



Remediation #4632

## **GROUNDWATER MONITORING REPORT AND NO FURTHER ACTION REQUEST JANUARY 2011**

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### **COLLINS 14-20 TANK BATTERY**

On December 16, 2010, LT Environmental, Inc. (LTE) conducted groundwater sampling on behalf of Noble Energy, Inc. (Noble), at the Collins 14-20 Tank Battery (Site). The December 2010 sampling event constitutes the fourth post remediation performance monitoring event at the Site. Site history, assessment, and prior remediation activities have been described in preceding reports. A Site Map is presented as Figure 1.

Depth to groundwater, which ranged from 15.91 feet below top of casing (btoc) in SB14-R to 19.55 feet btoc in SB08, was used to calculate well-specific purge volumes. Following purging, samples were collected and submitted to Summit Scientific, Inc. of Golden, Colorado for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by United States Environmental Protection Agency Method 8260B.

Analytical results indicate BTEX concentrations are in compliance with Colorado Department of Public Health and Environment Water Quality Control Commission Regulation 41 (WQCC Reg 41).

This groundwater sampling event constitutes the fourth consecutive quarter in which all analytical results are in compliance with WQCC Reg 41. LTE, on behalf of Noble, respectfully requests that the Colorado Oil and Gas Conservation Commission grant a No Further Action condition for the Collins 14-20 Tank Battery.

## **TABLE**

**TABLE 1**  
**GROUNDWATER ANALYTICAL DATA**  
**COLLINS 14-20 TANK BATTERY**  
**ADAMS COUNTY, COLORADO**  
**NOBLE ENERGY, INC.**

MONITORING WELL	DATE	DEPTH TO WATER	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYLBENZENE (ug/L)	TOTAL XYLENES (ug/L)	
		(feet btoc)					
SB08	10/29/2008	22.56	<1.0	<1.0	<1.0	<3.0	
	2/17/2009	22.49	<1.0	<1.0	<1.0	<3.0	
	2/27/2009	22.71	<1.0	<1.0	<1.0	<3.0	
	7/1/2009	22.63	<1.0	<1.0	<1.0	<3.0	
	9/21/2009	21.03	<1.0	<1.0	<1.0	<3.0	
	12/8/2009	19.52	<1.0	<1.0	<1.0	<3.0	
	3/3/2010	20.84	<1.0	<1.0	<1.0	<3.0	
	4/14/2010	20.95	<1.0	<1.0	<1.0	<1.0	
	6/18/2010	-	<1.0	<1.0	<1.0	<1.0	
	9/30/2010	19.83	<1.0	<1.0	<1.0	<3.0	
	12/16/2010	19.55	<1.0	<1.0	<1.0	<1.0	
	SB09	11/5/2008	19.65	<1.0	<1.0	<1.0	<3.0
2/17/2009		21.95	<1.0	<1.0	<1.0	<3.0	
2/27/2009		22.04	<1.0	<1.0	<1.0	<3.0	
7/1/2009		22.11	<1.0	<1.0	<1.0	<3.0	
9/21/2009		20.05	<1.0	<1.0	<1.0	<3.0	
12/8/2009		19.89	<1.0	<1.0	<1.0	<3.0	
3/3/2010		19.27	<1.0	<1.0	<1.0	<3.0	
4/14/2010		20.55	<1.0	<1.0	<1.0	<1.0	
6/18/2010		-	<1.0	<1.0	<1.0	<1.0	
9/30/2010		19.41	<1.0	<1.0	<1.0	<3.0	
12/16/2010		19.12	<1.0	<1.0	<1.0	<1.0	
SB11		2/17/2009	20.70	<1.0	<1.0	<1.0	<3.0
	2/27/2009	21.07	<1.0	<1.0	<1.0	<3.0	
	7/1/2009	20.98	1.36	<1.0	<1.0	<3.0	
	9/21/2009	19.70	<1.0	<1.0	<1.0	<3.0	
	12/8/2009	18.79	<1.0	<1.0	<1.0	<3.0	
	3/3/2010	19.11	<1.0	<1.0	<1.0	<3.0	
	4/14/2010	19.35	<1.0	<1.0	<1.0	<1.0	
	6/18/2010	-	<1.0	<1.0	<1.0	<1.0	
	9/30/2010	18.26	<1.0	<1.0	<1.0	<3.0	
	12/16/2010	17.93	<1.0	<1.0	<1.0	<1.0	
	SB12	2/17/2009	20.45	<1.0	<1.0	1.32	<3.0
		2/27/2009	20.78	<1.0	<1.0	<1.0	<3.0
7/1/2009		20.70	<1.0	<1.0	<1.0	<3.0	
9/21/2009		19.85	<1.0	<1.0	<1.0	<3.0	
12/8/2009		18.59	<1.0	<1.0	<1.0	<3.0	
3/3/2010		18.94	<1.0	<1.0	<1.0	<3.0	
4/14/2010		19.10	<1.0	<1.0	<1.0	<1.0	
6/18/2010		-	<1.0	<1.0	<1.0	<1.0	
9/30/2010		17.95	<1.0	<1.0	<1.0	<3.0	
12/16/2010		17.78	<1.0	<1.0	<1.0	<1.0	
SB13		2/27/2009	21.27	2.18	16.3	182	1,037
		7/1/2009	21.31	<b>14.2</b>	66.4	218	1,517
	9/21/2009	19.34	1.92	7.67	<1.0	521	
	12/8/2009	19.18	<1.0	15.0	37.8	384.0	
	3/3/2010	19.46	<1.0	12.7	86.1	700	
	4/14/2010	19.65	<1.0	11.9	37.0	280	
	6/18/2010	-	<1.0	<1.0	<1.0	5	
	9/30/2010	18.52	<1.0	<1.0	<1.0	20.54	
	12/16/2010	18.20	<1.0	12	45	560	
	SB14	2/27/2009	19.71	<b>17.9</b>	486	240	<b>2,335</b>
7/1/2009		20.77	2.5	<1.0	4.59	74.8	
9/21/2009		19.68	<1.0	<1.0	1.46	3.18	
12/8/2009		18.61	<b>14.3</b>	388	298	<b>3,107</b>	
3/3/2010		18.88	<b>14.5</b>	149	247	<b>2,540</b>	
SB14-R		4/14/2010	19.55	<1.0	<1.0	<1.0	<1.0
		6/18/2010	-	<1.0	<1.0	<1.0	<1.0
		9/30/2010	16.26	<1.0	<1.0	<1.0	<1.0
		12/16/2010	15.91	<1.0	<1.0	<1.0	<1.0
<b>CDPHE WQCC Reg 41</b>			<b>5.0</b>	<b>560</b>	<b>700</b>	<b>1,400</b>	

