

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax 894-2109



FOR OGCC USE ONLY

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:

- Spill Complaint
 Inspection NOAV

Tracking No:

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

- Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): _____

GENERAL INFORMATION

OGCC Operator Number: 69175		Contact Name and Telephone	
Name of Operator: <u>Petroleum Development Corporation</u>		Name: <u>John Nussbaumer</u>	
Address: <u>1775 Sherman Street, Suite 3000</u>		No: <u>(303) 860-5800</u>	
City: <u>Denver</u> State: <u>CO</u> Zip: <u>80203</u>		Fax: <u>(303) 860-5838</u>	
API/Facility No: <u>05-123-25156</u>	County: <u>Weld</u>		
Facility Name: <u>Booth 11,12,21,22-31U & 31AU</u>	Facility Number: _____		
Well Name: <u>Booth</u>	Well Number: <u>11-31U</u>		
Location (Qtr, Sec, Twp, Rng, Meridian): <u>NWNW Sec 31 T4N R63W 6th Principal Meridian</u> Latitude: _____ Longitude: _____			

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc.): Condensate, produced water

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation. Groundwater < 20 feet bgs.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): Ranch land

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Sand

Potential receptors (water wells within 1/4 mi, surface waters, etc.): No potential receptors are located within a 1/2 mile radius of the site

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>40' E to W x 50' N to S x 35' bgs</u>	<u>Soil samples for field screening and laboratory analysis</u>
<input type="checkbox"/> Vegetation	_____	_____
<input type="checkbox"/> Groundwater	_____	_____
<input type="checkbox"/> Surface water	_____	_____

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):
Provided in Attachment 1

Describe how source is to be removed:
Provided in Attachment 1

land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:
Provided in Attachment 1

FORM
27
Rev 6/99

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State of Colorado
Oil and Gas Conservation Commission

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REMEDIATION WORKPLAN (CONT.)

OGCC Employee:

Tracking Number: _____
Name of Operator: Petroleum Development Corporation
OGCC Operator No: 69175
Received Date: _____
Well Name & No: Booth 11-31U
Facility Name & No.: Booth 11,12,21,22-31U & 31AU

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):
Provided in Attachment 1

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.
Provided in Attachment 1-Remediation Work plan

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.
Is further site investigation required? Y N If yes, describe:
Provided in Attachment 1

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):
Provided in Attachment 1

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 7/29/08 Date Site Investigation Completed: Active Remediation Plan Submitted: 3/31/09
Remediation Start Date: 7/29/08 Anticipated Completion Date: 7/29/09 Actual Completion Date: _____

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: **John Peterson, LT Environmental, as agent for PDC**

Signed: Title: **Principal - LTE** Date: **3/31/09**

OGCC Approved: _____ Title: _____ Date: _____



March 31, 2009

Mr. John Nussbaumer
Petroleum Development Corporation
1775 Sherman Street, Suite 3000
Denver, Colorado 80203

RE: Booth 11, 12, 21, 22-31U & 31AU Release
API # 05-123-25156
Weld County, Colorado

Dear Mr. Nussbaumer:

LT Environmental, Inc. (LTE) was contracted by Petroleum Development Corporation (PDC) to conduct remedial activities at the Booth 11, 12, 21, 22-31U & 31AU tank battery (Site) located in Weld County, Colorado (Figure 1). Remedial activities were conducted at the Site due to a leak in the dump lines that impacted soil.

Source Identification

On July 28, 2008, PDC discovered petroleum hydrocarbon impacted soil while conducting routine maintenance activities on the dump lines. Once the source of the release was identified, PDC shut in the adjacent wells, removed the dump lines, tank battery equipment, and began excavating petroleum hydrocarbon impacted soils.

Initial Response Activities

On July 28, 2008, PDC contacted LTE to conduct excavation oversight, field screening, and soil sampling activities at the Site. LTE collected eight soil samples from the extent of the excavation and submitted the samples for analysis of Total Petroleum Hydrocarbons (TPH) by Environmental Protection Agency (EPA) Modified Method 8015. Analytical results received on July 30, 2008 confirmed soil samples exceeded the Colorado Oil and Gas Conservation Commission (COGCC) sensitive area allowable level for TPH of 1,000 milligrams per kilogram (mg/kg). LTE, on behalf of PDC, submitted a Form 19 on July 31, 2008 (To fulfill COGCC spill/release reporting requirements).

Non-Sensitive Area Determination

LTE used the following site-specific parameters and the COGCC Figure 901-1 Sensitive Area Determination Decision Tree to establish that the Site is located in a non-sensitive area. A review of sensitive receptors was conducted immediately. LTE determined that the location of the Site is located greater than 1/2 of a mile from a domestic well and public water supply well using the same aquifer. The Site is also located more than one mile from the nearest lake, major river,



stream, wetland, or other surface water features. Concurrent with source removal activities, LTE continued to assess if the depth to groundwater was less than 20 feet from the point of the spill/release from the dump lines. Groundwater was not encountered during excavation activities which extended 35 feet below ground surface (bgs).

Source Removal

Petroleum hydrocarbon impacted soil above the COGCC non-sensitive area allowable level was excavated to a depth of 35 feet bgs and transported off-site to the Waste Management landfill in Ault, Colorado.

