

# Summit Scientific

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Doc#1943744  
Project 4472

September 09, 2008

John Peterson

LT Environmental, Inc.

4600 West 60th Avenue

Arvada, CO 80003

RE: PDC - Pfenning # 43 & 44-31

Enclosed are the results of analyses for samples received by Summit Scientific on 09/08/08 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Ben Shrewsbury

Vice President / Laboratory Director



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

Project: PDC - Pfenning # 43 & 44-31

Project Number: PDC 08159  
Project Manager: John Peterson

**Reported:**  
09/09/08 08:01

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GW02	R809043-01	Water	09/08/08 14:08	09/08/08 17:00
E02@2'	R809043-02	Soil	09/08/08 13:45	09/08/08 17:00
SP01	R809043-03	Soil	09/08/08 13:55	09/08/08 17:00
SP02	R809043-04	Soil	09/08/08 14:00	09/08/08 17:00

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

Project: PDC - Pfenning # 43 & 44-31

Project Number: PDC 08159  
 Project Manager: John Peterson

**Reported:**  
 09/09/08 08:01

**GW02**  
**R809043-01 (Water)**

**Summit Scientific**

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

Date Sampled: **09/08/08 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Benzene</b>	<b>900</b>	10	ug/l	10	8090806	09/08/08	09/09/08	EPA 8260B	
<b>Toluene</b>	<b>28</b>	1.0	"	1	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>75</b>	1.0	"	"	"	"	"	"	

Date Sampled: **09/08/08 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>		102 %	77.3-121		"	"	"	"	
<i>Surrogate: Toluene-d8</i>		103 %	91.4-107		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		106 %	85.3-109		"	"	"	"	

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**Reported:**  
 09/09/08 08:01

**E02@2'**  
**R809043-02 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **09/08/08 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (GRO)	ND	50	mg/kg	1	8090807	09/08/08	09/08/08	8015 Full Carbon Chain	
C10-C28 (DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	
C6-C36 TPH	ND	50	"	"	"	"	"	"	

Date Sampled: **09/08/08 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		113 %	77.7-123		"	"	"	"	
Surrogate: Trifluorotoluene		97.7 %	73.9-116		"	"	"	"	

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Project: PDC - Pfenning # 43 & 44-31

Project Number: PDC 08159  
 Project Manager: John Peterson

**Reported:**  
 09/09/08 08:01

**SP01**  
**R809043-03 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **09/08/08 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C6-C10 (GRO)</b>	<b>1800</b>	50	mg/kg	1	8090807	09/08/08	09/08/08	8015 Full Carbon Chain	
<b>C10-C28 (DRO)</b>	<b>2300</b>	50	"	"	"	"	"	"	
<b>C28-C36 (ORO)</b>	<b>150</b>	50	"	"	"	"	"	"	
<b>C6-C36 TPH</b>	<b>4200</b>	50	"	"	"	"	"	"	

Date Sampled: **09/08/08 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		304 %	77.7-123		"	"	"	"	S-02
<i>Surrogate: Trifluorotoluene</i>		98.6 %	73.9-116		"	"	"	"	

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Project Number: PDC 08159  
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**Reported:**  
 09/09/08 08:01

**SP02**  
**R809043-04 (Soil)**

**Summit Scientific**

**Total Petroleum Hydrocarbons by 8015**

Date Sampled: **09/08/08 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (GRO)	ND	50	mg/kg	1	8090807	09/08/08	09/08/08	8015 Full Carbon Chain	
C10-C28 (DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	
C6-C36 TPH	ND	50	"	"	"	"	"	"	

Date Sampled: **09/08/08 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		113 %	77.7-123		"	"	"	"	
Surrogate: Trifluorotoluene		98.1 %	73.9-116		"	"	"	"	

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Reported:  
09/09/08 08:01

**Total 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 8090807 - EPA 3550A**

**Blank (8090807-BLK1)**

Prepared: 09/08/08 Analyzed: 09/09/08

C6-C10 (GRO)	ND	50	mg/kg							
C10-C28 (DRO)	ND	50	"							
C28-C36 (ORO)	ND	50	"							
C6-C36 TPH	ND	50	"							

