

RECEIVED 03/07/2016  
PROJECT 9549  
SPILL 2232617  
FACILITY 103144  
Document 2525954

## Appendix C

### Groundwater Laboratory Analytical Reports

# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 24, 2013

John Cocroft  
LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada, CO 80003  
RE: KMG - Helgoth Heirs Unit #1

Enclosed are the results of analyses for samples received by Summit Scientific on 03/13/13 19:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'JME', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury For Joseph J Egry IV  
Laboratory Director

S<sub>2</sub>

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB01@20'	R303072-01	Soil	03/13/13 08:30	03/13/13 19:50
SB02@9'	R303072-02	Soil	03/13/13 09:10	03/13/13 19:50
SB02@17'	R303072-03	Soil	03/13/13 09:20	03/13/13 19:50
SB03@19'	R303072-04	Soil	03/13/13 10:30	03/13/13 19:50
SB04@21'	R303072-05	Soil	03/13/13 11:10	03/13/13 19:50
SB05@21'	R303072-06	Soil	03/13/13 12:00	03/13/13 19:50
SB06@21'	R303072-07	Soil	03/13/13 13:05	03/13/13 19:50
SB02 FP	R303072-08	Water	03/13/13 12:05	03/13/13 19:50
SB03 FP	R303072-09	Water	03/13/13 18:45	03/13/13 19:50
SB04 FP	R303072-10	Water	03/13/13 19:00	03/13/13 19:50
SB05 GW	R303072-11	Water	03/13/13 12:40	03/13/13 19:50

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

Summit Scientific 2303022.1

741 Corporate Circle Suite 1 • Golden, Colorado 80401  
303-277-9310 • 303-277-9311 Fax

Page 1 of 2

Client: LT Environmental, Inc.  
Address: 4600 West 60th Avenue  
City/State/Zip: Arvada, CO 80003  
Phone: (303) 433-9788  
Sample Name: Audubon Verboet #2

Project Manager: John Cocroft  
E-Mail: jcocroft@hears.com  
Project Name: Helgoth Heirs Unit #1  
Project Number: 0142-13053.003

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)					
5801 @ 20'	3/07/13	8:30	1	X				X								
5802 @ 9'	3/07/13	9:10	1	X				X								
5802 @ 17'		9:20	1	X				X								
5803 @ 19'		10:30	1	X				X								
5804 @ 21'		11:10	1	X				X								
5805 @ 21'		12:00	1	X				X								
5806 @ 21'		13:05	1	X				X								
5807 @ W		12:05	3	X				X								
5803 @ W		18:45	3	X				X								
5804 @ W		19:00	3	X				X								
Relinquished by: <u>[Signature]</u>	Date Time: <u>3/13/13 19:50</u>	Received by: <u>[Signature]</u>		Date Time: <u>3/13/13 19:50</u>	Turn Around Time (Check)		Same Day <input checked="" type="checkbox"/>		72 Hours <input type="checkbox"/>	Standard <input type="checkbox"/>		24 Hours <input type="checkbox"/>		48 Hours <input type="checkbox"/>		
Relinquished by:	Date Time:	Received in Lab by:		Date Time:	Sample Integrity:		Temperature upon receipt: <u>5.2</u>		Intact: <u>(15)</u> No							



S<sub>2</sub>

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**SB01@20'**  
**R303072-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/13/13 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3031305	03/13/13	03/14/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/13/13 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		99.2 %	30-150		"	"	"	"	

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

Date Sampled: 03/13/13 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3031304	03/13/13	03/14/13	EPA 8260B	
<b>Toluene</b>	<b>0.0073</b>	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.0079</b>	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 03/13/13 08:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

SB02@9'  
R303072-02 (Soil)

Summit Scientific

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/13/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	2200	50	mg/kg	1	3031305	03/13/13	03/14/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/13/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		103 %	30-150		"	"	"	"	

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

Date Sampled: 03/13/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.10	0.0050	mg/kg	1	3031304	03/13/13	03/14/13	EPA 8260B	
Toluene	0.031	0.0050	"	"	"	"	"	"	
Ethylbenzene	8.2	0.050	"	10	"	"	03/13/13	"	
Xylenes (total)	69	0.050	"	"	"	"	"	"	E
Gasoline Range Hydrocarbons	2300	5.0	"	"	"	"	"	"	E

Date Sampled: 03/13/13 09:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	03/14/13	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		74.1 %	21-167		"	"	"	"	

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Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**SB02@17'**  
**R303072-03 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/13/13 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	1700	50	mg/kg	1	3031305	03/13/13	03/14/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/13/13 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		102 %	30-150		"	"	"	"	

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

Date Sampled: 03/13/13 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.90</b>	0.050	mg/kg	10	3031304	03/13/13	03/14/13	EPA 8260B	
<b>Toluene</b>	<b>2.8</b>	0.0050	"	1	"	"	03/14/13	"	
<b>Ethylbenzene</b>	<b>9.8</b>	0.050	"	10	"	"	03/14/13	"	
<b>Xylenes (total)</b>	<b>130</b>	0.050	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>2800</b>	5.0	"	"	"	"	03/14/13	"	

Date Sampled: 03/13/13 09:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		89.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		76.6 %	21-167		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

SB03@19'  
R303072-04 (Soil)

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Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 03/13/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	2100	50	mg/kg	1	3031305	03/13/13	03/14/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/13/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 03/13/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	1.9	0.050	mg/kg	10	3031304	03/13/13	03/14/13	EPA 8260B	
Toluene	39	0.050	"	"	"	"	03/14/13	"	
Ethylbenzene	14	0.050	"	"	"	"	"	"	
Xylenes (total)	170	0.050	"	"	"	"	03/14/13	"	
Gasoline Range Hydrocarbons	4600	5.0	"	"	"	"	03/14/13	"	

Date Sampled: 03/13/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		83.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

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4600 West 60th Avenue  
Arvada CO, 80003

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**SB04@21'**  
**R303072-05 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/13/13 11:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	3300	50	mg/kg	1	3031305	03/13/13	03/14/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/13/13 11:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		116 %	30-150		"	"	"	"	

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

Date Sampled: 03/13/13 11:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>0.50</b>	0.0050	mg/kg	1	3031304	03/13/13	03/14/13	EPA 8260B	
<b>Toluene</b>	<b>16</b>	0.050	"	10	"	"	03/14/13	"	
<b>Ethylbenzene</b>	<b>11</b>	0.050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>14</b>	0.0050	"	1	"	"	03/14/13	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3200</b>	5.0	"	10	"	"	03/14/13	"	

Date Sampled: 03/13/13 11:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		110 %	23-173		"	"	03/14/13	"	
Surrogate: Toluene-d8		90.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		146 %	21-167		"	"	"	"	

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LT Environmental, Inc.  
4600 West 60th Avenue  
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Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**SB05@21'**  
**R303072-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/13/13 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	650	50	mg/kg	1	3031305	03/13/13	03/14/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/13/13 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		103 %	30-150		"	"	"	"	

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

Date Sampled: 03/13/13 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.0080	0.0050	mg/kg	1	3031304	03/13/13	03/14/13	EPA 8260B	
Toluene	0.13	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.12	0.0050	"	"	"	"	"	"	
Xylenes (total)	1.5	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	390	5.0	"	10	"	"	03/14/13	"	

Date Sampled: 03/13/13 12:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	03/14/13	"	
Surrogate: Toluene-d8		97.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %	21-167		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**SB06@21'**  
**R303072-07 (Soil)**

Summit Scientific

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/13/13 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	69	50	mg/kg	1	3031305	03/13/13	03/14/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/13/13 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		100 %	30-150		"	"	"	"	

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

Date Sampled: 03/13/13 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3031304	03/13/13	03/14/13	EPA 8260B	
Toluene	0.010	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.012	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.26	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	7.6	0.50	"	"	"	"	"	"	

Date Sampled: 03/13/13 13:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		120 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		106 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	21-167		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**SB02 FP**  
**R303072-08 (Water)**

**Summit Scientific**

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

Date Sampled: 03/13/13 12:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>3600</b>	10	ug/l	10	3031306	03/13/13	03/13/13	EPA 8260B	E
<b>Toluene</b>	<b>8300</b>	10	"	"	"	"	"	"	E
<b>Ethylbenzene</b>	<b>1100</b>	10	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>15000</b>	10	"	"	"	"	"	"	

Date Sampled: 03/13/13 12:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		96.9 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		95.2 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		105 %	45-146		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**SB03 FP**  
**R303072-09 (Water)**

**Summit Scientific**

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

Date Sampled: 03/13/13 18:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>700000</b>	1000	ug/l	1000	3031306	03/13/13	03/13/13	EPA 8260B	E
<b>Toluene</b>	<b>6600000</b>	1000	"	"	"	"	"	"	E
<b>Ethylbenzene</b>	<b>18000000</b>	1000	"	"	"	"	"	"	E
<b>Xylenes (total)</b>	<b>30000000</b>	1000	"	"	"	"	"	"	E

Date Sampled: 03/13/13 18:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		294 %	37-154		"	"	"	"	S-02
<i>Surrogate: Toluene-d8</i>		1810 %	45-149		"	"	"	"	S-02
<i>Surrogate: 4-Bromofluorobenzene</i>		2900 %	45-146		"	"	"	"	S-02

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**SB04 FP**  
**R303072-10 (Water)**

**Summit Scientific**

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

Date Sampled: 03/13/13 19:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	550000	1000	ug/l	1000	3031306	03/13/13	03/13/13	EPA 8260B	E
Toluene	6000000	1000	"	"	"	"	"	"	E
Ethylbenzene	19000000	1000	"	"	"	"	"	"	E
Xylenes (total)	33000000	1000	"	"	"	"	"	"	E

