Water	July 21, 2014 15:05	07/21/2014 17:00
SB06	X407171-07	Water	July 21, 2014 15:15	07/21/2014 17:00
SB02	X407171-08	Water	July 21, 2014 15:25	07/21/2014 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.

Noelle Doyle Mathis, President

LT Environmental, Inc.

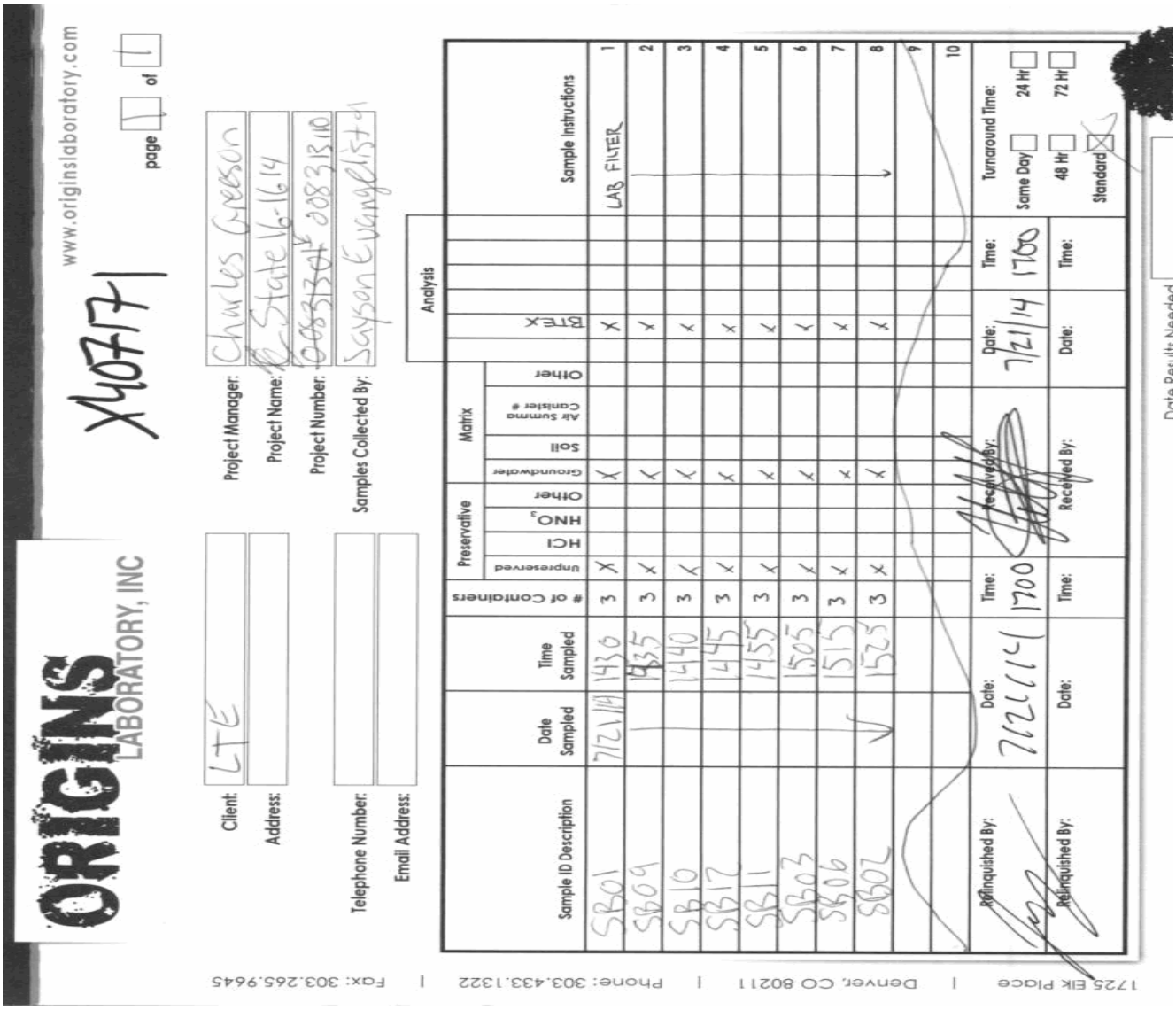
4600 West 60th Avenue

Arvada CO 80003

Charles Greeson

Project Number: 008313110

Project: Noble - State 16-16I4



Origins Laboratory, Inc.