On August 6, 2008, LTE collected 14 soil samples from the base and sidewalls of the excavation. All of the soil samples were submitted for analysis of TPH by EPA Modified Method 8015. Soil analytical results indicated TPH concentrations (C6-C36) in soil at the base of the excavation (northeast corner) exceeded the COGCC non-sensitive area allowable level of 10,000 mg/kg. When the soil samples were collected on August 6, 2008, the base of the excavation (northeast corner) extended 32 feet bgs. PDC continued to vertically define impacts in the base (northeast corner) of the excavation.

On August 13, 2008, LTE collected a soil sample from the base (northeast corner) of the excavation at 35 feet bgs and submitted the sample for analysis of TPH by EPA Modified Method 8015. Analytical results indicated TPH concentrations (C6-C36) in soil at the base of the excavation (northeast corner) continued to exceed the COGCC non-sensitive area allowable level of 10,000 mg/kg. Although groundwater was not encountered in the excavation, depth to groundwater and/or potential impact to groundwater were unknown. Soil analytical results are presented in Table 1. Figure 2 illustrates the extent of the excavation and the soil sample locations. Laboratory analytical reports for soils are provided in Attachment 1.

Soil Boring Installation

On August 16 and 18, 2008, LTE advanced a soil boring to the northwest of the excavation in an effort to install a groundwater monitoring well and collect a groundwater sample. The boring required two days to complete due to an auger flight getting stuck within a cemented sandstone layer. The boring was completed in soils that varied from fine to medium grained sands and extended from the ground surface to 68 feet bgs. LTE backfilled the soil boring since groundwater was not observed to 68 feet bgs.

Site Reclamation

A total of 1,010 total cubic yards (CY) of impacted soil above the COGCC non-sensitive area allowable level was transported to the Waste Management landfill in Ault, Colorado for disposal. Prior to backfilling the excavation, 50 gallons of Micro-Blaze[®] were applied to subsurface soils.



Additionally, PDC has restored the Site to prerelease grade and rebuilt the production facility. A material safety data sheet (MSDS) for Micro-Blaze[®] is provided in Attachment 2.

Passive Soil Vapor Extraction (SVE) Well Installation

Based on the excavation sampling and soil boring results, PDC decided to remediate the remaining impacted soils in the subsurface by installing a passive system designed to volatilize and vent petroleum constituents adsorbed onto soil particles.

On September 23, 2008, LTE contracted High Plains Drilling of Denver, Colorado to install an 8 inch soil boring in the northeast corner of the former excavation. LTE logged the soil boring and visually inspected the soil for the presence of petroleum hydrocarbon odor and/ or staining from 30 feet bgs to the terminus of the boring. Soil cuttings were visually inspected and field screened using a photoionization detector (PID) from 30 feet bgs to 38 feet bgs. PID readings collected from discrete cuttings at 30 feet and 35 feet bgs exceeded 200 parts per million (ppm). Soils at 38 feet and 43 feet bgs were characterized by visually inspecting the soil samples collected in split spoon samplers and screened using a PID. A soil sample with a PID reading of less than 10 ppm was collected from 43 feet bgs and was submitted for analysis of TPH by EPA Modified Method 8015. Analytical results indicated TPH concentrations were not detected above the laboratory reporting limit of 50 mg/kg, which is below the COGCC non-sensitive area allowable level.

Once the vertical extent of soil impacts had been defined, High Plains set a 4-inch SVE well in the 8-inch boring. The SVE well was constructed of a 4-inch diameter schedule 40 polyvinyl chloride (PVC) pipe screened with a 15 foot length of 0.010-inch slot well screen placed in the impacted soil interval from 28 feet bgs to 43. The SVE well was extended above the ground surface to 6 feet and a 4-inch wind powered turbine was attached to the top of the well casing. The wind turbine allows for low vacuum SVE to vent petroleum hydrocarbon impacts from soil at depth. Well completion information for the SVE well is provided in Attachment 3.

Passive SVE Well Operation

Hydrocarbon removal and emissions results for the SVE well have been monitored on a monthly basis since October 2008. Air emissions monitoring has included collecting air samples from the SVE well for laboratory analyses of benzene, toluene, ethylbenzene, xylenes, (BTEX) and TPH-Gasoline Range Organics (GRO) by EPA Method TO-14. Laboratory analytical results for the air samples collected from October 2008 through February 2009 are presented in Attachment 4.

An average stack flow rate of 1 cubic foot per minute (CFM) was used to estimate emissions. The flow rate is an engineering estimate based on vacuum observations of less than 0.1 inches of water column. In addition to the flowrate, operational hours for the wind turbine ventilator, and air sample laboratory analytical results were used to estimate total mass of total volatile petroleum hydrocarbons (TVPH) removed for the period.



From October 2008 through February 2009, it is estimated that the remediation system removed 15.94 cumulative pounds of hydrocarbons or approximately 2.17 gallons of equivalent hydrocarbons from the subsurface. Assuming the most recent rate of recovery until the end of the year, LTE calculated 0.01 tons of hydrocarbons would be recovered by the SVE well. Recovery and emissions data for the current period are summarized on Table 2.