NOTES:

btoc - below top of casing

ug/L - micrograms per liter

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

**Bold** - indicates concentration exceeds CDPHE WQCC Reg 41

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

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

**FIGURE**

SB11

SB09

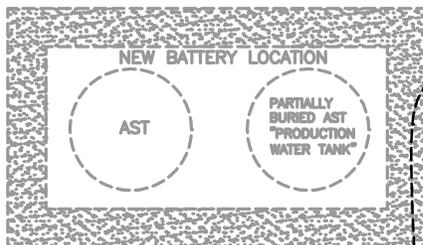
SEPARATOR

ABOVE GROUND PIPING  
ACCESS POINTS

SB12

SB14

SB13



SB08

### LEGEND

- SB08  MONITORING WELL LOCATION
-  BERM
-  EXTENT OF EXCAVATION
- AST ABOVEGROUND STORAGE TANK



0 5 10 20  
FEET

FIGURE 1  
SITE MAP  
COLLINS 14-20 TANK BATTERY  
ADAMS COUNTY, COLORADO  
NOBLE ENERGY, INC.



5/09\NEP083506

**APPENDIX A**  
**ANALYTICAL REPORTS**

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 22, 2010

Steve Kahn  
LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada, CO 80003  
RE: NEP - Collins 14-20

Enclosed are the results of analyses for samples received by Summit Scientific on 12/16/10 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to be 'PS', with a long horizontal flourish extending to the right.

