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North America Division

December 13, 2011

Mr. John Axelson
Department Of Natural Resources
Oil & Gas Conservation Commission
1120 Lincoln St., Suite 801
Denver CO 80203-2136

RE: Ground water Monitoring Report
Lorenz F22-1, 2
API 05-123-15139
Remediation #5465
Sec. 22, T5N R65W
Weld County, Colorado

Dear Mr. Axelson:

Please find attached the Ground water Monitoring Report for the Lorenz F22-1,2. Noble Energy Inc. would like to claim business confidentiality protection for the information submitted in this letter, the supporting materials attached and all previous and subsequent correspondence related to this matter. Please contact the Noble Energy Environmental Department at (970) 785-5000 if you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Todd Cullum'.

Todd Cullum
Environmental Specialist

Attachments



GROUNDWATER MONITORING REPORT NOVEMBER 2011

LORENZ F 22-1 TANK BATTERY

LT Environmental, Inc. (LTE), under the direction of Noble Energy, Inc. (Noble), conducted groundwater monitoring at the Lorenz F 22-1 Tank Battery (Site) on November 9, 2011. This monitoring event constitutes the third post-remediation monitoring event at this Site. Site history, remediation activities, well installation, and historical performance monitoring results have been described in preceding reports.

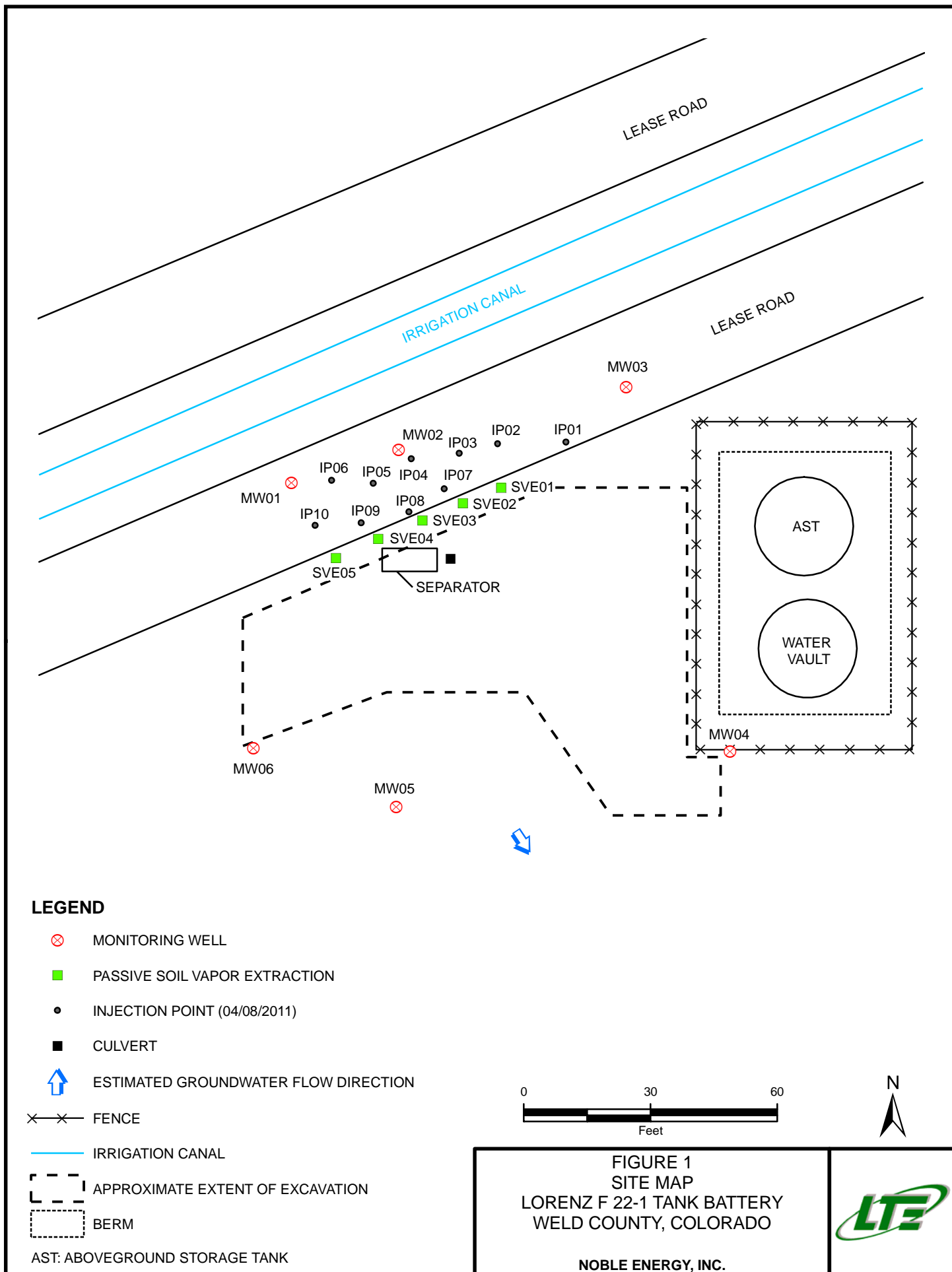
Monitoring wells (MW01 through MW06) were installed at the Site on April 22, 2011. The Site Map is presented as Figure 1. Groundwater level measurements were collected from the monitoring wells and are summarized in Table 1.