Summary and Conclusions

PDC discovered historic petroleum hydrocarbon impacted soil while conducting routine maintenance activities on the dump lines at the Booth 11, 12, 21, 22-31U & 31AU tank battery site. PDC quickly responded to the historic release by removing the dump lines, tank battery equipment, and excavating petroleum hydrocarbon impacted soils.

Petroleum hydrocarbon impacted soil above the COGCC non-sensitive area allowable level was excavated to a depth of 35 feet bgs. A soil sample collected from the base of the excavation (northeast corner) at 35 feet bgs indicated TPH concentrations continued to exceed the COGCC non-sensitive area allowable level. Groundwater was not encountered during excavation activities.

On September 23, 2008, LTE directed the installation of an SVE well in the northeast corner of the former excavation in order to define the vertical extent and remediated the remaining impacted soil. LTE collected a confirmation soil sample from the terminus of the boring at 43 feet bgs and analytical results indicated TPH concentrations were below COGCC non-sensitive area allowable levels. Once the vertical extent of impacts had been defined, an SVE well was set in the boring.

LTE has monitored hydrocarbon removal and emissions results for the SVE well on a monthly basis since October 2008. From October 2008 through February 2009, it is estimated the remediation system removed 15.94 cumulative pounds of hydrocarbons or approximately 2.17 gallons of equivalent hydrocarbons from the subsurface. Although minimal vacuum has been measured at the well, analytical results for air samples collected from the well indicate volatilization of petroleum hydrocarbon impacted soil is occurring. Analytical results for air samples collected since December 2008 show TVPH concentrations are decreasing. A graph showing TVPH concentrations and cumulative emissions versus time is presented in Attachment 5. LTE recommends continued operation of the SVE well for the next 12 months to 18 months in order to encourage continued volatilization and natural attenuation. After 12 months to 18 months, LTE recommends evaluating the SVE data in determining whether a confirmation soil sample should be collected.



LTE appreciates the opportunity to provide environmental services to PDC. Please call us at (303) 433-9788 if you have any questions regarding this letter report or require additional information.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink, appearing to read 'Asher' followed by a stylized 'W'.

Asher Weinberg
Staff Environmental Scientist

A handwritten signature in black ink, appearing to read 'J.D. Peterson' followed by a stylized 'P'.

John D. Peterson, PG
Principal/Senior Geologist

Attachments:

Table 1 – Soil Analytical Results

Table 2 – Air Recovery and Emissions Results

Figure 1 – Site Location Map

Figure 2 – Site Map

Attachment 1 – Soil Analytical Reports

Attachment 2 – MSDS for Micro-Blaze[®]

Attachment 3 – SVE Well Completion Log

Attachment 4 – Air Analytical Reports

Attachment 5 – TVPH Concentrations and Cumulative Emissions Graph

TABLES



TABLE 1
SOIL SAMPLE ANALYTICAL DATA
BOOTH 11, 12, 21, 22, 31U & 31AU
WELD COUNTY, COLORADO
PETROLEUM DEVELOPMENT CORPORATION

SAMPLE ID	DATE	DEPTH (feet bgs)	TPH (mg/kg)
N01@7	7/28/2008	7	1,200
N02@7	8/6/2008	7	<50
N03@20	8/6/2008	20	8,400
E01@10	7/28/2008	10	<50
E02@10	7/28/2008	10	<50
E03@7	8/6/2008	7	<50
E04@20	8/6/2008	20	680
E05@7	8/6/2008	7	<50
E06@20	8/6/2008	20	8,600
S01@10	7/28/2008	10	16,000
S02@7	8/6/2008	7	<50
S03@20	8/6/2008	20	<50
W01@10	7/28/2008	10	<50
W02@10	7/28/2008	10	<50
W03@20	8/6/2008	20	370
W04@20	8/6/2008	20	13,000
W05@22	8/6/2008	22	<50
B01@12	7/28/2008	12	11,000
B02@18	7/28/2008	18	14,000
B03@28	8/6/2008	28	14,000
B04@28	8/6/2008	28	9,500
B05@32	8/6/2008	32	21,000
B06@35	8/13/2008	35	29,680
B07@43	9/23/2008	43	<50
COGCC Non-Sensitive Area Allowable Level			10,000

< - Less than stated laboratory reporting limit

TPH - Total Petroleum Hydrocarbons (C6-C36)

mg/kg - milligrams per kilogram

bgs - Below ground surface

Analytical results noted in bold exceed the COGCC non-sensitive area allowable level



TABLE 2
PASSIVE SOIL VAPOR EXTRACTION EMISSION ESTIMATE
BOOTH 11, 12, 21, 22, 31U & 31AU
WELD COUNTY, COLORADO
PETROLEUM DEVELOPMENT CORPORATION

Sample Information and Lab Analysis							
Sampling Date	Operating Hours		Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Xylenes (mg/L)	TPH-GRO (mg/L)
	Total	Delta					
10/10/2008	228	228	0.00018	0.00015	<0.00011	0.00026	0.022
11/3/2008	804	576	0.00062	0.0008	0.0003	0.0013	0.052
12/18/2008	1884	1080	0.085	0.069	0.0022	0.015	3.9
1/7/2009	2364	480	0.00026	0.00058	<0.00011	0.00089	0.018
2/18/2009	3372	1008	<0.00016	<0.00019	<0.00022	<0.00066	0.0067