Paul Shrewsbury For Ben Shrewsbury  
President / Laboratory Director



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

Project: NEP - Collins 14-20

Project Number: NEP 0835  
Project Manager: Steve Kahn

**Reported:**  
12/22/10 13:49

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB08	R012122-01	Water	12/16/10 13:15	12/16/10 17:00
SB09	R012122-02	Water	12/16/10 13:20	12/16/10 17:00
SB11	R012122-03	Water	12/16/10 13:25	12/16/10 17:00
SB12	R012122-04	Water	12/16/10 13:30	12/16/10 17:00
SB13	R012122-05	Water	12/16/10 13:35	12/16/10 17:00
SB14	R012122-06	Water	12/16/10 13:40	12/16/10 17:00

Summit Scientific

*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

Project: NEP - Collins 14-20

Project Number: NEP 0835  
Project Manager: Steve Kahn

Reported:  
12/22/10 13:49

Summit Scientific  
S2  
R012/22

741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-277-9531 Fax

Page | of |

Client: LT Environmental, Inc.  
Address: 4600 West 60th Avenue  
City/State/Zip: Arvada, CO 80003  
Phone: (303) 433-9788  
Sampler Name: *SKahn*

Project Manager: *SKahn*  
E-Mail: *SKahn@HOND.com*  
Project Name: *Collins 14-20*  
Project Number: *NEP0835*

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:			Special Instructions	Notes	
				HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	Turn Around Time (Check)	72 Hours			Standard
5808	12/16	1315	3	X				X								
5809		1320	3	X				X								
5811		1325	3	X				X								
5812		1330	3	X				X								
5813		1335	3	X				X								
5814		1340	3	X				X								
Relinquished by: <i>SKahn</i> Date/Time: <i>12/16</i> Received by: <i>SKahn</i> Date/Time: <i>12/16/10 5:00</i> Relinquished by: <i>SKahn</i> Date/Time: <i>12/16/10 5:00</i> Received by: <i>SKahn</i> Date/Time: <i>12/16/10 5:00</i> Relinquished by: _____ Date/Time: _____ Received in Lab by: _____ Date/Time: _____																

www.s2scientific.com

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

Project: NEP - Collins 14-20

Project Number: NEP 0835  
 Project Manager: Steve Kahn

**Reported:**  
 12/22/10 13:49

**SB08**  
**R012122-01 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 12/16/10 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	0122106	12/21/10	12/22/10	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 12/16/10 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.8 %	57.9-139		"	"	"	"	
Surrogate: Toluene-d8		92.1 %	83.1-115		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.4 %	80.8-120		"	"	"	"	

Summit Scientific

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 Arvada CO, 80003

Project: NEP - Collins 14-20

Project Number: NEP 0835  
 Project Manager: Steve Kahn

**Reported:**  
 12/22/10 13:49

**SB09**  
**R012122-02 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 12/16/10 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	0122106	12/21/10	12/22/10	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 12/16/10 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %	57.9-139		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		99.2 %	83.1-115		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98.7 %	80.8-120		"	"	"	"	

Summit Scientific

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

Project: NEP - Collins 14-20

Project Number: NEP 0835  
 Project Manager: Steve Kahn

**Reported:**  
 12/22/10 13:49

**SB11**  
**R012122-03 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 12/16/10 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	0122106	12/21/10	12/22/10	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 12/16/10 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		89.0 %	57.9-139		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		94.7 %	83.1-115		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.4 %	80.8-120		"	"	"	"	

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 Arvada CO, 80003

Project: NEP - Collins 14-20

Project Number: NEP 0835  
 Project Manager: Steve Kahn

**Reported:**  
 12/22/10 13:49

**SB12**  
**R012122-04 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 12/16/10 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	0122106	12/21/10	12/22/10	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 12/16/10 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		104 %	57.9-139		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		92.8 %	83.1-115		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96.7 %	80.8-120		"	"	"	"	

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

Project: NEP - Collins 14-20

Project Number: NEP 0835  
 Project Manager: Steve Kahn

**Reported:**  
 12/22/10 13:49

**SB13**  
**R012122-05 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 12/16/10 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	0122106	12/21/10	12/22/10	EPA 8260B	
<b>Toluene</b>	<b>12</b>	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>45</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>560</b>	1.0	"	"	"	"	"	"	

Date Sampled: 12/16/10 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		99.2 %	57.9-139		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		106 %	83.1-115		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94.6 %	80.8-120		"	"	"	"	

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Project: NEP - Collins 14-20