Depth to groundwater, which ranged from 3.76 feet below top of casing (btoc) in MW05 to 5.96 feet btoc in MW02, was used to calculate well-specific purge volumes. Following purging, groundwater samples were collected and then submitted to Origins Laboratory, Inc. of Denver, Colorado, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency Method 8260C.

Groundwater analytical results, presented in Table 1, indicate BTEX concentrations are in compliance with Colorado Department of Public Health and Environment-Water Quality Control Commission Regulation 41 (WQCC Reg 41). The laboratory analytical report is included in the Appendix.

This monitoring event constitutes the second post remediation monitoring event in compliance with clean-up goals. Noble will continue to conduct quarterly groundwater monitoring events with the goal of obtaining four consecutive quarters with analytical results in compliance with WQCC Reg 41. The next quarterly groundwater monitoring event is scheduled for February 2012.

FIGURE



TABLE

TABLE 1

**GROUNDWATER ANALYTICAL DATA
LORENZ F 22-1 TANK BATTERY
WELD COUNTY, COLORADO
NOBLE ENERGY, INC.**

Well ID	Date	Depth to Water (feet btoc)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW01	4/26/2011	6.25	<1.0	<1.0	<1.0	<3.0
	7/12/2011	4.69	<1.0	<1.0	<1.0	<3.0
	11/9/2011	5.51	<1.0	<1.0	<1.0	<3.0
MW02	4/26/2011	6.69	44.3	<1.0	7.4	52.4
	7/12/2011	5.33	<1.0	<1.0	<1.0	<3.0
	11/9/2011	5.96	<1.0	<1.0	<1.0	<3.0
MW03	4/26/2011	5.81	<1.0	<1.0	<1.0	<3.0
	7/12/2011	4.20	<1.0	<1.0	<1.0	<3.0
	11/9/2011	5.05	<1.0	<1.0	<1.0	<3.0
MW04	4/26/2011	5.13	<1.0	<1.0	<1.0	<3.0
	7/12/2011	3.52	<1.0	<1.0	<1.0	<3.0
	11/9/2011	4.42	<1.0	<1.0	<1.0	<3.0
MW05	4/26/2011	5.00	<1.0	<1.0	<1.0	<3.0
	7/12/2011	2.90	<1.0	<1.0	<1.0	<3.0
	11/9/2011	3.76	<1.0	<1.0	<1.0	<3.0
MW06	4/26/2011	4.59	<1.0	<1.0	1.7	8.6
	7/12/2011	3.03	<1.0	<1.0	<1.0	<3.0
	11/9/2011	3.86	<1.0	<1.0	<1.0	<3.0
CDPHE WQCC Reg 41			5.0	560	700	1,400

NOTES:

btoc - below top of casing

µg/L - micrograms per liter

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

BOLD - indicates result exceeds the applicable standard

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

CDPHE WQCC Reg 41 - Colorado Department of Public Health and Environmental - Water Quality

Control Commission Regulation 41 covering Basic Standards for Ground Water

ATTACHMENT 1
LABORATORY ANALYTICAL REPORT



November 14, 2011

LT Environmental, Inc.

Steve Kahn

4600 West 60th Avenue

Arvada CO 80003

Project Name - Noble - Lorenz F22-1

Project Number - NEP1047

Attached are you analytical results for Noble - Lorenz F22-1 received by Origins Laboratory, Inc. November 09, 2011. This project is associated with Origins project number X111044-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods specified in SW-846. The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody.

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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	X111044-01	Water	November 9, 2011 13:00	11/09/2011 16:00
MW-2	X111044-02	Water	November 9, 2011 13:10	11/09/2011 16:00
MW-3	X111044-03	Water	November 9, 2011 13:20	11/09/2011 16:00
MW-4	X111044-04	Water	November 9, 2011 13:30	11/09/2011 16:00
MW-5	X111044-05	Water	November 9, 2011 13:40	11/09/2011 16:00
MW-6	X111044-06	Water	November 9, 2011 13:50	11/09/2011 16:00

Origins Laboratory, Inc.