Date Sampled: 03/13/13 19:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		299 %	37-154		"	"	"	"	S-02
Surrogate: Toluene-d8		2030 %	45-149		"	"	"	"	S-02
Surrogate: 4-Bromofluorobenzene		2990 %	45-146		"	"	"	"	S-02

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**SB05 GW**  
**R303072-11 (Water)**

**Summit Scientific**

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

Date Sampled: 03/13/13 12:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>2.2</b>	1.0	ug/l	1	3031306	03/13/13	03/13/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>750</b>	10	"	10	"	"	"	"	
<b>Xylenes (total)</b>	<b>5100</b>	10	"	"	"	"	"	"	

Date Sampled: 03/13/13 12:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		104 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		97.4 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		105 %	45-146		"	"	"	"	

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		
<b>Batch 3031305 - EPA 3550A</b>											
<b>Blank (3031305-BLK1)</b>											
Prepared: 03/13/13 Analyzed: 03/14/13											
C10-C28 (TEPH-DRO)	ND	50	mg/kg								
C28-C36 (TEPH-ORO)	ND	50	"								
<b>LCS (3031305-BS1)</b>											
Prepared: 03/13/13 Analyzed: 03/14/13											
C10-C28 (TEPH-DRO)	469	50	mg/kg	501		93.6	73-134				
<b>LCS Dup (3031305-BSD1)</b>											
Prepared: 03/13/13 Analyzed: 03/14/13											
C10-C28 (TEPH-DRO)	464	50	mg/kg	501		92.6	73-134	1.02		11	
<b>Matrix Spike (3031305-MS1)</b>											
Source: R303071-03 Prepared: 03/13/13 Analyzed: 03/14/13											
C10-C28 (TEPH-DRO)	449	50	mg/kg	501	ND	89.6	50-148				
<b>Matrix Spike Dup (3031305-MSD1)</b>											
Source: R303071-03 Prepared: 03/13/13 Analyzed: 03/14/13											
C10-C28 (TEPH-DRO)	447	50	mg/kg	501	ND	89.2	50-148	0.508		13	

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**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 3031304 - EPA 5030 Soil MS**

**Blank (3031304-BLK1)**

Prepared: 03/13/13 Analyzed: 03/14/13

Benzene	ND	0.0050	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0417</i>		<i>"</i>	<i>0.0397</i>		<i>105</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0384</i>		<i>"</i>	<i>0.0400</i>		<i>96.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0382</i>		<i>"</i>	<i>0.0400</i>		<i>95.6</i>	<i>21-167</i>			

**LCS (3031304-BS1)**

Prepared: 03/13/13 Analyzed: 03/14/13

Benzene	0.115	0.0050	mg/kg	0.100		115	58-130			
Toluene	0.117	0.0050	"	0.100		117	61-134			
Ethylbenzene	0.112	0.0050	"	0.100		112	74-139			
m,p-Xylene	0.247	0.010	"	0.200		124	73-137			
o-Xylene	0.120	0.0050	"	0.100		120	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0432</i>		<i>"</i>	<i>0.0397</i>		<i>109</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>95.0</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>94.9</i>	<i>21-167</i>			

**LCS Dup (3031304-BSD1)**

Prepared: 03/13/13 Analyzed: 03/14/13

Benzene	0.111	0.0050	mg/kg	0.100		111	58-130	3.29	13	
Toluene	0.111	0.0050	"	0.100		111	61-134	4.45	16	
Ethylbenzene	0.112	0.0050	"	0.100		112	74-139	0.642	12	
m,p-Xylene	0.236	0.010	"	0.200		118	73-137	4.57	14	
o-Xylene	0.117	0.0050	"	0.100		117	73-141	2.33	12	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0420</i>		<i>"</i>	<i>0.0397</i>		<i>106</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0382</i>		<i>"</i>	<i>0.0400</i>		<i>95.5</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0386</i>		<i>"</i>	<i>0.0400</i>		<i>96.4</i>	<i>21-167</i>			

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

**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 3031304 - EPA 5030 Soil MS**

<b>Matrix Spike (3031304-MS1)</b>	<b>Source: R303071-03</b>			Prepared: 03/13/13		Analyzed: 03/14/13					
Benzene	0.0986	0.0050	mg/kg	0.100	ND	98.6	30-131				
Toluene	0.0978	0.0050	"	0.100	ND	97.8	30-134				
Ethylbenzene	0.0961	0.0050	"	0.100	ND	96.1	22-153				
m,p-Xylene	0.197	0.010	"	0.200	0.00423	96.2	10-159				
o-Xylene	0.0997	0.0050	"	0.100	ND	99.7	31-151				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0401</i>		"	<i>0.0397</i>		<i>101</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0377</i>		"	<i>0.0400</i>		<i>94.3</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0379</i>		"	<i>0.0400</i>		<i>94.8</i>	<i>21-167</i>				

<b>Matrix Spike Dup (3031304-MSD1)</b>	<b>Source: R303071-03</b>			Prepared: 03/13/13		Analyzed: 03/14/13					
Benzene	0.100	0.0050	mg/kg	0.100	ND	100	30-131	1.54	34		
Toluene	0.0998	0.0050	"	0.100	ND	99.8	30-134	2.00	30		
Ethylbenzene	0.0985	0.0050	"	0.100	ND	98.5	22-153	2.44	24		
m,p-Xylene	0.201	0.010	"	0.200	0.00423	98.2	10-159	2.02	68		
o-Xylene	0.102	0.0050	"	0.100	ND	102	31-151	2.73	38		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0431</i>		"	<i>0.0397</i>		<i>109</i>	<i>23-173</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0384</i>		"	<i>0.0400</i>		<i>96.1</i>	<i>20-170</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0380</i>		"	<i>0.0400</i>		<i>95.0</i>	<i>21-167</i>				

**Batch 3031306 - EPA 5030 Water MS**

<b>Blank (3031306-BLK1)</b>				Prepared: 03/13/13		Analyzed: 03/15/13					
Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	1.0	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.0</i>		"	<i>13.2</i>		<i>91.1</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>12.1</i>		"	<i>13.3</i>		<i>90.9</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.4</i>		"	<i>13.3</i>		<i>92.9</i>	<i>45-146</i>				

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

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

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

**Batch 3031306 - EPA 5030 Water MS**

LCS (3031306-BS1)				Prepared: 03/13/13 Analyzed: 03/15/13						
Benzene	36.1	1.0	ug/l	33.3	108	51-132				
Toluene	36.4	1.0	"	33.3	109	51-138				
Ethylbenzene	37.5	1.0	"	33.3	113	58-146				
m,p-Xylene	74.4	2.0	"	66.7	112	57-144				
o-Xylene	38.8	1.0	"	33.3	117	53-146				
Surrogate: 1,2-Dichloroethane-d4	12.6		"	13.2	95.0	37-154				
Surrogate: Toluene-d8	12.6		"	13.3	94.1	45-149				
Surrogate: 4-Bromofluorobenzene	12.0		"	13.3	89.9	45-146				

LCS Dup (3031306-BS1)				Prepared: 03/13/13 Analyzed: 03/15/13						
Benzene	38.0	1.0	ug/l	33.3	114	51-132	4.94	17		
Toluene	37.8	1.0	"	33.3	113	51-138	3.72	17		
Ethylbenzene	40.0	1.0	"	33.3	120	58-146	6.27	16		
m,p-Xylene	80.2	2.0	"	66.7	120	57-144	7.40	16		
o-Xylene	40.9	1.0	"	33.3	123	53-146	5.12	15		
Surrogate: 1,2-Dichloroethane-d4	12.8		"	13.2	96.3	37-154				
Surrogate: Toluene-d8	12.5		"	13.3	93.5	45-149				
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3	94.4	45-146				

Matrix Spike (3031306-MS1)				Source: R303031-01		Prepared: 03/13/13 Analyzed: 03/15/13				
Benzene	38.5	1.0	ug/l	33.3	ND	116	34-141			
Toluene	37.9	1.0	"	33.3	ND	114	27-151			
Ethylbenzene	38.5	1.0	"	33.3	ND	116	29-160			
m,p-Xylene	77.1	2.0	"	66.7	ND	116	20-166			
o-Xylene	39.8	1.0	"	33.3	ND	119	33-159			
Surrogate: 1,2-Dichloroethane-d4	12.1		"	13.2	91.5	37-154				
Surrogate: Toluene-d8	12.7		"	13.3	95.0	45-149				
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3	94.9	45-146				

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:25

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

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

**Batch 3031306 - EPA 5030 Water MS**

Matrix Spike Dup (3031306-MSD1)	Source: R303031-01			Prepared: 03/13/13	Analyzed: 03/15/13				
Benzene	37.8	1.0	ug/l	33.3	ND	113	34-141	1.86	32
Toluene	37.3	1.0	"	33.3	ND	112	27-151	1.52	25
Ethylbenzene	38.5	1.0	"	33.3	ND	116	29-160	0.0519	50
m,p-Xylene	77.3	2.0	"	66.7	ND	116	20-166	0.311	36
o-Xylene	39.4	1.0	"	33.3	ND	118	33-159	1.19	26
Surrogate: 1,2-Dichloroethane-d4	12.3		"	13.2		93.2	37-154		
Surrogate: Toluene-d8	12.2		"	13.3		91.7	45-149		
Surrogate: 4-Bromofluorobenzene	12.6		"	13.3		94.4	45-146		

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

**Reported:**  
04/24/13 08:25

### Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- 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

Summit Scientific



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# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

March 15, 2013

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

RE: KMG - Helgoth Heirs Unit #1

Enclosed are the results of analyses for samples received by Summit Scientific on 03/14/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV For Ben Shrewsbury  
President / Laboratory Manager