Emission Calculations						
Sampling Period	Stack Flow Rate* (cfm)	Benzene (lb/hr)	Toluene (lb/hr)	Ethyl-benzene (lb/hr)	Xylenes (lb/hr)	TPH-GRO (lb/hr)
10/10/2008	1	0.00000	0.00000	0.00000	0.00000	0.00008
11/3/2008	1	0.00000	0.00000	0.00000	0.00000	0.00019
12/18/2008	1	0.00032	0.00026	0.00001	0.00006	0.01459
1/7/2009	1	0.00000	0.00000	0.00000	0.00000	0.00007
2/18/2009	1	0.00000	0.00000	0.00000	0.00000	0.00003

Amounts Emitted Over Total Operating Time							
Sampling Period	Benzene (pounds)	Toluene (pounds)	Ethyl-benzene (pounds)	Xylenes (pounds)	TPH-GRO (pounds)	Cumulative TPH-GRO (pounds)	Cumulative TPH-GRO (tons)
10/10/2008	0.00	0.00	0.00	0.00	0.0	0.0	0.00
11/3/2008	0.00	0.00	0.00	0.00	0.1	0.1	0.00
12/18/2008	0.34	0.28	0.01	0.06	15.8	15.9	0.01
1/7/2009	0.00	0.00	0.00	0.00	0.0	15.9	0.01
2/18/2009	0.00	0.00	0.00	0.00	0.0	15.9	0.01
TOTAL	0.35	0.28	0.01	0.07	15.94		

Notes:

mg/L - milligrams per liter

TPH-GRO - total petroleum hydrocarbons gasoline range organics

< - reported value less than laboratory detection limit

mph - miles per hour

cfm - cubic feet per minute

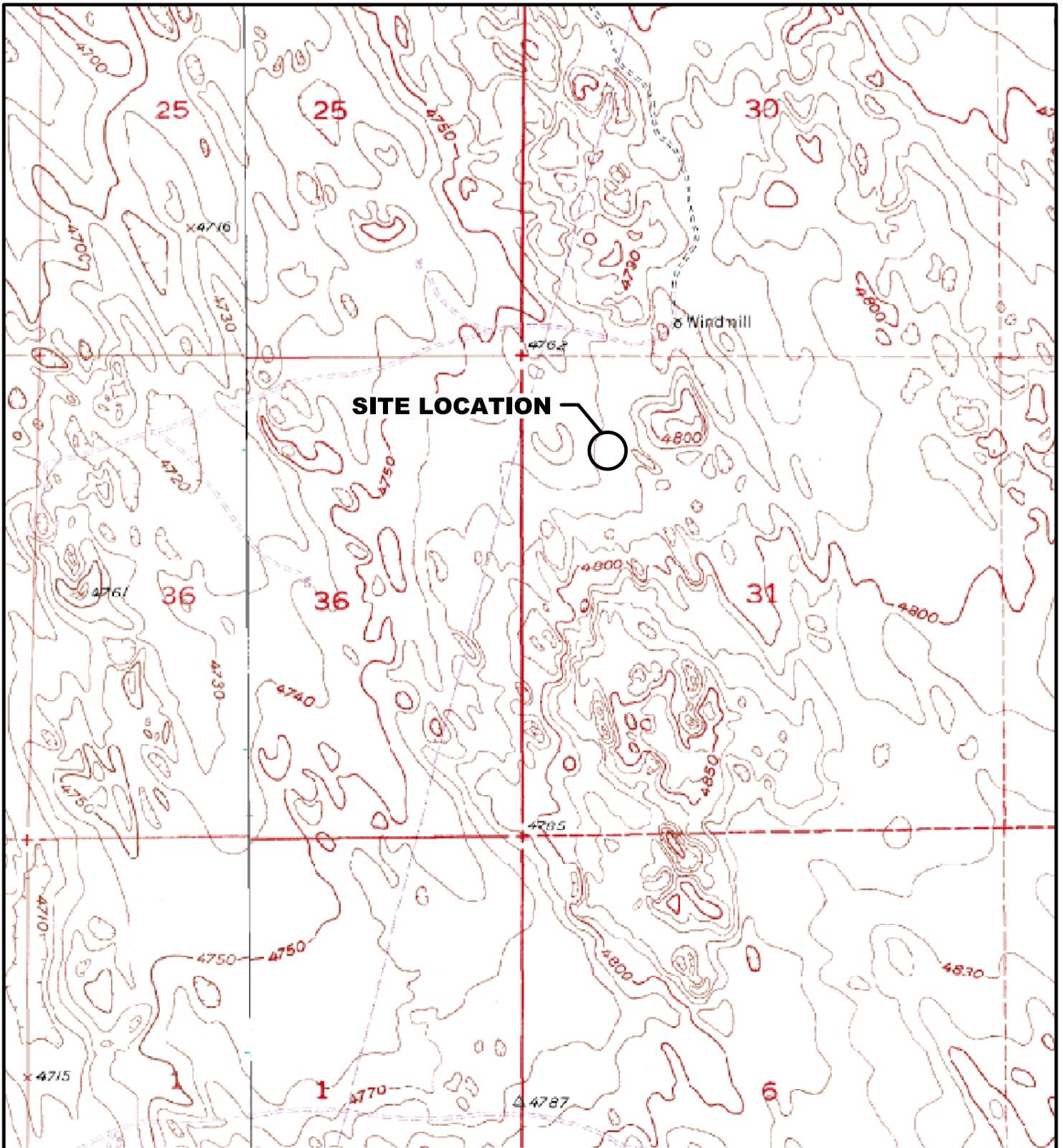
lb/hr - pounds per hour

*Stack flowrate of 1 cfm was assumed due to vacuum observations of less than 0.1



FIGURES





LEGEND

○ SITE LOCATION

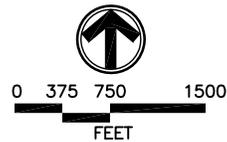
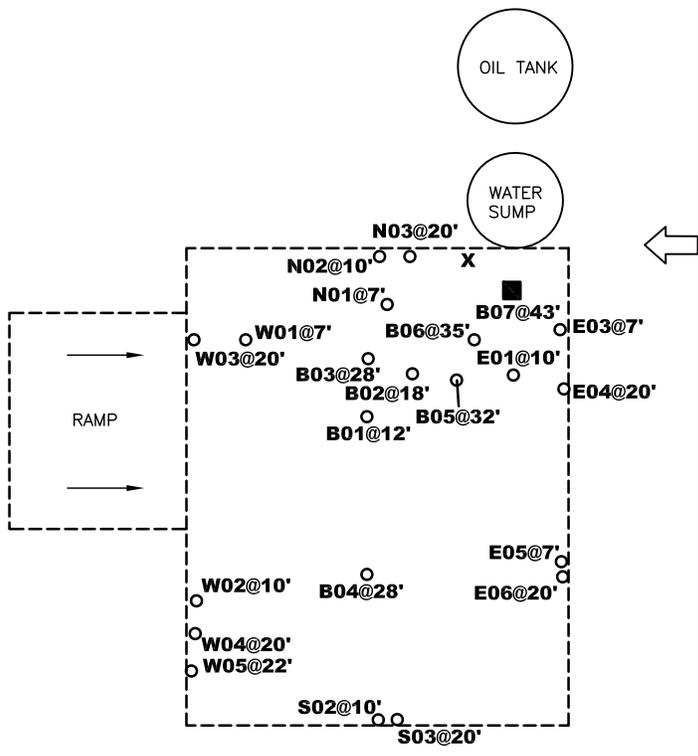


FIGURE 1
 SITE LOCATION MAP
 BOOTH 11, 12, 21, 22-31U & 31AU
 NWNW 31, T4N, R63W
 WELD COUNTY, CO
 PETROLEUM DEVELOPMENT CORPORATION

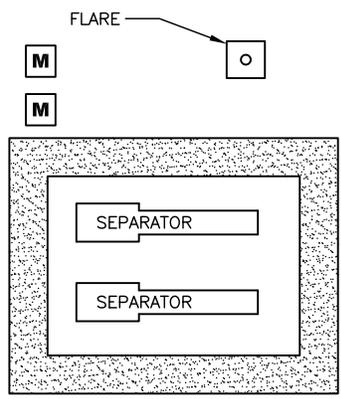
SOURCE: TOPOZONE.COM
 USGS 7.5' QUADRANGLE
 (NAD27)





NOTE:
SOIL SAMPLE B07@43'
COLLECTED FROM SAME
LOCATION AS SOIL VAPOR
EXTRACTION WELL

LEASE ROAD



LEGEND

- SOIL VAPOR EXTRACTION WELL LOCATION
- N01@7' ○ SOIL SAMPLE LOCATION
- M METER HOUSE
- ▬ BERM
- x RELEASE LOCATION
- - - - - EXTENT OF EXCAVATION
- ➔ ESTIMATED GROUNDWATER FLOW DIRECTION

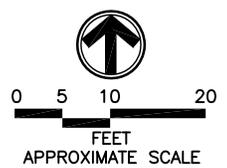


FIGURE 2
SITE MAP
BOOTH 11, 12, 21, 22-31U & 31AU
NNW 31, T4N, R63W
WELD COUNTY, CO
PETROLEUM DEVELOPMENT CORPORATION



ATTACHMENT 1
SOIL ANALYTICAL REPORTS



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 08, 2008

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

RE: PDC - Booth 11, 12, 21, 22, 31u & 31au

Enclosed are the results of analyses for samples received by Summit Scientific on 07/29/08 18:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury For Ben Shrewsbury
Vice President / Laboratory Director



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N01@7'	R807178-01	Soil	07/28/08 17:10	07/29/08 18:30
W01@10'	R807178-02	Soil	07/28/08 17:05	07/29/08 18:30
B01@12'	R807178-03	Soil	07/28/08 16:59	07/29/08 18:30
B02@18'	R807178-04	Soil	07/28/08 17:03	07/29/08 18:30
E01@10'	R807178-05	Soil	07/28/08 16:58	07/29/08 18:30
E02@10'	R807178-06	Soil	07/28/08 17:00	07/29/08 18:30
S01@10'	R807178-07	Soil	07/28/08 17:08	07/29/08 18:30
W02@10'	R807178-08	Soil	07/28/08 17:09	07/29/08 18:30