Noelle E Doyle, President

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.

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

ORIGINS

LABORATORY, INC

www.originslaboratory.com

Client:

LTZ

Address:

Telephone Number:

Email Address:

Project Manager:

S. Kuhn

Project Name:

Lorenz P 22-1

Project Number:

NEP1047

Samples Collected By:

J. Evans

page 1 of 1

X111044

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

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis					
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #	Other					
MW01	11-9-11	1300	2	X				X								Sample Instructions Filter All Samples 1 2 3 4 5 6 7 8 9 10
MW02		1310	2	X				X								
MW03		1320	2	X				X								
MW04		1330	2	X				X								
MW05		1340	2	X				X								
MW06		1350	2	X				X								
Relinquished By:	11-9-11		Time: 1600	Received By:				Date:				Time:		Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard <input type="checkbox"/>		
Relinquished By:			Time:	Received By:				Date:				Time:				

Date Received: 11/9/11

Origins Laboratory, Inc.

Naule G.

Noelle E Doyle, President

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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

Origins Laboratory

F-012207-01
Effective Date: 01/22/07

Sample Receipt Checklist

Origins Work Order: X111044

Client: LT Client Project ID: LORENZ F22-1

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

Matrix (Check all that apply): Soil/Solid X Water Other: _____
(Describe)

Cooler ID	<u>N/A</u>				
Temp (°C)	<u>6.12</u>				

Thermometer ID: 1001

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature just above 0°C to ≤ 6°C ⁽¹⁾ ? NOTE: If samples are delivered within 5 hours of sampling, this requirement is waived provided that there is evidence that cooling has begun.			<u>X</u>	<u>ONICE</u>
Were all samples received intact ⁽¹⁾ ?	<u>X</u>			
Was adequate sample volume provided ⁽¹⁾ ?	<u>X</u>			
If custody seals are present, are they intact ⁽¹⁾ ?			<u>X</u>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<u>X</u>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<u>X</u>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<u>X</u>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		<u>X</u>		
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservation in the Comments column (e.g., HCl).		<u>X</u>		
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in the case narrative.				

Ross Hano
Custodian Printed Name

ER
Signature or Initials of Custodian

11/9/11 15:55
Date/Time

Origins Laboratory, Inc.

Noelle E Doyle

Noelle E Doyle, President

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

Steve Kahn

Project Number: NEP1047

Project: Noble - Lorenz F22-1

MW-1

11/9/2011 1:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.

X111044-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	1K10007	11/10/2011	11/11/2011
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	3.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4
 Surrogate: Toluene-d8
 Surrogate: 4-Bromofluorobenzene

108 % 70-130
 100 % 70-130
 105 % 70-130

" "
 " "
 " "

Origins Laboratory, Inc.



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Noelle E Doyle, President

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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

MW-2

11/9/2011 1:10:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.
X111044-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	1K10007	11/10/2011	11/11/2011
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	3.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"
Surrogate: Toluene-d8	102 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	107 %	70-130			"	"	"

Origins Laboratory, Inc.



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Noelle E Doyle, President

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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

MW-3

11/9/2011 1:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X111044-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	1K10007	11/10/2011	11/11/2011
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	3.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"
Surrogate: Toluene-d8	100 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	105 %	70-130			"	"	"

Origins Laboratory, Inc.



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Noelle E Doyle, President

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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

MW-4

11/9/2011 1:30:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.
X111044-04 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	1K10007	11/10/2011	11/11/2011
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	3.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4
Surrogate: Toluene-d8
Surrogate: 4-Bromofluorobenzene

108 %
101 %
106 %

70-130
70-130
70-130

"
"
"

Origins Laboratory, Inc.



Noelle E Doyle, President

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LT Environmental, Inc.

4600 West 60th Avenue

Arvada CO 80003

Steve Kahn

Project Number: NEP1047

Project: Noble - Lorenz F22-1

MW-5

11/9/2011 1:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X111044-05 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	1K10007	11/10/2011	11/11/2011
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	3.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"
Surrogate: Toluene-d8	101 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	106 %	70-130			"	"	"

Origins Laboratory, Inc.



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Noelle E Doyle, President

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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

MW-6

11/9/2011 1:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X111044-06 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	1K10007	11/10/2011	11/11/2011
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	3.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"
Surrogate: Toluene-d8	101 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	106 %	70-130			"	"	"

Origins Laboratory, Inc.