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Noelle Doyle Mathis, President

ORIGINS LABORATORY, INC

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X40717

Client: LTE
Client Project ID: State 16-16I4

Checklist Completed by: Jose Smith
Date/time completed: 7/22/14 806

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

Matrix(s) Received: (Check all that apply): ____Soil/Solid X Water ____Other: ____

Cooler Number/Temperature: 1 / 1.6.9 °C ____/____°C ____/____°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		Sampled Same Day
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]?		X		
Is a chain-of-custody (COC) present and filled out completely[1]?	7/22/14 JOS	X		Missing analysis, Matrix, Preservative, # of Containers
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		
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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)*		X		Samples will be analyzed with in 7 Days of collection

Additional Comments (if any): I confirmed with Charles G. via email regarding unfilled out COC. He confirmed Analysis and requested we Filtering on all Samples.

7/22/14

[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) 7/23/14 1010 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.

Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB01
7/21/2014 2:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407171-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4G22007	07/22/2014	07/22/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*96.0 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*105 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*96.4 %*	*88.6-111*			"	"	"	

Origins Laboratory, Inc.

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Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB09
7/21/2014 2:35:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407171-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4G22007	07/22/2014	07/22/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	*96.2 %*	*87.3-113*			"	"	"
Surrogate: Toluene-d8	*105 %*	*90.9-108*			"	"	"
Surrogate: 4-Bromofluorobenzene	*97.4 %*	*88.6-111*			"	"	"

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.

Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB10

7/21/2014 2:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407171-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4G22007	07/22/2014	07/22/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*97.5 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*104 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*95.7 %*	*88.6-111*			"	"	"	

Origins Laboratory, Inc.

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Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB12
7/21/2014 2:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407171-04 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4G22007	07/22/2014	07/22/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*96.4 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*104 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*95.7 %*	*88.6-111*			"	"	"	

Origins Laboratory, Inc.

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB11

7/21/2014 2:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407171-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4G22007	07/22/2014	07/22/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	**47.2**	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*96.1 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*106 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*96.4 %*	*88.6-111*			"	"	"	

Origins Laboratory, Inc.

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Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB03
7/21/2014 3:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407171-06 (Water)

BTEX by EPA 8260C

Benzene	**194**	1.0	ug/L	1	4G22007	07/22/2014	07/22/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	**5.7**	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*95.7 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*104 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*96.2 %*	*88.6-111*			"	"	"	

Origins Laboratory, Inc.

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Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB06
7/21/2014 3:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407171-07 (Water)

BTEX by EPA 8260C

Benzene	**159**	1.0	ug/L	1	4G22007	07/22/2014	07/22/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	**6.8**	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*94.8 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*106 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*95.6 %*	*88.6-111*			"	"	"	

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.

Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB02
7/21/2014 3:25:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407171-08 (Water)

BTEX by EPA 8260C

Benzene	**500**	4.0	ug/L	4	4G22007	07/22/2014	07/22/2014	
Toluene	ND	4.0	"	"	"	"	"	
Ethylbenzene	**76.0**	4.0	"	"	"	"	"	
Xylenes, total	**230**	4.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*96.2 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*106 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*95.6 %*	*88.6-111*			"	"	"	

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.

Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

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 4G22007 - EPA 5030B (Water)										
Blank (4G22007-BLK1)					Prepared: 07/22/2014 Analyzed: 07/22/2014					
Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	*60*		"	*62.5*		*96.3*	*87.3-113*			
Surrogate: Toluene-d8	*66*		"	*62.5*		*106*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*60*		"	*62.5*		*95.9*	*88.6-111*			

Origins Laboratory, Inc.