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

Summit Scientific

7507178

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

Client: LT Environmental, Inc. Project Manager: John Peterson
Address: 4600 West 60th Avenue E-Mail: Arvada@ltenvi.com
City/State/Zip: Arvada, CO 80003 Project Name: Booth 11, 12, 21, 22, 31u & 31au
Phone: (303) 433-9788 Fax: (303) 433-1432 Project Number: PDC08151
Sampler Name:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative					Matrix			Analyze For:			Special Instructions	Notes	
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	Total Carbon Chain	BTEX	Turn Around Time (Check)			
00107	7/28/08	17:10	1		X												
00107		17:05	1		X												
00107		16:59	1		X												
00107		17:03	1		X												
00107		16:58	1		X												
00107		17:00	1		X												
00107		17:06	1		X												
00107		17:09	1		X												
Relinquished by:	Date/Time:	Relinquished by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	Received in Lab by:	Date/Time:	Turn Around Time (Check)	Sample Integrity:	Temperature Upon Receipt:	Intact?	Yes	No		
CS	7/29/08 18:50	CS	7/29/08 18:50	CS	7/29/08 18:50	CS	7/29/08 18:50			Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/>	Temperature Upon Receipt: 4.4	Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					

www.s2scientific.com



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

Summit Scientific

8110178

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

Client: LT Environmental, Inc.
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: (303) 433-9788 Fax: (303) 433-1432
Project Manager: John Peterson
E-Mail: Aw@summit-sc.com
Project Name: Booth 11, 12, 21, 22, 31u & 31au
Project Number: PDC08151

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:				Special Instructions	Notes
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	Total Carbon Chain	BTEX	72 Hours Standard	24 Hours		
Booth 11	9/18/08	17:10	1	X	X			X									
Booth 12	9/18/08	17:05	1	X	X			X									
Booth 21	9/18/08	16:59	1	X	X			X									
Booth 22	9/18/08	17:03	1	X	X			X									
Booth 31u	9/18/08	16:58	1	X	X			X									
Booth 31au	9/18/08	17:00	1	X	X			X									
Booth 11	9/18/08	17:08	1	X	X			X									
Booth 12	9/18/08	17:09	1	X	X			X									
Received by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:	Received by:	Date/Time:
JS	7/19/08 18:30	JS	7/19/08 18:30	JS	7/19/08 18:30	JS	7/19/08 18:30	JS	7/19/08 18:30	JS	7/19/08 18:30	JS	7/19/08 18:30	JS	7/19/08 18:30	JS	7/19/08 18:30
Sample Integrity:	Temperature Upon Receipt:	Intact?	Yes	No	4	4	4	4	4	4	4	4	4	4	4	4	4

www.s2scientific.com



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

N01@7'
R807178-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/28/08 17:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	460	50	mg/kg	1	8072905	07/29/08	07/30/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	740	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/28/08 17:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		158 %	70-130		"	"	"	"	S-04
Surrogate: Trifluorotoluene		92.3 %	70-130		"	"	"	"	

Date Sampled: **07/28/08 17:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	1200		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
 Project Manager: John Peterson

Reported:
 08/08/08 14:51

W01@10'
R807178-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/28/08 17:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8072905	07/29/08	07/30/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/28/08 17:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		97.8 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		91.3 %	70-130		"	"	"	"	

Date Sampled: **07/28/08 17:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	0.0		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

B01@12'
R807178-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/28/08 16:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	4900	50	mg/kg	1	8072905	07/29/08	07/30/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	5400	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	250	50	"	"	"	"	"	"	

Date Sampled: **07/28/08 16:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		454 %	70-130		"	"	"	"	S-04
<i>Surrogate: Trifluorotoluene</i>		91.0 %	70-130		"	"	"	"	

Date Sampled: **07/28/08 16:59**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	11000		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

B02@18'
R807178-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/28/08 17:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	7400	50	mg/kg	1	8072905	07/29/08	07/30/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	6200	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	250	50	"	"	"	"	"	"	

Date Sampled: **07/28/08 17:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		510 %	70-130		"	"	"	"	S-04
<i>Surrogate: Trifluorotoluene</i>		91.7 %	70-130		"	"	"	"	

Date Sampled: **07/28/08 17:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	14000		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

E01 @ 10'
R807178-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/28/08 16:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8072905	07/29/08	07/30/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/28/08 16:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		98.8 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		92.6 %	70-130		"	"	"	"	

Date Sampled: **07/28/08 16:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	0.0		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

E02@10'
R807178-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/28/08 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8072905	07/29/08	07/30/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/28/08 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		96.8 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		90.3 %	70-130		"	"	"	"	

Date Sampled: **07/28/08 17:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	0.0		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

S01@10'
R807178-07 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/28/08 17:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	8700	50	mg/kg	1	8072905	07/29/08	07/30/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	6800	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	290	50	"	"	"	"	"	"	

Date Sampled: **07/28/08 17:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		548 %	70-130		"	"	"	"	S-04
<i>Surrogate: Trifluorotoluene</i>		91.4 %	70-130		"	"	"	"	

Date Sampled: **07/28/08 17:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	16000		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
 Project Manager: John Peterson