**LCS (8090807-BS1)**

Prepared: 09/08/08 Analyzed: 09/09/08

C10-C28 (DRO)	598	50	mg/kg	500	120	83.3-127				
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**LCS Dup (8090807-BSD1)**

Prepared: 09/08/08 Analyzed: 09/09/08

C10-C28 (DRO)	494	50	mg/kg	500	98.8	83.3-127	19.0	15		
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**Matrix Spike (8090807-MS1)**

Source: R809043-02

Prepared: 09/08/08 Analyzed: 09/09/08

C10-C28 (DRO)	475	50	mg/kg	500	ND	95.0	75.8-126			
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**Matrix Spike Dup (8090807-MSD1)**

Source: R809043-02

Prepared: 09/08/08 Analyzed: 09/09/08

C10-C28 (DRO)	468	50	mg/kg	500	ND	93.6	75.8-126	1.48	13.6	
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09/09/08 08:01

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

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

**Batch 8090806 - EPA 5030 Water MS**

**Blank (8090806-BLK1)**

Prepared & Analyzed: 09/08/08

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>12.9</i>		<i>"</i>	<i>13.3</i>		<i>97.0</i>	<i>77.3-121</i>				
<i>Surrogate: Toluene-d8</i>	<i>12.9</i>		<i>"</i>	<i>13.3</i>		<i>97.0</i>	<i>91.4-107</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>99.2</i>	<i>85.3-109</i>				

**LCS (8090806-BS1)**

Prepared & Analyzed: 09/08/08

Benzene	32.2	1.0	ug/l	33.3		96.7	70-114				
Toluene	32.4	1.0	"	33.3		97.3	72.7-116				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>99.2</i>	<i>77.3-121</i>				
<i>Surrogate: Toluene-d8</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>99.2</i>	<i>91.4-107</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.0</i>		<i>"</i>	<i>13.3</i>		<i>97.7</i>	<i>85.3-109</i>				

**LCS Dup (8090806-BSD1)**

Prepared & Analyzed: 09/08/08

Benzene	31.7	1.0	ug/l	33.3		95.2	70-114	1.56	8.14		
Toluene	31.7	1.0	"	33.3		95.2	72.7-116	2.18	7.88		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>100</i>	<i>77.3-121</i>				
<i>Surrogate: Toluene-d8</i>	<i>12.8</i>		<i>"</i>	<i>13.3</i>		<i>96.2</i>	<i>91.4-107</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.8</i>		<i>"</i>	<i>13.3</i>		<i>96.2</i>	<i>85.3-109</i>				

**Matrix Spike (8090806-MS1)**

Source: R809044-01

Prepared & Analyzed: 09/08/08

Benzene	76.2	1.0	ug/l	33.3	42	103	66.8-117				
Toluene	44.5	1.0	"	33.3	12	97.6	71.5-117				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>77.3-121</i>				
<i>Surrogate: Toluene-d8</i>	<i>13.6</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>91.4-107</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>13.3</i>		<i>"</i>	<i>13.3</i>		<i>100</i>	<i>85.3-109</i>				

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**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
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Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**Batch 8090806 - EPA 5030 Water MS**

<b>Matrix Spike Dup (8090806-MSD1)</b>	<b>Source: R809044-01</b>			<b>Prepared &amp; Analyzed: 09/08/08</b>						
Benzene	55.7	1.0	ug/l	33.3	42	41.1	66.8-117	31.1	17.8	
Toluene	37.0	1.0	"	33.3	12	75.1	71.5-117	18.4	14.4	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>15.2</i>		<i>"</i>	<i>13.3</i>		<i>114</i>	<i>77.3-121</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.5</i>		<i>"</i>	<i>13.3</i>		<i>102</i>	<i>91.4-107</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>14.0</i>		<i>"</i>	<i>13.3</i>		<i>105</i>	<i>85.3-109</i>			

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### 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.
- 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