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
03/15/13 14:32

**SB06GW**  
**R303078-01 (Water)**

**Summit Scientific**

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

Date Sampled: 03/14/13 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>9.4</b>	1.0	ug/l	1	3031412	03/14/13	03/14/13	EPA 8260B	
<b>Toluene</b>	<b>32</b>	1.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>45</b>	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1200</b>	100	"	100	"	"	"	"	

Date Sampled: 03/14/13 10:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		105 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		106 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		102 %	45-146		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
03/15/13 14:32

**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 3031412 - EPA 5030 Water MS**

**Blank (3031412-BLK1)**

Prepared: 03/14/13 Analyzed: 03/15/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.3</i>		<i>"</i>	<i>13.2</i>		<i>100</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>		<i>98.5</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>45-146</i>			

**LCS (3031412-BS1)**

Prepared: 03/14/13 Analyzed: 03/15/13

Benzene	49.3	1.0	ug/l	50.0		98.6	51-132			
Toluene	46.0	1.0	"	50.0		92.0	51-138			
Ethylbenzene	49.6	1.0	"	50.0		99.3	58-146			
m,p-Xylene	98.2	2.0	"	100		98.2	57-144			
o-Xylene	49.2	1.0	"	50.0		98.4	53-146			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>14.1</i>		<i>"</i>	<i>13.2</i>		<i>107</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>		<i>98.1</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>45-146</i>			

**LCS Dup (3031412-BSD1)**

Prepared: 03/14/13 Analyzed: 03/15/13

Benzene	45.8	1.0	ug/l	50.0		91.6	51-132	7.40	17	
Toluene	43.4	1.0	"	50.0		86.8	51-138	5.81	17	
Ethylbenzene	49.6	1.0	"	50.0		99.3	58-146	0.0403	16	
m,p-Xylene	98.0	2.0	"	100		98.0	57-144	0.194	16	
o-Xylene	48.8	1.0	"	50.0		97.6	53-146	0.796	15	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.0</i>		<i>"</i>	<i>13.2</i>		<i>98.6</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>		<i>98.2</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>99.5</i>	<i>45-146</i>			

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
03/15/13 14:32

**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 3031412 - EPA 5030 Water MS**

**Matrix Spike (3031412-MS1)**

Source: R303033-01

Prepared: 03/14/13

Analyzed: 03/15/13

Benzene	49.6	1.0	ug/l	50.0	ND	99.2	34-141			
Toluene	46.7	1.0	"	50.0	ND	93.5	27-151			
Ethylbenzene	50.6	1.0	"	50.0	ND	101	29-160			
m,p-Xylene	100	2.0	"	100	ND	100	20-166			
o-Xylene	49.4	1.0	"	50.0	ND	98.9	33-159			
Surrogate: 1,2-Dichloroethane-d4	14.1		"	13.2		106	37-154			
Surrogate: Toluene-d8	13.4		"	13.3		101	45-149			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	45-146			

**Matrix Spike Dup (3031412-MSD1)**

Source: R303033-01

Prepared: 03/14/13

Analyzed: 03/15/13

Benzene	48.7	1.0	ug/l	50.0	ND	97.5	34-141	1.77	32
Toluene	46.0	1.0	"	50.0	ND	92.0	27-151	1.64	25
Ethylbenzene	51.2	1.0	"	50.0	ND	102	29-160	1.08	50
m,p-Xylene	101	2.0	"	100	ND	101	20-166	0.864	36
o-Xylene	50.2	1.0	"	50.0	ND	100	33-159	1.53	26
Surrogate: 1,2-Dichloroethane-d4	13.4		"	13.2		101	37-154		
Surrogate: Toluene-d8	13.0		"	13.3		97.4	45-149		
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		100	45-146		

Summit Scientific

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S<sub>2</sub>

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
03/15/13 14:32

### 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



# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 24, 2013

John Cocroft

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: KMG - Helgoth Heirs Unit #1

Enclosed are the results of analyses for samples received by Summit Scientific on 03/15/13 20:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'JME', with a long, sweeping horizontal line extending to the right.

Ben Shrewsbury For Joseph J Egry IV  
Laboratory Director

S<sub>2</sub>

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB07@23'	R303083-01	Soil	03/15/13 11:30	03/15/13 20:15
SB07 GW	R303083-02	Water	03/15/13 15:15	03/15/13 20:15
SB08@21'	R303083-03	Soil	03/15/13 12:25	03/15/13 20:15
SB09@21'	R303083-04	Soil	03/15/13 15:10	03/15/13 20:15
SB09@25'	R303083-05	Soil	03/15/13 15:30	03/15/13 20:15
SB09 FP	R303083-06	Water	03/15/13 19:20	03/15/13 20:15
SB010@23'	R303083-07	Soil	03/15/13 13:20	03/15/13 20:15
SB011@20'	R303083-08	Soil	03/15/13 14:15	03/15/13 20:15
SB010 GW	R303083-09	Water	03/15/13 00:00	03/15/13 20:15

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: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

**SB07@23'**  
**R303083-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/15/13 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3031511	03/15/13	03/16/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/15/13 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		97.8 %	30-150		"	"	"	"	

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

Date Sampled: 03/15/13 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3031510	03/15/13	03/15/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 03/15/13 11:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

**SB07 GW**  
**R303083-02 (Water)**

**Summit Scientific**

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

Date Sampled: 03/15/13 15:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	7.3	1.0	ug/l	1	3031509	03/15/13	03/15/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>14</b>	1.0	"	"	"	"	"	"	

Date Sampled: 03/15/13 15:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.1 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		95.6 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.8 %	45-146		"	"	"	"	

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.

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

SB08@21'  
R303083-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 03/15/13 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3031511	03/15/13	03/16/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/15/13 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		98.0 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 03/15/13 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3031510	03/15/13	03/15/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 03/15/13 12:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		125 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		105 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

**SB09@21'**  
**R303083-04 (Soil)**

Summit Scientific

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/15/13 15:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	170	50	mg/kg	1	3031511	03/15/13	03/16/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/15/13 15:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		102 %	30-150		"	"	"	"	

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

Date Sampled: 03/15/13 15:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3031510	03/15/13	03/16/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.11	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.40	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	230	5.0	"	10	"	"	"	"	

Date Sampled: 03/15/13 15:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		117 %	21-167		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

SB09@25'  
R303083-05 (Soil)

Summit Scientific

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/15/13 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	3000	50	mg/kg	1	3031511	03/15/13	03/16/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/15/13 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		113 %	30-150		"	"	"	"	

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

Date Sampled: 03/15/13 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.38	0.0050	mg/kg	1	3031510	03/15/13	03/16/13	EPA 8260B	
Toluene	22	0.050	"	10	"	"	"	"	E
Ethylbenzene	14	0.050	"	"	"	"	"	"	E
Xylenes (total)	200	0.050	"	"	"	"	"	"	E
Gasoline Range Hydrocarbons	1600	5.0	"	"	"	"	"	"	E

Date Sampled: 03/15/13 15:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		147 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		177 %	21-167		"	"	"	"	S-02

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

**SB09 FP**  
**R303083-06 (Water)**

**Summit Scientific**

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

Date Sampled: 03/15/13 19:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>2400</b>	100	ug/l	100	3031509	03/15/13	03/15/13	EPA 8260B	
<b>Toluene</b>	<b>12000</b>	100	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>3900</b>	100	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>60000</b>	100	"	"	"	"	"	"	

Date Sampled: 03/15/13 19:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		114 %	37-154		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		112 %	45-149		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		110 %	45-146		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

**SB010@23'**  
**R303083-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 03/15/13 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3031511	03/15/13	03/16/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/15/13 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		94.4 %	30-150		"	"	"	"	

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

Date Sampled: 03/15/13 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3031510	03/15/13	03/15/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 03/15/13 13:20

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

SB011@20'  
R303083-08 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 03/15/13 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3031511	03/15/13	03/16/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 03/15/13 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		91.6 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 03/15/13 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3031510	03/15/13	03/15/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 03/15/13 14:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		121 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		103 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	21-167		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

**SB010 GW**  
**R303083-09 (Water)**

**Summit Scientific**

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

Date Sampled: 03/15/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	3031509	03/15/13	03/15/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 03/15/13 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		98.8 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		94.3 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.3 %	45-146		"	"	"	"	

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

Extractable Petroleum Hydrocarbons by 8015 - Quality Control  
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		
<b>Batch 3031511 - EPA 3550A</b>											
<b>Blank (3031511-BLK1)</b>											
Prepared: 03/15/13 Analyzed: 03/16/13											
C10-C28 (TEPH-DRO)	ND	50	mg/kg								
C28-C36 (TEPH-ORO)	ND	50	"								
<b>LCS (3031511-BS1)</b>											
Prepared: 03/15/13 Analyzed: 03/16/13											
C10-C28 (TEPH-DRO)	531	50	mg/kg	501		106	73-134				
<b>LCS Dup (3031511-BSD1)</b>											
Prepared: 03/15/13 Analyzed: 03/16/13											
C10-C28 (TEPH-DRO)	555	50	mg/kg	501		111	73-134	4.51		11	
<b>Matrix Spike (3031511-MS1)</b>											
Source: R303083-01 Prepared: 03/15/13 Analyzed: 03/16/13											
C10-C28 (TEPH-DRO)	496	50	mg/kg	501	ND	99.1	50-148				
<b>Matrix Spike Dup (3031511-MSD1)</b>											
Source: R303083-01 Prepared: 03/15/13 Analyzed: 03/16/13											
C10-C28 (TEPH-DRO)	473	50	mg/kg	501	ND	94.5	50-148	4.72		13	

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

**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 3031509 - EPA 5030 Water MS**

**Blank (3031509-BLK1)**

Prepared: 03/15/13 Analyzed: 03/16/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.8</i>		<i>"</i>	<i>13.2</i>		<i>96.3</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.0</i>		<i>"</i>	<i>13.3</i>		<i>97.9</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.2</i>		<i>"</i>	<i>13.3</i>		<i>91.4</i>	<i>45-146</i>			