Reported:
 08/08/08 14:51

W02@10'
R807178-08 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/28/08 17:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8072905	07/29/08	07/30/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/28/08 17:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		97.4 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		90.2 %	70-130		"	"	"	"	

Date Sampled: **07/28/08 17:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	0.0		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

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 8072905 - EPA 3550A

LCS (8072905-BS1)

Prepared: 07/29/08 Analyzed: 07/30/08

C10-C28 (TEPH-DRO)	407	50	mg/kg	500		81.4	65.3-142			
Surrogate: <i>o</i> -Terphenyl	58.3		"	50.0		117	70-130			
Surrogate: Trifluorotoluene	90.6		"	100		90.6	70-130			

LCS Dup (8072905-BSD1)

Prepared: 07/29/08 Analyzed: 07/30/08

C10-C28 (TEPH-DRO)	480	50	mg/kg	500		96.0	65.3-142	16.5	19.7	
Surrogate: <i>o</i> -Terphenyl	59.6		"	50.0		119	70-130			
Surrogate: Trifluorotoluene	90.4		"	100		90.4	70-130			

Matrix Spike (8072905-MS1)

Source: R807177-01

Prepared: 07/29/08 Analyzed: 07/30/08

C10-C28 (TEPH-DRO)	526	50	mg/kg	500	76	90.0	55.2-139			
Surrogate: <i>o</i> -Terphenyl	60.1		"	50.0		120	70-130			
Surrogate: Trifluorotoluene	90.8		"	100		90.8	70-130			

Matrix Spike Dup (8072905-MSD1)

Source: R807177-01

Prepared: 07/29/08 Analyzed: 07/30/08

C10-C28 (TEPH-DRO)	542	50	mg/kg	500	76	93.2	55.2-139	3.00	16.7	
Surrogate: <i>o</i> -Terphenyl	60.6		"	50.0		121	70-130			
Surrogate: Trifluorotoluene	92.1		"	100		92.1	70-130			

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/08/08 14:51

Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

August 07, 2008

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

RE: PDC - Booth 11, 12, 21, 22, 31u & 31au

Enclosed are the results of analyses for samples received by Summit Scientific on 08/06/08 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury For Ben Shrewsbury
Vice President / Laboratory Director



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E03@7'	R808014-01	Soil	08/06/08 13:30	08/06/08 17:00
E04@20'	R808014-02	Soil	08/06/08 13:35	08/06/08 17:00
E05@7'	R808014-03	Soil	08/06/08 13:40	08/06/08 17:00
E06@20'	R808014-04	Soil	08/06/08 13:45	08/06/08 17:00
S02@7'	R808014-05	Soil	08/06/08 13:50	08/06/08 17:00
S03@20'	R808014-06	Soil	08/06/08 13:55	08/06/08 17:00
W03@20'	R808014-07	Soil	08/06/08 14:00	08/06/08 17:00
W04@20'	R808014-08	Soil	08/06/08 14:05	08/06/08 17:00
B04@28'	R808014-09	Soil	08/06/08 14:15	08/06/08 17:00
B03@28'	R808014-10	Soil	08/06/08 14:10	08/06/08 17:00
N02@7'	R808014-11	Soil	08/06/08 14:20	08/06/08 17:00
N03@20'	R808014-12	Soil	08/06/08 14:25	08/06/08 17:00

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

Page 1 of 2

288019.1

Summit Scientific

741 Corporate Circle Suite 1 ♦ Golden, Colorado 80401
303-277-9310 ♦ 303-277-9331 Fax

Client: LT Environmental, Inc.
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: (303) 433-9788 Fax: (303) 433-1432
Sampler Name: AD
Project Manager: Asker Jelenberg
E-Mail: askerb@ltenv.com
Project Name: Booth 11, 12, 21, 22-31u
Project Number: PDC08151

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix				Analyze For:				Special Instructions	
				HCl	HNO ₃	Zone	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	Total Carbon Chain	BTEX				
F03 @ 7'	8-6-08	1330	1		X												
F04 @ 20'		1335	1		X												
F05 @ 7'		1346	1		X												
F06 @ 20'		1345	1		X												
S02 @ 7'		1350	1		X												
S03 @ 20'		1355	1		X												
W03 @ 20'		1400	1		X												
W-B04 @ 20'		1405	1		X												
B04 @ 28'		1415	1		X												
B03 @ 28'		1410	1		X												
Relinquished by:	Date/Time:	8-6-08 8-6-08 / 17:00	Received by:	Date/Time:		Turn Around Time (Check):	Same Day <input type="checkbox"/>	24 Hours <input checked="" type="checkbox"/>	48 Hours <input type="checkbox"/>	72 Hours <input type="checkbox"/>	Standard <input type="checkbox"/>	Notes:					
Relinquished by:	Date/Time:		Received by:	Date/Time:		Sample Integrity:	Temperature Upon Receipt: 5.2	Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>									
Relinquished by:	Date/Time:		Received in Lab by:	Date/Time:	8-6-08 7:00												

www.s2scientific.com



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

E03@7'
R808014-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8080606	08/06/08	08/06/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		103 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		98.7 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	0.0		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