Project Number: NEP 0835  
 Project Manager: Steve Kahn

**Reported:**  
 12/22/10 13:49

**SB14**  
**R012122-06 (Water)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: 12/16/10 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	0122106	12/21/10	12/22/10	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 12/16/10 13:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		103 %	57.9-139		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.4 %	83.1-115		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94.8 %	80.8-120		"	"	"	"	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: NEP - Collins 14-20

Project Number: NEP 0835  
Project Manager: Steve Kahn

**Reported:**  
12/22/10 13:49

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**Summit Scientific**

Analyte	Reporting			Spike Level	Source		%REC		RPD		Notes
	Result	Limit	Units		Result	%REC	Limits	RPD	Limit		

**Batch 0122106 - EPA 5030 Water MS**

**Blank (0122106-BLK1)**

Prepared: 12/21/10 Analyzed: 12/22/10

Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	1.0	"								
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3	105	57.9-139					
Surrogate: Toluene-d8	13.6		"	13.3	102	83.1-115					
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3	102	80.8-120					

**Blank (0122106-BLK2)**

Prepared: 12/21/10 Analyzed: 12/22/10

Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	1.0	"								
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.3	101	57.9-139					
Surrogate: Toluene-d8	12.5		"	13.3	93.5	83.1-115					
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3	95.6	80.8-120					

**LCS (0122106-BS1)**

Prepared: 12/21/10 Analyzed: 12/22/10

Benzene	29.6	1.0	ug/l	33.3	88.7	60.1-131			10.9		
Toluene	28.2	1.0	"	33.3	84.8	65.9-127			11.3		
Ethylbenzene	31.4	1.0	"	33.3	94.3	65.1-129			20		
m,p-Xylene	57.1	2.0	"	66.7	85.6	66.8-127			20		
o-Xylene	31.5	1.0	"	33.3	94.5	61.2-120			20		
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.3	100	57.9-139					
Surrogate: Toluene-d8	12.6		"	13.3	94.7	83.1-115					
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3	93.7	80.8-120					

**LCS (0122106-BS2)**

Prepared: 12/21/10 Analyzed: 12/22/10

Benzene	30.3	1.0	ug/l	33.3	91.0	60.1-131			10.9		
Toluene	29.8	1.0	"	33.3	89.3	65.9-127			11.3		
Ethylbenzene	30.9	1.0	"	33.3	92.8	65.1-129			20		
m,p-Xylene	57.4	2.0	"	66.7	86.1	66.8-127			20		
o-Xylene	30.9	1.0	"	33.3	92.6	61.2-120			20		
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3	105	57.9-139					
Surrogate: Toluene-d8	13.2		"	13.3	98.6	83.1-115					
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3	93.7	80.8-120					

Summit Scientific

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

Project: NEP - Collins 14-20

Project Number: NEP 0835  
Project Manager: Steve Kahn

**Reported:**  
12/22/10 13:49

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch 0122106 - EPA 5030 Water MS**

**LCS Dup (0122106-BSD1)**

Prepared: 12/21/10 Analyzed: 12/22/10

Benzene	28.4	1.0	ug/l	33.3		85.3	60.1-131	3.90	10.9	
Toluene	27.9	1.0	"	33.3		83.7	65.9-127	1.21	11.3	
Ethylbenzene	29.1	1.0	"	33.3		87.2	65.1-129	7.84	20	
m,p-Xylene	53.6	2.0	"	66.7		80.5	66.8-127	6.23	20	
o-Xylene	29.3	1.0	"	33.3		87.8	61.2-120	7.37	20	
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3		105	57.9-139			
Surrogate: Toluene-d8	13.0		"	13.3		97.6	83.1-115			
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3		94.1	80.8-120			

**LCS Dup (0122106-BSD2)**

Prepared: 12/21/10 Analyzed: 12/22/10

Benzene	28.7	1.0	ug/l	33.3		86.2	60.1-131	5.49	10.9	
Toluene	28.5	1.0	"	33.3		85.5	65.9-127	4.39	11.3	
Ethylbenzene	29.8	1.0	"	33.3		89.4	65.1-129	3.72	20	
m,p-Xylene	54.7	2.0	"	66.7		82.1	66.8-127	4.80	20	
o-Xylene	30.3	1.0	"	33.3		91.0	61.2-120	1.73	20	
Surrogate: 1,2-Dichloroethane-d4	13.9		"	13.3		105	57.9-139			
Surrogate: Toluene-d8	13.1		"	13.3		98.3	83.1-115			
Surrogate: 4-Bromofluorobenzene	12.4		"	13.3		92.6	80.8-120			