**LCS (3031509-BS1)**

Prepared: 03/15/13 Analyzed: 03/16/13

Benzene	37.5	1.0	ug/l	33.3		112	51-132			
Toluene	38.8	1.0	"	33.3		116	51-138			
Ethylbenzene	37.7	1.0	"	33.3		113	58-146			
m,p-Xylene	75.5	2.0	"	66.7		113	57-144			
o-Xylene	38.5	1.0	"	33.3		116	53-146			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.4</i>		<i>"</i>	<i>13.2</i>		<i>93.4</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.0</i>		<i>"</i>	<i>13.3</i>		<i>97.7</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>11.9</i>		<i>"</i>	<i>13.3</i>		<i>89.4</i>	<i>45-146</i>			

**LCS Dup (3031509-BSD1)**

Prepared: 03/15/13 Analyzed: 03/16/13

Benzene	36.7	1.0	ug/l	33.3		110	51-132	2.18	17	
Toluene	38.4	1.0	"	33.3		115	51-138	1.04	17	
Ethylbenzene	38.0	1.0	"	33.3		114	58-146	0.713	16	
m,p-Xylene	75.8	2.0	"	66.7		114	57-144	0.384	16	
o-Xylene	38.4	1.0	"	33.3		115	53-146	0.468	15	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.7</i>		<i>"</i>	<i>13.2</i>		<i>96.0</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.0</i>		<i>"</i>	<i>13.3</i>		<i>97.8</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.0</i>		<i>"</i>	<i>13.3</i>		<i>89.6</i>	<i>45-146</i>			

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

**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 3031509 - EPA 5030 Water MS**

Matrix Spike (3031509-MS1)	Source: R303066-01			Prepared: 03/15/13		Analyzed: 03/16/13	
Benzene	41.8	1.0	ug/l	33.3	ND	126	34-141
Toluene	41.4	1.0	"	33.3	ND	124	27-151
Ethylbenzene	40.9	1.0	"	33.3	ND	123	29-160
m,p-Xylene	81.1	2.0	"	66.7	ND	122	20-166
o-Xylene	41.2	1.0	"	33.3	ND	124	33-159
Surrogate: 1,2-Dichloroethane-d4	12.5		"	13.2		94.8	37-154
Surrogate: Toluene-d8	12.8		"	13.3		95.6	45-149
Surrogate: 4-Bromofluorobenzene	12.2		"	13.3		91.7	45-146

Matrix Spike Dup (3031509-MSD1)	Source: R303066-01			Prepared: 03/15/13		Analyzed: 03/16/13			
Benzene	37.8	1.0	ug/l	33.3	ND	113	34-141	10.3	32
Toluene	39.7	1.0	"	33.3	ND	119	27-151	4.14	25
Ethylbenzene	38.6	1.0	"	33.3	ND	116	29-160	5.66	50
m,p-Xylene	76.9	2.0	"	66.7	ND	115	20-166	5.34	36
o-Xylene	39.1	1.0	"	33.3	ND	117	33-159	5.36	26
Surrogate: 1,2-Dichloroethane-d4	12.4		"	13.2		93.9	37-154		
Surrogate: Toluene-d8	12.8		"	13.3		96.2	45-149		
Surrogate: 4-Bromofluorobenzene	11.9		"	13.3		89.4	45-146		

**Batch 3031510 - EPA 5030 Soil MS**

Blank (3031510-BLK1)	Prepared: 03/15/13			Analyzed: 03/16/13	
Benzene	ND	0.0050	mg/kg		
Toluene	ND	0.0050	"		
Ethylbenzene	ND	0.0050	"		
Xylenes (total)	ND	0.0050	"		
Gasoline Range Hydrocarbons	ND	0.50	"		
Surrogate: 1,2-Dichloroethane-d4	0.0454		"	0.0397	114 23-173
Surrogate: Toluene-d8	0.0387		"	0.0400	96.7 20-170
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400	101 21-167

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

**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 3031510 - EPA 5030 Soil MS**

**LCS (3031510-BS1)**

Prepared: 03/15/13 Analyzed: 03/16/13

Benzene	0.104	0.0050	mg/kg	0.100		104	58-130			
Toluene	0.113	0.0050	"	0.100		113	61-134			
Ethylbenzene	0.127	0.0050	"	0.100		127	74-139			
m,p-Xylene	0.252	0.010	"	0.200		126	73-137			
o-Xylene	0.124	0.0050	"	0.100		124	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0462		"	0.0397		116	23-173			
Surrogate: Toluene-d8	0.0415		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	21-167			

**LCS Dup (3031510-BSD1)**

Prepared: 03/15/13 Analyzed: 03/16/13

Benzene	0.110	0.0050	mg/kg	0.100		110	58-130	5.50	13	
Toluene	0.120	0.0050	"	0.100		120	61-134	6.02	16	
Ethylbenzene	0.134	0.0050	"	0.100		134	74-139	5.01	12	
m,p-Xylene	0.262	0.010	"	0.200		131	73-137	3.61	14	
o-Xylene	0.130	0.0050	"	0.100		130	73-141	4.85	12	
Surrogate: 1,2-Dichloroethane-d4	0.0455		"	0.0397		115	23-173			
Surrogate: Toluene-d8	0.0418		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	21-167			

**Matrix Spike (3031510-MS1)**

Source: R303083-01

Prepared: 03/15/13 Analyzed: 03/16/13

Benzene	0.102	0.0050	mg/kg	0.100	ND	102	30-131			
Toluene	0.109	0.0050	"	0.100	ND	109	30-134			
Ethylbenzene	0.124	0.0050	"	0.100	ND	124	22-153			
m,p-Xylene	0.246	0.010	"	0.200	ND	123	10-159			
o-Xylene	0.119	0.0050	"	0.100	ND	119	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0451		"	0.0397		114	23-173			
Surrogate: Toluene-d8	0.0410		"	0.0400		103	20-170			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.7	21-167			

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/24/13 08:28

**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 3031510 - EPA 5030 Soil MS**

Matrix Spike Dup (3031510-MSD1)	Source: R303083-01			Prepared: 03/15/13	Analyzed: 03/16/13				
Benzene	0.104	0.0050	mg/kg	0.100	ND	104	30-131	1.31	34
Toluene	0.112	0.0050	"	0.100	ND	112	30-134	2.87	30
Ethylbenzene	0.127	0.0050	"	0.100	ND	127	22-153	2.80	24
m,p-Xylene	0.248	0.010	"	0.200	ND	124	10-159	0.741	68
o-Xylene	0.123	0.0050	"	0.100	ND	123	31-151	3.37	38
Surrogate: 1,2-Dichloroethane-d4	0.0471		"	0.0397		119	23-173		
Surrogate: Toluene-d8	0.0405		"	0.0400		101	20-170		
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.4	21-167		

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

**Reported:**  
04/24/13 08:28

### Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- 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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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 19, 2013

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

RE: KMG - Helgoth Heirs Unit #1

Enclosed are the results of analyses for samples received by Summit Scientific on 04/03/13 16:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV For Ben Shrewsbury  
President / Laboratory Manager

This report shall not be reproduced, except in its entirety, without the written approval of Summit Scientific. Test results relate only to samples analyzed.

Summit Scientific is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB12@16.5'	R304029-01	Soil	04/03/13 09:46	04/03/13 16:45
SB13@23'	R304029-02	Soil	04/03/13 11:01	04/03/13 16:45
SB14@14'	R304029-03	Soil	04/03/13 12:30	04/03/13 16:45
SB13	R304029-04	Water	04/03/13 14:05	04/03/13 16:45
SB15@23'	R304029-06	Soil	04/03/13 13:30	04/03/13 16:45
SB16@24.5'	R304029-07	Soil	04/03/13 15:24	04/03/13 16:45

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

**SB12@16.5'**  
**R304029-01 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 04/03/13 09:46

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3040307	04/03/13	04/04/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 04/03/13 09:46

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		108 %	30-150		"	"	"	"	

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

Date Sampled: 04/03/13 09:46

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3040306	04/03/13	04/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 04/03/13 09:46

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.2 %	21-167		"	"	"	"	

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

**SB13@23'**  
**R304029-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 04/03/13 11:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	170	50	mg/kg	1	3040307	04/03/13	04/04/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 04/03/13 11:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		112 %	30-150		"	"	"	"	

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

Date Sampled: 04/03/13 11:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3040306	04/03/13	04/04/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.031	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.11	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	26	0.50	"	"	"	"	"	"	

Date Sampled: 04/03/13 11:01

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		113 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.5 %	21-167		"	"	"	"	

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

**SB14@14'**  
**R304029-03 (Soil)**

Summit Scientific

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 04/03/13 12:30

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3040307	04/03/13	04/04/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 04/03/13 12:30

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: <i>o</i> -Terphenyl		95.4 %	30-150	"	"	"	"	"	

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

Date Sampled: 04/03/13 12:30

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0050	mg/kg	1	3040306	04/03/13	04/04/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	<b>0.032</b>	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	<b>8.6</b>	0.50	"	"	"	"	"	"	

Date Sampled: 04/03/13 12:30

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173	"	"	"	"	"	
Surrogate: Toluene-d8		97.2 %	20-170	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	21-167	"	"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

**SB13**  
**R304029-04 (Water)**

Summit Scientific

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

Date Sampled: 04/03/13 14:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	3040305	04/03/13	04/03/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	4.6	1.0	"	"	"	"	"	"	
Xylenes (total)	15	1.0	"	"	"	"	"	"	

Date Sampled: 04/03/13 14:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		103 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.5 %	45-146		"	"	"	"	

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

**SB15@23'**  
**R304029-06 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 04/03/13 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	910	50	mg/kg	1	3040307	04/03/13	04/04/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 04/03/13 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		93.4 %	30-150		"	"	"	"	

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

Date Sampled: 04/03/13 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3040306	04/03/13	04/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	6.3	0.050	"	10	"	"	"	"	
Gasoline Range Hydrocarbons	280	5.0	"	"	"	"	"	"	

Date Sampled: 04/03/13 13:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		124 %	21-167		"	"	"	"	

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

**SB16@24.5'**  
**R304029-07 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 04/03/13 15:24

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3040307	04/03/13	04/04/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 04/03/13 15:24

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		92.8 %	30-150		"	"	"	"	

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

Date Sampled: 04/03/13 15:24

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3040306	04/03/13	04/03/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 04/03/13 15:24

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		112 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		96.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.2 %	21-167		"	"	"	"	

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.