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4600 West 60th Avenue
Arvada CO 80003

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

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 4G22007 - EPA 5030B (Water)										
LCS (4G22007-BS1)					Prepared: 07/22/2014 Analyzed: 07/22/2014					
Benzene	50.2	1.0	ug/L	50.0		100	75-126			
Toluene	53.1	1.0	"	50.0		106	78.7-126			
Ethylbenzene	53.9	1.0	"	50.0		108	81-130			
m,p-Xylene	107	2.0	"	100		107	77.2-133			
o-Xylene	52.6	1.0	"	50.0		105	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	*56*		"	*62.5*		*89.4*	*87.3-113*			
Surrogate: Toluene-d8	*67*		"	*62.5*		*107*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*61*		"	*62.5*		*96.9*	*88.6-111*			

Origins Laboratory, Inc.

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Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

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 4G22007 - EPA 5030B (Water)										
Matrix Spike (4G22007-MS1)		**Source: X407174-04**			Prepared: 07/22/2014 Analyzed: 07/22/2014					
Benzene	50.7	1.0	ug/L	50.0	ND	101	74-130			
Toluene	52.7	1.0	"	50.0	ND	105	73-131			
Ethylbenzene	52.8	1.0	"	50.0	ND	106	76-132			
m,p-Xylene	106	2.0	"	100	ND	106	69-139			
o-Xylene	52.8	1.0	"	50.0	ND	106	74-131			
Surrogate: 1,2-Dichloroethane-d4	*56*		"	*62.5*		*90.0*	*87.3-113*			
Surrogate: Toluene-d8	*66*		"	*62.5*		*106*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*61*		"	*62.5*		*97.6*	*88.6-111*			

Origins Laboratory, Inc.

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Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

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 4G22007 - EPA 5030B (Water)										
Matrix Spike Dup (4G22007-MSD1)		**Source: X407174-04**			Prepared: 07/22/2014 Analyzed: 07/22/2014					
Benzene	52.4	1.0	ug/L	50.0	ND	105	74-130	3.24	20	
Toluene	54.8	1.0	"	50.0	ND	110	73-131	3.91	20	
Ethylbenzene	56.1	1.0	"	50.0	ND	112	76-132	6.10	20	
m,p-Xylene	110	2.0	"	100	ND	110	69-139	4.23	20	
o-Xylene	53.7	1.0	"	50.0	ND	107	74-131	1.65	20	
Surrogate: 1,2-Dichloroethane-d4	*56*		"	*62.5*		*89.6*	*87.3-113*			
Surrogate: Toluene-d8	*66*		"	*62.5*		*106*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*61*		"	*62.5*		*97.5*	*88.6-111*			

Origins Laboratory, Inc.

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ORIGINS LABORATORY, INC

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.

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Noelle Doyle Mathis, President

ORIGINS LABORATORY, INC

July 31, 2014

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

Project Name - Noble - State 16-16I4 Project Number - 008313110

Attached are your analytical results for Noble - State 16-16I4 received by Origins Laboratory, Inc. July 28, 2014. This project is associated with Origins project number X407238-01.

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

THE NELAC INSTITUTE

ACCREDITED
TESTING CERT # 3494.01

ORIGINS LABORATORY, INC

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB04	X407238-01	Water	July 28, 2014 12:00	07/28/2014 15:45
SB05	X407238-02	Water	July 28, 2014 12:10	07/28/2014 15:45
SB08	X407238-03	Water	July 28, 2014 12:20	07/28/2014 15:45
SB07	X407238-04	Water	July 28, 2014 12:30	07/28/2014 15:45

Origins Laboratory, Inc.