**Matrix Spike (0122106-MS1)**

Source: R012122-01

Prepared: 12/21/10 Analyzed: 12/22/10

Benzene	30.9	1.0	ug/l	33.3	ND	92.7	52.7-130		19.3	
Toluene	30.3	1.0	"	33.3	ND	91.0	57-127		18.7	
Ethylbenzene	33.0	1.0	"	33.3	ND	98.9	59.2-127		20	
m,p-Xylene	60.1	2.0	"	66.7	ND	90.2	53.2-132		20	
o-Xylene	33.0	1.0	"	33.3	ND	99.2	56.3-117		20	
Surrogate: 1,2-Dichloroethane-d4	14.1		"	13.3		106	57.9-139			
Surrogate: Toluene-d8	12.7		"	13.3		95.3	83.1-115			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.1	80.8-120			

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

Project: NEP - Collins 14-20

Project Number: NEP 0835  
Project Manager: Steve Kahn

**Reported:**  
12/22/10 13:49

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch 0122106 - EPA 5030 Water MS**

**Matrix Spike (0122106-MS2)**

Source: R012122-02 Prepared: 12/21/10 Analyzed: 12/22/10

Benzene	31.0	1.0	ug/l	33.3	ND	93.0	52.7-130		19.3	
Toluene	31.3	1.0	"	33.3	ND	94.0	57-127		18.7	
Ethylbenzene	32.2	1.0	"	33.3	ND	96.6	59.2-127		20	
m,p-Xylene	60.7	2.0	"	66.7	ND	91.0	53.2-132		20	
o-Xylene	33.7	1.0	"	33.3	ND	101	56.3-117		20	
Surrogate: 1,2-Dichloroethane-d4	13.8		"	13.3		103	57.9-139			
Surrogate: Toluene-d8	13.3		"	13.3		99.6	83.1-115			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.4	80.8-120			

**Matrix Spike Dup (0122106-MSD1)**

Source: R012122-01 Prepared: 12/21/10 Analyzed: 12/22/10

Benzene	32.3	1.0	ug/l	33.3	ND	96.9	52.7-130	4.37	19.3	
Toluene	30.9	1.0	"	33.3	ND	92.7	57-127	1.86	18.7	
Ethylbenzene	33.6	1.0	"	33.3	ND	101	59.2-127	1.89	20	
m,p-Xylene	63.3	2.0	"	66.7	ND	94.9	53.2-132	5.11	20	
o-Xylene	33.5	1.0	"	33.3	ND	101	56.3-117	1.44	20	
Surrogate: 1,2-Dichloroethane-d4	14.4		"	13.3		108	57.9-139			
Surrogate: Toluene-d8	13.3		"	13.3		100	83.1-115			
Surrogate: 4-Bromofluorobenzene	12.8		"	13.3		95.8	80.8-120			

**Matrix Spike Dup (0122106-MSD2)**

Source: R012122-02 Prepared: 12/21/10 Analyzed: 12/22/10

Benzene	33.9	1.0	ug/l	33.3	ND	102	52.7-130	8.97	19.3	
Toluene	33.6	1.0	"	33.3	ND	101	57-127	6.87	18.7	
Ethylbenzene	32.8	1.0	"	33.3	ND	98.3	59.2-127	1.72	20	
m,p-Xylene	60.8	2.0	"	66.7	ND	91.2	53.2-132	0.263	20	
o-Xylene	33.4	1.0	"	33.3	ND	100	56.3-117	1.13	20	
Surrogate: 1,2-Dichloroethane-d4	14.7		"	13.3		110	57.9-139			
Surrogate: Toluene-d8	13.7		"	13.3		103	83.1-115			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.3	80.8-120			

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Project: NEP - Collins 14-20

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Project Manager: Steve Kahn

**Reported:**  
12/22/10 13:49

### Notes and Definitions

DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference

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