S<sub>2</sub>

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		
<b>Batch 3040307 - EPA 3550A</b>											
<b>Blank (3040307-BLK1)</b> Prepared: 04/03/13 Analyzed: 04/04/13											
C10-C28 (TEPH-DRO)	ND	50	mg/kg								
C28-C36 (TEPH-ORO)	ND	50	"								
<b>Blank (3040307-BLK2)</b> Prepared: 04/03/13 Analyzed: 04/04/13											
C10-C28 (TEPH-DRO)	ND	50	mg/kg								
C28-C36 (TEPH-ORO)	ND	50	"								
<b>LCS (3040307-BS1)</b> Prepared: 04/03/13 Analyzed: 04/04/13											
C10-C28 (TEPH-DRO)	573	50	mg/kg	501	114	73-134					
<b>LCS (3040307-BS2)</b> Prepared: 04/03/13 Analyzed: 04/04/13											
C10-C28 (TEPH-DRO)	505	50	mg/kg	501	101	73-134					
<b>LCS Dup (3040307-BSD1)</b> Prepared: 04/03/13 Analyzed: 04/04/13											
C10-C28 (TEPH-DRO)	559	50	mg/kg	501	112	73-134	2.51	11			
<b>LCS Dup (3040307-BSD2)</b> Prepared: 04/03/13 Analyzed: 04/04/13											
C10-C28 (TEPH-DRO)	552	50	mg/kg	501	110	73-134	8.77	11			
<b>Matrix Spike (3040307-MS1)</b> Source: R304031-01 Prepared: 04/03/13 Analyzed: 04/04/13											
C10-C28 (TEPH-DRO)	909	50	mg/kg	501	283	125	50-148				
<b>Matrix Spike (3040307-MS2)</b> Source: R304031-02 Prepared: 04/03/13 Analyzed: 04/04/13											
C10-C28 (TEPH-DRO)	584	50	mg/kg	501	ND	117	50-148				
<b>Matrix Spike Dup (3040307-MSD1)</b> Source: R304031-01 Prepared: 04/03/13 Analyzed: 04/04/13											
C10-C28 (TEPH-DRO)	888	50	mg/kg	501	283	121	50-148	2.42	13		

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 3040307 - EPA 3550A**

**Matrix Spike Dup (3040307-MSD2)**

**Source: R304031-02**

Prepared: 04/03/13

Analyzed: 04/04/13

C10-C28 (TEPH-DRO)	580	50	mg/kg	501	ND	116	50-148	0.781	13
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LT Environmental, Inc.  
4600 West 60th Avenue  
Arvada CO, 80003

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

**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 3040305 - EPA 5030 Water MS**

**Blank (3040305-BLK1)**

Prepared: 04/03/13 Analyzed: 04/04/13

Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	1.0	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.7</i>		<i>"</i>	<i>13.2</i>		<i>96.0</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>99.3</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>		<i>96.8</i>	<i>45-146</i>				

**LCS (3040305-BS1)**

Prepared: 04/03/13 Analyzed: 04/04/13

Benzene	21.2	1.0	ug/l	33.3		63.5	51-132				
Toluene	23.0	1.0	"	33.3		69.1	51-138				
Ethylbenzene	24.5	1.0	"	33.3		73.5	58-146				
m,p-Xylene	49.4	2.0	"	66.7		74.1	57-144				
o-Xylene	24.0	1.0	"	33.3		71.9	53-146				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.1</i>		<i>"</i>	<i>13.2</i>		<i>98.7</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>13.4</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>100</i>	<i>45-146</i>				

**LCS Dup (3040305-BSD1)**

Prepared: 04/03/13 Analyzed: 04/04/13

Benzene	19.8	1.0	ug/l	33.3		59.3	51-132	6.84	17		
Toluene	21.5	1.0	"	33.3		64.4	51-138	7.05	17		
Ethylbenzene	23.2	1.0	"	33.3		69.6	58-146	5.49	16		
m,p-Xylene	46.5	2.0	"	66.7		69.7	57-144	6.09	16		
o-Xylene	22.7	1.0	"	33.3		68.2	53-146	5.31	15		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.2</i>		<i>"</i>	<i>13.2</i>		<i>92.2</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>99.5</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.6</i>		<i>"</i>	<i>13.3</i>		<i>94.2</i>	<i>45-146</i>				

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

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

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

**Batch 3040305 - EPA 5030 Water MS**

Matrix Spike (3040305-MS1)	Source: R304007-05			Prepared: 04/03/13	Analyzed: 04/04/13
Benzene	23.1	1.0	ug/l	33.3	ND 69.3 34-141
Toluene	25.3	1.0	"	33.3	ND 75.9 27-151
Ethylbenzene	26.9	1.0	"	33.3	ND 80.8 29-160
m,p-Xylene	54.7	2.0	"	66.7	ND 82.1 20-166
o-Xylene	26.2	1.0	"	33.3	ND 78.7 33-159
Surrogate: 1,2-Dichloroethane-d4	13.0		"	13.2	98.6 37-154
Surrogate: Toluene-d8	13.5		"	13.3	101 45-149
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3	94.1 45-146

Matrix Spike Dup (3040305-MSD1)	Source: R304007-05			Prepared: 04/03/13	Analyzed: 04/04/13
Benzene	22.6	1.0	ug/l	33.3	ND 67.8 34-141 2.10 32
Toluene	24.7	1.0	"	33.3	ND 74.1 27-151 2.44 25
Ethylbenzene	27.1	1.0	"	33.3	ND 81.4 29-160 0.740 50
m,p-Xylene	54.2	2.0	"	66.7	ND 81.2 20-166 1.05 36
o-Xylene	26.3	1.0	"	33.3	ND 78.9 33-159 0.305 26
Surrogate: 1,2-Dichloroethane-d4	12.3		"	13.2	92.9 37-154
Surrogate: Toluene-d8	13.2		"	13.3	98.9 45-149
Surrogate: 4-Bromofluorobenzene	12.5		"	13.3	94.1 45-146

**Batch 3040306 - EPA 5030 Soil MS**

Blank (3040306-BLK1)	Prepared: 04/03/13 Analyzed: 04/04/13				
Benzene	ND	0.0050	mg/kg		
Toluene	ND	0.0050	"		
Ethylbenzene	ND	0.0050	"		
Xylenes (total)	ND	0.0050	"		
Gasoline Range Hydrocarbons	ND	0.50	"		
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0397	107 23-173
Surrogate: Toluene-d8	0.0372		"	0.0400	93.0 20-170
Surrogate: 4-Bromofluorobenzene	0.0409		"	0.0400	102 21-167

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

### 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		

#### Batch 3040306 - EPA 5030 Soil MS

##### LCS (3040306-BS1)

Prepared: 04/03/13 Analyzed: 04/04/13

Benzene	0.0820	0.0050	mg/kg	0.100		82.0	58-130		
Toluene	0.0928	0.0050	"	0.100		92.8	61-134		
Ethylbenzene	0.118	0.0050	"	0.100		118	74-139		
m,p-Xylene	0.226	0.010	"	0.200		113	73-137		
o-Xylene	0.113	0.0050	"	0.100		113	73-141		
Surrogate: 1,2-Dichloroethane-d4	0.0421		"	0.0397		106	23-173		
Surrogate: Toluene-d8	0.0386		"	0.0400		96.6	20-170		
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	21-167		

##### LCS Dup (3040306-BSD1)

Prepared: 04/03/13 Analyzed: 04/04/13

Benzene	0.0783	0.0050	mg/kg	0.100		78.3	58-130	4.64	13
Toluene	0.0899	0.0050	"	0.100		89.9	61-134	3.12	16
Ethylbenzene	0.120	0.0050	"	0.100		120	74-139	1.76	12
m,p-Xylene	0.230	0.010	"	0.200		115	73-137	1.70	14
o-Xylene	0.117	0.0050	"	0.100		117	73-141	3.26	12
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0397		102	23-173		
Surrogate: Toluene-d8	0.0366		"	0.0400		91.6	20-170		
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	21-167		

##### Matrix Spike (3040306-MS1)

Source: R304031-01

Prepared: 04/03/13 Analyzed: 04/04/13

Benzene	0.0806	0.0050	mg/kg	0.100	ND	80.6	30-131		
Toluene	0.0920	0.0050	"	0.100	ND	92.0	30-134		
Ethylbenzene	0.120	0.0050	"	0.100	ND	120	22-153		
m,p-Xylene	0.236	0.010	"	0.200	0.0100	113	10-159		
o-Xylene	0.123	0.0050	"	0.100	0.00900	114	31-151		
Surrogate: 1,2-Dichloroethane-d4	0.0439		"	0.0397		111	23-173		
Surrogate: Toluene-d8	0.0381		"	0.0400		95.2	20-170		
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.0	21-167		