Noelle Doyle Mathis, President

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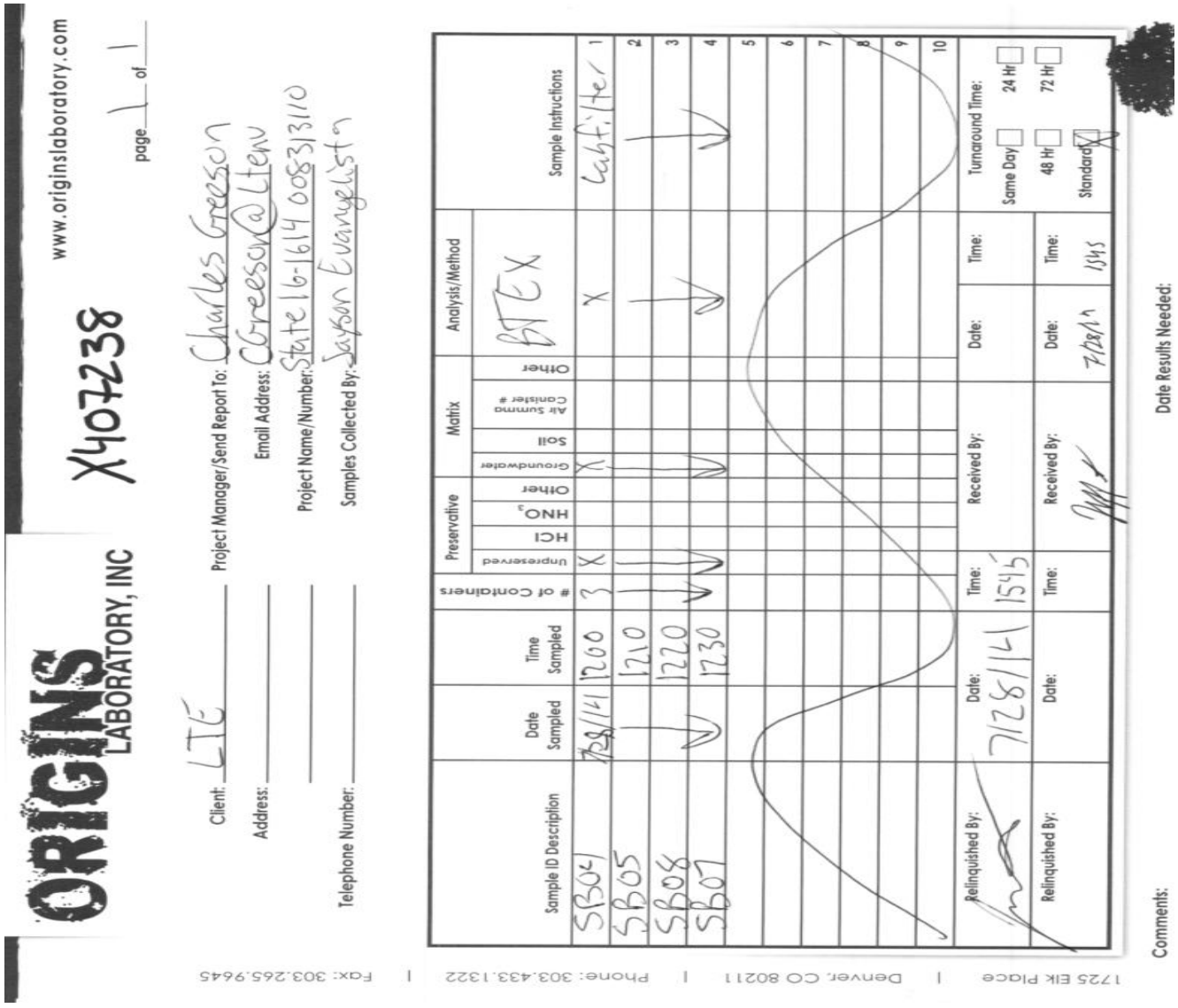
ORIGINS LABORATORY, INC

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4



Origins Laboratory, Inc.

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Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X407238

Client: LTE
Client Project ID: State 16-16I4

Checklist Completed by: Jeff Smith
Date/time completed: 7/28/14

Shipped Via: H/D (UPS, FedEx, Hand Delivered, Pick-up, etc.)
Airbill #: NA

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

Cooler Number/Temperature: ____/5.6 °C ____/____ °C ____/____ °C ____/____ °C (Describe)

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]?		X		
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		
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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)*		X		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) 7/29/14 1326
Date/Time Reviewed

Origins Laboratory, Inc.

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Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB04
7/28/2014 12:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407238-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4G29007	07/29/2014	07/29/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*96.3 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*105 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*95.7 %*	*88.6-111*			"	"	"	

Origins Laboratory, Inc.

Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB05
7/28/2014 12:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407238-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4G29007	07/29/2014	07/29/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*96.0 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*105 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*94.2 %*	*88.6-111*			"	"	"	

Origins Laboratory, Inc.

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Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB08
7/28/2014 12:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407238-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4G29007	07/29/2014	07/29/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*96.4 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*103 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*94.7 %*	*88.6-111*			"	"	"	

Origins Laboratory, Inc.

Noelle Doyle Mathis, President

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

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

SB07
7/28/2014 12:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

X407238-04 (Water)

BTEX by EPA 8260C

Benzene	1.5	1.0	ug/L	1	4G29007	07/29/2014	07/29/2014	
Toluene	ND	1.0	"	"	"	"	"	
Ethylbenzene	36.6	1.0	"	"	"	"	"	
Xylenes, total	ND	1.0	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	*95.0 %*	*87.3-113*			"	"	"	
Surrogate: Toluene-d8	*104 %*	*90.9-108*			"	"	"	
Surrogate: 4-Bromofluorobenzene	*95.2 %*	*88.6-111*			"	"	"	

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Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G29007 - EPA 5030B (Water)										
Blank (4G29007-BLK1)						Prepared: 07/29/2014 Analyzed: 07/29/2014				
Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	*59*		"	*62.5*		*93.9*	*87.3-113*			
Surrogate: Toluene-d8	*66*		"	*62.5*		*105*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*60*		"	*62.5*		*95.6*	*88.6-111*			

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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 4G29007 - EPA 5030B (Water)										
LCS (4G29007-BS1)					Prepared: 07/29/2014 Analyzed: 07/29/2014					
Benzene	54.4	1.0	ug/L	50.0		109	75-126			
Toluene	57.5	1.0	"	50.0		115	78.7-126			
Ethylbenzene	58.2	1.0	"	50.0		116	81-130			
m,p-Xylene	116	2.0	"	100		116	77.2-133			
o-Xylene	57.0	1.0	"	50.0		114	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	*54*		"	*62.5*		*86.1*	*87.3-113*			
Surrogate: Toluene-d8	*65*		"	*62.5*		*105*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*61*		"	*62.5*		*97.1*	*88.6-111*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G29007 - EPA 5030B (Water)										
Matrix Spike (4G29007-MS1)		Source: X407219-02			Prepared: 07/29/2014 Analyzed: 07/29/2014					
Benzene	56.6	1.0	ug/L	50.0	ND	113	74-130			
Toluene	60.1	1.0	"	50.0	ND	120	73-131			
Ethylbenzene	61.1	1.0	"	50.0	ND	122	76-132			
m,p-Xylene	121	2.0	"	100	ND	121	69-139			
o-Xylene	58.4	1.0	"	50.0	ND	117	74-131			
Surrogate: 1,2-Dichloroethane-d4	*56*		"	*62.5*		*89.6*	*87.3-113*			
Surrogate: Toluene-d8	*66*		"	*62.5*		*105*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*60*		"	*62.5*		*96.4*	*88.6-111*			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4G29007 - EPA 5030B (Water)										
Matrix Spike Dup (4G29007-MSD1)		Source: X407219-02			Prepared: 07/29/2014 Analyzed: 07/29/2014					
Benzene	57.5	1.0	ug/L	50.0	ND	115	74-130	1.54	20	
Toluene	60.8	1.0	"	50.0	ND	122	73-131	1.21	20	
Ethylbenzene	61.8	1.0	"	50.0	ND	124	76-132	1.14	20	
m,p-Xylene	123	2.0	"	100	ND	123	69-139	1.14	20	
o-Xylene	60.4	1.0	"	50.0	ND	121	74-131	3.37	20	
Surrogate: 1,2-Dichloroethane-d4	*56*		"	*62.5*		*88.9*	*87.3-113*			
Surrogate: Toluene-d8	*66*		"	*62.5*		*105*	*90.9-108*			
Surrogate: 4-Bromofluorobenzene	*60*		"	*62.5*		*95.6*	*88.6-111*			

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Arvada CO 80003

Charles Greeson
Project Number: 008313110
Project: Noble - State 16-16I4

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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