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Noelle E Doyle, President

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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

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 1K10007 - EPA 5030B

Blank (1K10007-BLK1)

Prepared: 11/10/2011 Analyzed: 11/11/2011

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	3.0	"							
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5	109		70-130			
Surrogate: Toluene-d8	62		"	62.5	99.8		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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

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 1K10007 - EPA 5030B

Blank (1K10007-BLK2)

Prepared: 11/10/2011 Analyzed: 11/11/2011

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	3.0	"							
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5	107		70-130			
Surrogate: Toluene-d8	63		"	62.5	100		70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5	105		70-130			

Origins Laboratory, Inc.



Noelle E Doyle, President

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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

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 1K10007 - EPA 5030B										
LCS (1K10007-BS1)					Prepared: 11/10/2011 Analyzed: 11/11/2011					
Benzene	53.7	1.0	ug/L	50.0		107	70-130			
Toluene	52.3	1.0	"	50.0		105	70-130			
Ethylbenzene	54.3	1.0	"	50.0		109	70-130			
m,p-Xylene	108	2.0	"	100		108	70-130			
o-Xylene	55.0	1.0	"	50.0		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5		108	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

Origins Laboratory, Inc.



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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

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 1K10007 - EPA 5030B										
LCS (1K10007-BS2)					Prepared: 11/10/2011 Analyzed: 11/11/2011					
Benzene	51.3	1.0	ug/L	50.0		103	70-130			
Toluene	50.6	1.0	"	50.0		101	70-130			
Ethylbenzene	52.0	1.0	"	50.0		104	70-130			
m,p-Xylene	104	2.0	"	100		104	70-130			
o-Xylene	54.1	1.0	"	50.0		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5		109	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

Origins Laboratory, Inc.



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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

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 1K10007 - EPA 5030B

Matrix Spike (1K10007-MS1)		Source: X111038-04			Prepared: 11/10/2011 Analyzed: 11/11/2011					
Benzene	50.5	1.0	ug/L	50.0	ND	101	70-130			
Toluene	48.9	1.0	"	50.0	ND	97.9	70-130			
Ethylbenzene	50.2	1.0	"	50.0	ND	100	70-130			
m,p-Xylene	99.6	2.0	"	100	ND	99.6	70-130			
o-Xylene	51.7	1.0	"	50.0	ND	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		108	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		107	70-130			

Origins Laboratory, Inc.



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Noelle E Doyle, President

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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

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 1K10007 - EPA 5030B

Matrix Spike (1K10007-MS2)		Source: X111040-01			Prepared: 11/10/2011 Analyzed: 11/11/2011					
Benzene	52.5	1.0	ug/L	50.0	ND	105	70-130			
Toluene	50.9	1.0	"	50.0	0.1	102	70-130			
Ethylbenzene	52.7	1.0	"	50.0	ND	105	70-130			
m,p-Xylene	105	2.0	"	100	ND	105	70-130			
o-Xylene	53.6	1.0	"	50.0	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		108	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		105	70-130			

Origins Laboratory, Inc.



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Noelle E Doyle, President

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

Steve Kahn
Project Number: NEP1047
Project: Noble - Lorenz F22-1

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 1K10007 - EPA 5030B

Matrix Spike Dup (1K10007-MSD1)		Source: X111038-04			Prepared: 11/10/2011 Analyzed: 11/11/2011					
Benzene	52.0	1.0	ug/L	50.0	ND	104	70-130	2.97	20	
Toluene	51.1	1.0	"	50.0	ND	102	70-130	4.42	20	
Ethylbenzene	52.6	1.0	"	50.0	ND	105	70-130	4.77	20	
m,p-Xylene	104	2.0	"	100	ND	104	70-130	4.81	20	
o-Xylene	53.5	1.0	"	50.0	ND	107	70-130	3.31	20	
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5		109	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	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
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Batch 1K10007 - EPA 5030B

Matrix Spike Dup (1K10007-MSD2)		Source: X111040-01			Prepared: 11/10/2011 Analyzed: 11/11/2011					
Benzene	54.9	1.0	ug/L	50.0	ND	110	70-130	4.37	20	
Toluene	53.9	1.0	"	50.0	0.1	108	70-130	5.68	20	
Ethylbenzene	56.3	1.0	"	50.0	ND	113	70-130	6.59	20	
m,p-Xylene	110	2.0	"	100	ND	110	70-130	5.14	20	
o-Xylene	55.3	1.0	"	50.0	ND	111	70-130	3.20	20	
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5		108	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	70-130			

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Project: Noble - Lorenz F22-1

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

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