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

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

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

**Batch 3040306 - EPA 5030 Soil MS**

**Matrix Spike Dup (3040306-MSD1)**

**Source: R304031-01**

Prepared: 04/03/13 Analyzed: 04/04/13

Benzene	0.0825	0.0050	mg/kg	0.100	ND	82.5	30-131	2.43	34
Toluene	0.0938	0.0050	"	0.100	ND	93.8	30-134	1.94	30
Ethylbenzene	0.120	0.0050	"	0.100	ND	120	22-153	0.251	24
m,p-Xylene	0.237	0.010	"	0.200	0.0100	113	10-159	0.241	68
o-Xylene	0.124	0.0050	"	0.100	0.00900	115	31-151	1.09	38
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0434</i>		<i>"</i>	<i>0.0397</i>		<i>109</i>	<i>23-173</i>		
<i>Surrogate: Toluene-d8</i>	<i>0.0377</i>		<i>"</i>	<i>0.0400</i>		<i>94.3</i>	<i>20-170</i>		
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0415</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>21-167</i>		

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/19/13 16:29

### 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

---

Summit Scientific

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# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 05, 2013

John Cocroft

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: KMG - Helgoth Heirs Unit #1

Enclosed are the results of analyses for samples received by Summit Scientific on 04/04/13 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury  
President / Laboratory Manager

S<sub>2</sub>

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/05/13 07:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB15	R304056-01	Water	04/04/13 10:05	04/04/13 16:00
SB17@21'	R304056-02	Soil	04/04/13 10:30	04/04/13 16:00

Summit Scientific



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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/05/13 07:37

**SB15**  
**R304056-01 (Water)**

**Summit Scientific**

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

Date Sampled: 04/04/13 10:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	7.2	1.0	ug/l	1	3040210	04/04/13	04/04/13	EPA 8260B	
Toluene	1.3	1.0	"	"	"	"	"	"	
Ethylbenzene	22	1.0	"	"	"	"	"	"	
Xylenes (total)	700	1.0	"	"	"	"	"	"	

Date Sampled: 04/04/13 10:05

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		104 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.1 %	45-146		"	"	"	"	

Summit Scientific



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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/05/13 07:37

**SB17@21'**  
**R304056-02 (Soil)**

**Summit Scientific**

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: 04/04/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (TEPH-DRO)	ND	50	mg/kg	1	3040402	04/04/13	04/04/13	8015 Full Carbon Chain	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: 04/04/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		93.4 %	30-150		"	"	"	"	

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

Date Sampled: 04/04/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0050	mg/kg	1	3040414	04/04/13	04/04/13	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 04/04/13 10:30

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		95.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.1 %	21-167		"	"	"	"	

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/05/13 07:37

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch 3040402 - EPA 3550A**

**Blank (3040402-BLK1)**

Prepared: 04/04/13 Analyzed: 04/05/13

C10-C28 (TEPH-DRO)	ND	50	mg/kg						
C28-C36 (TEPH-ORO)	ND	50	"						

**LCS (3040402-BS1)**

Prepared: 04/04/13 Analyzed: 04/05/13

C10-C28 (TEPH-DRO)	570	50	mg/kg	501	114	73-134			
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**LCS Dup (3040402-BS1)**

Prepared: 04/04/13 Analyzed: 04/05/13

C10-C28 (TEPH-DRO)	551	50	mg/kg	501	110	73-134	3.31	11	
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**Matrix Spike (3040402-MS1)**

Source: R304026-05

Prepared: 04/04/13 Analyzed: 04/05/13

C10-C28 (TEPH-DRO)	597	50	mg/kg	501	119	50-148			
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**Matrix Spike Dup (3040402-MS1)**

Source: R304026-05

Prepared: 04/04/13 Analyzed: 04/05/13

C10-C28 (TEPH-DRO)	582	50	mg/kg	501	116	50-148	2.60	13	
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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.

S<sub>2</sub>

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/05/13 07:37

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

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

**Batch 3040210 - EPA 5030 Water MS**

**Blank (3040210-BLK1)**

Prepared & Analyzed: 04/02/13

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	1.0	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.1</i>		<i>"</i>	<i>13.2</i>	<i>99.1</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>13.1</i>		<i>"</i>	<i>13.3</i>	<i>98.1</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>14.1</i>		<i>"</i>	<i>13.3</i>	<i>106</i>	<i>45-146</i>				

**LCS (3040210-BS1)**

Prepared & Analyzed: 04/02/13

Benzene	30.0	1.0	ug/l	33.3	90.0	51-132				
Toluene	33.7	1.0	"	33.3	101	51-138				
Ethylbenzene	40.7	1.0	"	33.3	122	58-146				
m,p-Xylene	78.7	2.0	"	66.7	118	57-144				
o-Xylene	39.1	1.0	"	33.3	117	53-146				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.5</i>		<i>"</i>	<i>13.2</i>	<i>102</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>	<i>96.6</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>	<i>102</i>	<i>45-146</i>				

**LCS Dup (3040210-BSD1)**

Prepared & Analyzed: 04/02/13

Benzene	28.3	1.0	ug/l	33.3	84.8	51-132	5.87	17		
Toluene	32.3	1.0	"	33.3	96.8	51-138	4.25	17		
Ethylbenzene	41.5	1.0	"	33.3	124	58-146	1.85	16		
m,p-Xylene	79.5	2.0	"	66.7	119	57-144	1.11	16		
o-Xylene	39.2	1.0	"	33.3	117	53-146	0.230	15		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.5</i>		<i>"</i>	<i>13.2</i>	<i>94.4</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>	<i>96.8</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.4</i>		<i>"</i>	<i>13.3</i>	<i>101</i>	<i>45-146</i>				

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/05/13 07:37

**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 3040210 - EPA 5030 Water MS**

<b>Matrix Spike (3040210-MS1)</b>	<b>Source: R304004-04</b>			<b>Prepared &amp; Analyzed: 04/02/13</b>						
Benzene	29.9	1.0	ug/l	33.3	ND	89.6	34-141			
Toluene	34.7	1.0	"	33.3	ND	104	27-151			
Ethylbenzene	41.2	1.0	"	33.3	ND	124	29-160			
m,p-Xylene	79.3	2.0	"	66.7	ND	119	20-166			
o-Xylene	39.7	1.0	"	33.3	ND	119	33-159			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.0</i>		<i>"</i>	<i>13.2</i>		<i>98.5</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>12.8</i>		<i>"</i>	<i>13.3</i>		<i>95.6</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.4</i>		<i>"</i>	<i>13.3</i>		<i>101</i>	<i>45-146</i>			

<b>Matrix Spike Dup (3040210-MSD1)</b>	<b>Source: R304004-04</b>			<b>Prepared &amp; Analyzed: 04/02/13</b>						
Benzene	29.0	1.0	ug/l	33.3	ND	87.1	34-141	2.89	32	
Toluene	32.6	1.0	"	33.3	ND	97.9	27-151	6.06	25	
Ethylbenzene	40.8	1.0	"	33.3	ND	122	29-160	1.05	50	
m,p-Xylene	78.4	2.0	"	66.7	ND	118	20-166	1.12	36	
o-Xylene	39.7	1.0	"	33.3	ND	119	33-159	0.0504	26	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.0</i>		<i>"</i>	<i>13.2</i>		<i>98.5</i>	<i>37-154</i>			
<i>Surrogate: Toluene-d8</i>	<i>12.6</i>		<i>"</i>	<i>13.3</i>		<i>94.6</i>	<i>45-149</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.7</i>		<i>"</i>	<i>13.3</i>		<i>103</i>	<i>45-146</i>			

**Batch 3040414 - EPA 5030 Soil MS**

<b>Blank (3040414-BLK1)</b>	<b>Prepared &amp; Analyzed: 04/04/13</b>									
Benzene	ND	0.0050	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0404</i>		<i>"</i>	<i>0.0397</i>		<i>102</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0389</i>		<i>"</i>	<i>0.0400</i>		<i>97.3</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0413</i>		<i>"</i>	<i>0.0400</i>		<i>103</i>	<i>21-167</i>			

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/05/13 07:37

**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 3040414 - EPA 5030 Soil MS**

LCS (3040414-BS1)				Prepared & Analyzed: 04/04/13						
Benzene	0.136	0.0050	mg/kg	0.150		90.7	58-130			
Toluene	0.135	0.0050	"	0.150		89.7	61-134			
Ethylbenzene	0.157	0.0050	"	0.150		105	74-139			
m,p-Xylene	0.318	0.010	"	0.300		106	73-137			
o-Xylene	0.150	0.0050	"	0.150		100	73-141			
Surrogate: 1,2-Dichloroethane-d4	0.0384		"	0.0397		96.8	23-173			
Surrogate: Toluene-d8	0.0373		"	0.0400		93.3	20-170			
Surrogate: 4-Bromofluorobenzene	0.0384		"	0.0400		96.0	21-167			

LCS Dup (3040414-BSD1)				Prepared & Analyzed: 04/04/13						
Benzene	0.153	0.0050	mg/kg	0.150	ND	102	58-130	12.0	13	
Toluene	0.152	0.0050	"	0.150	ND	101	61-134	11.8	16	
Ethylbenzene	0.155	0.0050	"	0.150	ND	103	74-139	1.42	12	
m,p-Xylene	0.310	0.010	"	0.300	ND	103	73-137	2.53	14	
o-Xylene	0.154	0.0050	"	0.150	ND	103	73-141	2.92	12	
Surrogate: 1,2-Dichloroethane-d4	0.0427		"	0.0397		108	23-173			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0422		"	0.0400		105	21-167			

Matrix Spike (3040414-MS1)				Source: R304052-01		Prepared & Analyzed: 04/04/13				
Benzene	0.123	0.0050	mg/kg	0.150	ND	81.7	30-131			
Toluene	0.118	0.0050	"	0.150	ND	78.8	30-134			
Ethylbenzene	0.120	0.0050	"	0.150	ND	79.9	22-153			
m,p-Xylene	0.240	0.010	"	0.300	ND	79.9	10-159			
o-Xylene	0.123	0.0050	"	0.150	ND	81.7	31-151			
Surrogate: 1,2-Dichloroethane-d4	0.0475		"	0.0397		120	23-173			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	21-167			

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/05/13 07:37

**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	

**Batch 3040414 - EPA 5030 Soil MS**

Matrix Spike Dup (3040414-MSD1)	Source: R304052-01			Prepared & Analyzed: 04/04/13					
Benzene	0.117	0.0050	mg/kg	0.150	ND	77.8	30-131	4.84	34
Toluene	0.113	0.0050	"	0.150	ND	75.1	30-134	4.83	30
Ethylbenzene	0.114	0.0050	"	0.150	ND	75.8	22-153	5.29	24
m,p-Xylene	0.226	0.010	"	0.300	ND	75.5	10-159	5.63	68
o-Xylene	0.116	0.0050	"	0.150	ND	77.3	31-151	5.48	38
Surrogate: 1,2-Dichloroethane-d4	0.0456		"	0.0397		115	23-173		
Surrogate: Toluene-d8	0.0406		"	0.0400		102	20-170		
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	21-167		

Summit Scientific



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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053.003  
Project Manager: John Cocroft

Reported:  
04/05/13 07:37

### 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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Summit Scientific



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# Summit Scientific

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741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

April 11, 2013

John Cocroft

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: KMG - Helgoth Heirs Unit #1

Enclosed are the results of analyses for samples received by Summit Scientific on 04/08/13 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Joseph J Egry IV For Ben Shrewsbury

President / Laboratory Manager

This report shall not be reproduced, except in its entirety, without the written approval of Summit Scientific. Test results relate only to samples analyzed.

Summit Scientific is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.



S<sub>2</sub>

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

Project: KMG - Helgoth Heirs Unit #1  
Project Number: 0142-13053  
Project Manager: John Cocroft

Reported:  
04/11/13 09:07

**SB16 GW**  
**R304084-01 (Water)**

**Summit Scientific**

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

Date Sampled: 04/08/13 11:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	1.0	ug/l	1	3040814	04/09/13	04/10/13	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	1.0	"	"	"	"	"	"	

Date Sampled: 04/08/13 11:50

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		105 %	37-154		"	"	"	"	
Surrogate: Toluene-d8		96.0 %	45-149		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	45-146		"	"	"	"	

Summit Scientific

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053  
Project Manager: John Cocroft

Reported:  
04/11/13 09:07

**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 3040814 - EPA 5030 Water MS**

**Blank (3040814-BLK1)**

Prepared: 04/08/13 Analyzed: 04/09/13

Benzene	ND	1.0	ug/l								
Toluene	ND	1.0	"								
Ethylbenzene	ND	1.0	"								
Xylenes (total)	ND	1.0	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>11.4</i>		<i>"</i>	<i>13.2</i>		<i>85.8</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>12.6</i>		<i>"</i>	<i>13.3</i>		<i>94.8</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.8</i>		<i>"</i>	<i>13.3</i>		<i>103</i>	<i>45-146</i>				

**LCS (3040814-BS1)**

Prepared: 04/08/13 Analyzed: 04/09/13

Benzene	18.6	1.0	ug/l	33.3		55.7	51-132				
Toluene	19.8	1.0	"	33.3		59.3	51-138				
Ethylbenzene	22.0	1.0	"	33.3		66.1	58-146				
m,p-Xylene	44.1	2.0	"	66.7		66.1	57-144				
o-Xylene	22.3	1.0	"	33.3		66.9	53-146				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.6</i>		<i>"</i>	<i>13.2</i>		<i>103</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>12.0</i>		<i>"</i>	<i>13.3</i>		<i>89.7</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>17.5</i>		<i>"</i>	<i>13.3</i>		<i>131</i>	<i>45-146</i>				

**LCS Dup (3040814-BSD1)**

Prepared: 04/08/13 Analyzed: 04/09/13

Benzene	19.6	1.0	ug/l	33.3		58.8	51-132	5.40		17	
Toluene	20.2	1.0	"	33.3		60.5	51-138	1.90		17	
Ethylbenzene	23.2	1.0	"	33.3		69.7	58-146	5.31		16	
m,p-Xylene	38.4	2.0	"	66.7		57.6	57-144	13.7		16	
o-Xylene	21.2	1.0	"	33.3		63.5	53-146	5.25		15	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>16.7</i>		<i>"</i>	<i>13.2</i>		<i>126</i>	<i>37-154</i>				
<i>Surrogate: Toluene-d8</i>	<i>10.5</i>		<i>"</i>	<i>13.3</i>		<i>78.9</i>	<i>45-149</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>99.4</i>	<i>45-146</i>				

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053  
Project Manager: John Cocroft

Reported:  
04/11/13 09:07

**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 3040814 - EPA 5030 Water MS**

<b>Matrix Spike (3040814-MS1)</b>		<b>Source: R304066-01</b>			Prepared: 04/08/13		Analyzed: 04/09/13	
Benzene	20.0	1.0	ug/l	33.3	ND	60.0	34-141	
Toluene	19.1	1.0	"	33.3	ND	57.3	27-151	
Ethylbenzene	22.8	1.0	"	33.3	ND	68.4	29-160	
m,p-Xylene	45.1	2.0	"	66.7	ND	67.6	20-166	
o-Xylene	21.9	1.0	"	33.3	ND	65.7	33-159	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.3</i>		<i>"</i>	<i>13.2</i>		<i>100</i>	<i>37-154</i>	
<i>Surrogate: Toluene-d8</i>	<i>11.7</i>		<i>"</i>	<i>13.3</i>		<i>87.8</i>	<i>45-149</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>		<i>96.7</i>	<i>45-146</i>	
<b>Matrix Spike Dup (3040814-MSD1)</b>		<b>Source: R304066-01</b>			Prepared: 04/08/13		Analyzed: 04/09/13	
Benzene	20.5	1.0	ug/l	33.3	ND	61.4	34-141	2.32 32
Toluene	20.8	1.0	"	33.3	ND	62.3	27-151	8.32 25
Ethylbenzene	24.1	1.0	"	33.3	ND	72.4	29-160	5.63 50
m,p-Xylene	47.8	2.0	"	66.7	ND	71.7	20-166	5.77 36
o-Xylene	22.9	1.0	"	33.3	ND	68.6	33-159	4.38 26
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>14.0</i>		<i>"</i>	<i>13.2</i>		<i>106</i>	<i>37-154</i>	
<i>Surrogate: Toluene-d8</i>	<i>12.7</i>		<i>"</i>	<i>13.3</i>		<i>95.2</i>	<i>45-149</i>	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.0</i>		<i>"</i>	<i>13.3</i>		<i>97.9</i>	<i>45-146</i>	

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.*

S<sub>2</sub>

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

Project: KMG - Helgoth Heirs Unit #1

Project Number: 0142-13053  
Project Manager: John Cocroft

Reported:  
04/11/13 09:07

### 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



January 22, 2014

Tasman Geosciences  
Paul Schnieder  
6899 Pecos Street, Unit C  
Denver CO 80211

Project Name - KMG - Helgoth Heirs 1

Project Number - AFE 2086239.EHS

Attached are your analytical results for KMG - Helgoth Heirs 1 received by Origins Laboratory, Inc. January 14, 2014. This project is associated with Origins project number X401124-01.

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



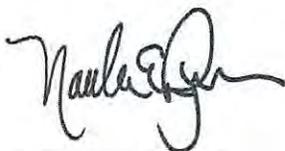
Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Paul Schnieder  
Project Number: AFE 2086239.EHS  
Project: KMG - Helgoth Heirs 1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SB07	X401124-01	Water	January 13, 2014 11:50	01/14/2014 09:04
SB13	X401124-02	Water	January 13, 2014 14:45	01/14/2014 09:04
SB10	X401124-03	Water	January 13, 2014 15:15	01/14/2014 09:04
SB21	X401124-04	Water	January 13, 2014 15:45	01/14/2014 09:04
SB20	X401124-05	Water	January 13, 2014 15:50	01/14/2014 09:04
SB19	X401124-06	Water	January 13, 2014 15:55	01/14/2014 09:04
SB18	X401124-07	Water	January 13, 2014 16:00	01/14/2014 09:04
SB24	X401124-08	Water	January 13, 2014 16:05	01/14/2014 09:04

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 Denver CO 80211

Paul Schnieder  
 Project Number: AFE 2086239.EHS  
 Project: KMG - Helgoth Heirs 1

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: X401124

Client: Tasman

Client Project ID: Helgoth Heirs 1

Checklist Completed by: Jeff Smith

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

Date/Time Completed: 1/14/14 10:14

Airbill #: N/A

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

Cooler Number/Temperature: 1 153 °C 1 °C 1 °C 1 °C (Describe)

Thermometer ID: 1002

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	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 <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	X			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	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 <sup>(1)</sup> ? (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			HCL
Additional Comments (if any).				

<sup>(1)</sup>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): [Signature]

Date/Time Reviewed: 1-21-14 10:10

Origins Laboratory, Inc.

[Signature]

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Paul Schnieder  
 Project Number: AFE 2086239.EHS  
 Project: KMG - Helgoth Heirs 1

**SB07**

1/13/2014 11:50:00AM

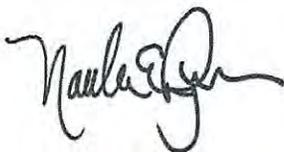
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 X401124-01 (Water)

**BTEX by EPA 8260C**

Benzene	0.0153	0.0040	mg/L	4	4A16008	01/16/2014	01/17/2014	
Toluene	ND	0.0040	"	"	"	"	"	
Ethylbenzene	ND	0.0040	"	"	"	"	"	
Xylenes, total	0.0542	0.0040	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	97.1 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	102 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	99.6 %	84-114			"	"	"	

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Paul Schnieder  
 Project Number: AFE 2086239.EHS  
 Project: KMG - Helgoth Heirs 1

SB13  
 1/13/2014 2:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X401124-02 (Water)

**BTEX by EPA 8260C**

Benzene	0.0287	0.0040	mg/L	4	4A16008	01/16/2014	01/17/2014	
Toluene	ND	0.0040	"	"	"	"	"	
Ethylbenzene	ND	0.0040	"	"	"	"	"	
Xylenes, total	ND	0.0040	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	98.1 %	84-121			"	"	"	
Surrogate: Toluene-d8	102 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.2 %	84-114			"	"	"	

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 Denver CO 80211

Paul Schnieder  
 Project Number: AFE 2086239.EHS  
 Project: KMG - Helgoth Heirs 1

SB10  
 1/13/2014 3:15:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
 X401124-03 (Water)

**BTEX by EPA 8260C**

Benzene	ND	0.0040	mg/L	4	4A16008	01/16/2014	01/17/2014	
Toluene	ND	0.0040	"	"	"	"	"	
Ethylbenzene	ND	0.0040	"	"	"	"	"	
Xylenes, total	ND	0.0040	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	97.9 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	101 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	98.6 %	84-114			"	"	"	

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Denver CO 80211

Paul Schnieder  
Project Number: AFE 2086239.EHS  
Project: KMG - Helgoth Heirs 1

SB21  
1/13/2014 3:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
X401124-04 (Water)

**BTEX by EPA 8260C**

Benzene	1.6	0.100	mg/L	100	4A16008	01/16/2014	01/20/2014	
Toluene	4.37	0.100	"	"	"	"	"	
Ethylbenzene	0.342	0.0040	"	4	"	"	01/17/2014	
Xylenes, total	6.17	0.100	"	100	"	"	01/20/2014	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	96.1 %	84-121			"	"	01/17/2014	
<i>Surrogate: Toluene-d8</i>	104 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	97.6 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Paul Schnieder  
Project Number: AFE 2086239.EHS  
Project: KMG - Helgoth Heirs 1

SB20  
1/13/2014 3:50:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X401124-05 (Water)

**BTEX by EPA 8260C**

Benzene	0.489	0.0040	mg/L	4	4A16008	01/16/2014	01/17/2014	
Toluene	0.250	0.0040	"	"	"	"	"	
Ethylbenzene	0.102	0.0040	"	"	"	"	"	
Xylenes, total	0.886	0.0040	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	98.1 %	84-121			"	"	"	
Surrogate: Toluene-d8	102 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.8 %	84-114			"	"	"	

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Project: KMG - Helgoth Heirs 1

SB19  
1/13/2014 3:55:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X401124-06 (Water)

**BTEX by EPA 8260C**

Benzene	2.4	0.0200	mg/L	20	4A16008	01/16/2014	01/20/2014	
Toluene	0.483	0.0040	"	4	"	"	01/17/2014	
Ethylbenzene	0.344	0.0040	"	"	"	"	"	
Xylenes, total	6.42	0.0200	"	20	"	"	01/20/2014	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	96.0 %	84-121			"	"	01/17/2014	
<i>Surrogate: Toluene-d8</i>	103 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	97.8 %	84-114			"	"	"	

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Project: KMG - Helgoth Heirs 1

SB18  
1/13/2014 4:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
X401124-07 (Water)

**BTEX by EPA 8260C**

Benzene	0.0082	0.0040	mg/L	4	4A16008	01/16/2014	01/17/2014	
Toluene	ND	0.0040	"	"	"	"	"	
Ethylbenzene	0.0417	0.0040	"	"	"	"	"	
Xylenes, total	0.0353	0.0040	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>97.1 %</i>	<i>84-121</i>			"	"	"	
<i>Surrogate: Toluene-d8</i>	<i>102 %</i>	<i>85-115</i>			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>97.2 %</i>	<i>84-114</i>			"	"	"	

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 Denver CO 80211

Paul Schnieder  
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 Project: KMG - Helgoth Heirs 1

SB24  
 1/13/2014 4:05:00PM

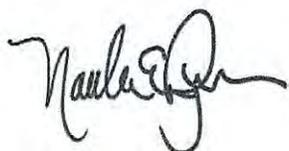
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 X401124-08 (Water)

**BTEX by EPA 8260C**

Benzene	ND	0.0040	mg/L	4	4A16008	01/16/2014	01/17/2014	
Toluene	ND	0.0040	"	"	"	"	"	
Ethylbenzene	0.0065	0.0040	"	"	"	"	"	
Xylenes, total	0.0399	0.0040	"	"	"	"	"	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	97.7 %	84-121			"	"	"	
<i>Surrogate: Toluene-d8</i>	103 %	85-115			"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	98.6 %	84-114			"	"	"	

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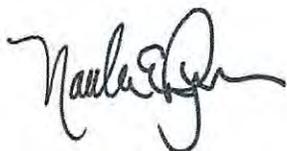
Tasman Geosciences  
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 Denver CO 80211

Paul Schnieder  
 Project Number: AFE 2086239.EHS  
 Project: KMG - Helgoth Heirs 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
<b>Batch 4A16008 - EPA 5030B (Water)</b>										
<b>Blank (4A16008-BLK1)</b>										
					Prepared: 01/16/2014 Analyzed: 01/17/2014					
Benzene	ND	0.001	mg/L							
Toluene	ND	0.001	"							
Ethylbenzene	ND	0.001	"							
Xylenes, total	ND	0.001	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	62		ug/L	62.5		96.7	84-121			
<i>Surrogate: Toluene-d8</i>	63		"	62.5		101	85-115			
<i>Surrogate: 4-Bromofluorobenzene</i>	62		"	62.5		99.7	84-114			

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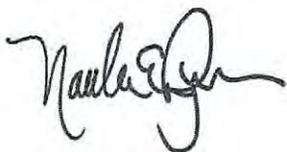
Tasman Geosciences  
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Paul Schnieder  
 Project Number: AFE 2086239.EHS  
 Project: KMG - Helgoth Heirs 1

**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
<b>Batch 4A16008 - EPA 5030B (Water)</b>										
<b>LCS (4A16008-BS1)</b>					Prepared: 01/16/2014 Analyzed: 01/17/2014					
Benzene	0.05	0.001	mg/L	0.0500		103	74-130			
Toluene	0.05	0.001	"	0.0500		106	76-128			
Ethylbenzene	0.06	0.001	"	0.0500		111	78-130			
m,p-Xylene	0.1	0.002	"	0.100		110	75-134			
o-Xylene	0.05	0.001	"	0.0500		104	76-129			
Surrogate: 1,2-Dichloroethane-d4	59		ug/L	62.5		95.1	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.0	84-114			

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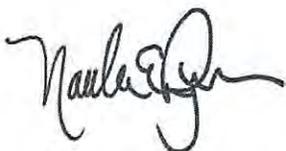
Tasman Geosciences  
 6899 Pecos Street, Unit C  
 Denver CO 80211

Paul Schnieder  
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 Project: KMG - Helgoth Heirs 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
<b>Batch 4A16008 - EPA 5030B (Water)</b>										
<b>Matrix Spike (4A16008-MS1)</b>			<b>Source: X401143-01</b>			<b>Prepared: 01/16/2014 Analyzed: 01/17/2014</b>				
Benzene	0.02	0.001	mg/L	0.0500	0.0003	46.7	74-130			QM-05
Toluene	0.03	0.001	"	0.0500	ND	58.5	73-131			QM-05
Ethylbenzene	0.03	0.001	"	0.0500	ND	60.5	76-132			QM-05
m,p-Xylene	0.06	0.002	"	0.100	ND	60.6	69-139			QM-05
o-Xylene	0.03	0.001	"	0.0500	ND	58.4	74-131			QM-05
Surrogate: 1,2-Dichloroethane-d4	53		ug/L	62.5		84.4	84-121			
Surrogate: Toluene-d8	75		"	62.5		120	85-115			S-01
Surrogate: 4-Bromofluorobenzene	66		"	62.5		106	84-114			

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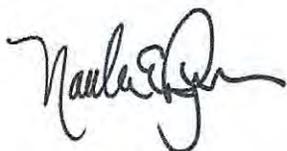
Tasman Geosciences  
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Paul Schnieder  
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**Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4A16008 - EPA 5030B (Water)</b>										
<b>Matrix Spike Dup (4A16008-MSD1)</b>			<b>Source: X401143-01</b>			<b>Prepared: 01/16/2014 Analyzed: 01/17/2014</b>				
Benzene	0.05	0.001	mg/L	0.0500	0.0003	96.6	74-130	69.0	20	QR-03
Toluene	0.05	0.001	"	0.0500	ND	96.7	73-131	49.3	20	QR-03
Ethylbenzene	0.05	0.001	"	0.0500	ND	99.7	76-132	49.0	20	QR-03
m,p-Xylene	0.1	0.002	"	0.100	ND	99.5	69-139	48.6	20	QR-03
o-Xylene	0.05	0.001	"	0.0500	ND	96.6	74-131	49.3	20	QR-03
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>60</i>		<i>ug/L</i>	<i>62.5</i>		<i>95.8</i>	<i>84-127</i>			
<i>Surrogate: Toluene-d8</i>	<i>62</i>		<i>"</i>	<i>62.5</i>		<i>99.5</i>	<i>85-115</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>61</i>		<i>"</i>	<i>62.5</i>		<i>97.9</i>	<i>84-114</i>			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Paul Schnieder  
Project Number: AFE 2086239.EHS  
Project: KMG - Helgoth Heirs 1

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### Notes and Definitions

- S-01 The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference's.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- 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.



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