E04@20'
R808014-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	230	50	mg/kg	1	8080606	08/06/08	08/06/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	450	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		150 %	70-130		"	"	"	"	S-02
Surrogate: Trifluorotoluene		99.0 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	680		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
 Project Manager: John Peterson

Reported:
 08/07/08 12:22

E05@7'
R808014-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8080606	08/06/08	08/06/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		104 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		98.7 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	0.0		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
 Project Manager: John Peterson

Reported:
 08/07/08 12:22

E06@20'
R808014-04 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	4800	50	mg/kg	1	8080606	08/06/08	08/06/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	3600	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	190	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		366 %	70-130		"	"	"	"	S-02
<i>Surrogate: Trifluorotoluene</i>		99.9 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 13:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	8600		"	"	[CALC]	"	"	EPA 8015	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

S02@7'
R808014-05 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8080606	08/06/08	08/06/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		106 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		101 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 13:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	0.0		"	"	[CALC]	"	"	EPA 8015	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

S03@20'
R808014-06 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8080606	08/06/08	08/06/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		107 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		101 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	0.0		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
 Project Manager: John Peterson

Reported:
 08/07/08 12:22

W03@20'
R808014-07 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	180	50	mg/kg	1	8080606	08/06/08	08/06/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	190	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		129 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		99.7 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	370		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

W04@20'
R808014-08 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	5900	50	mg/kg	1	8080606	08/06/08	08/06/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	6400	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	340	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		580 %	70-130		"	"	"	"	S-02
<i>Surrogate: Trifluorotoluene</i>		99.4 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 14:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	13000		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

B04@28'
R808014-09 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	4600	50	mg/kg	1	8080606	08/06/08	08/06/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	4700	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	180	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		466 %	70-130		"	"	"	"	S-02
<i>Surrogate: Trifluorotoluene</i>		98.6 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	9500		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

B03@28'
R808014-10 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	8000	50	mg/kg	1	8080606	08/06/08	08/06/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	6000	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	230	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		558 %	70-130		"	"	"	"	S-02
<i>Surrogate: Trifluorotoluene</i>		99.7 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	14000		"	"	[CALC]	"	"	EPA 8015	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

N02@7'
R808014-11 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8080606	08/06/08	08/07/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		105 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		99.4 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	0.0		"	"	[CALC]	"	"	EPA 8015	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
 Project Manager: John Peterson

Reported:
 08/07/08 12:22

N03@20'
R808014-12 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/06/08 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	3700	50	mg/kg	1	8080606	08/06/08	08/07/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	4300	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	400	50	"	"	"	"	"	"	

Date Sampled: **08/06/08 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		448 %	70-130		"	"	"	"	S-02
<i>Surrogate: Trifluorotoluene</i>		99.6 %	70-130		"	"	"	"	

Date Sampled: **08/06/08 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	8400		"	"	[CALC]	"	"	EPA 8015	

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

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 8080606 - EPA 3550A

Blank (8080606-BLK1)

Prepared: 08/06/08 Analyzed: 08/07/08

C6-C10 (TEPH-GRO)	ND	50	mg/kg							
C10-C28 (TEPH-DRO)	ND	50	"							
C28-C36 (TEPH-ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	53.0		"	50.0		106	70-130			
Surrogate: Trifluorotoluene	100		"	100		100	70-130			

LCS (8080606-BS1)

Prepared: 08/06/08 Analyzed: 08/07/08

C10-C28 (TEPH-DRO)	493	50	mg/kg	500		98.6	65.3-142			
Surrogate: <i>o</i> -Terphenyl	66.7		"	50.0		133	70-130			
Surrogate: Trifluorotoluene	99.3		"	100		99.3	70-130			

LCS Dup (8080606-BSD1)

Prepared: 08/06/08 Analyzed: 08/07/08

C10-C28 (TEPH-DRO)	468	50	mg/kg	500		93.6	65.3-142	5.20	19.7	
Surrogate: <i>o</i> -Terphenyl	66.2		"	50.0		132	70-130			
Surrogate: Trifluorotoluene	99.6		"	100		99.6	70-130			

Matrix Spike (8080606-MS1)

Source: R808013-01

Prepared: 08/06/08 Analyzed: 08/07/08

C10-C28 (TEPH-DRO)	478	50	mg/kg	500	44	86.8	55.2-139			
Surrogate: <i>o</i> -Terphenyl	64.9		"	50.0		130	70-130			
Surrogate: Trifluorotoluene	97.9		"	100		97.9	70-130			

Matrix Spike Dup (8080606-MSD1)

Source: R808013-01

Prepared: 08/06/08 Analyzed: 08/07/08

C10-C28 (TEPH-DRO)	483	50	mg/kg	500	44	87.8	55.2-139	1.04	16.7	
Surrogate: <i>o</i> -Terphenyl	65.2		"	50.0		130	70-130			
Surrogate: Trifluorotoluene	98.0		"	100		98.0	70-130			

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
08/07/08 12:22

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

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.374.5933 - fax

August 11, 2008

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

RE: PDC - Booth 11, 12, 21, 22, 31u & 31au

Enclosed are the results of analyses for samples received by Summit Scientific on 08/08/08 18:07. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
Vice President / Laboratory Director



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/11/08 06:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B05@32'	R808026-01	Soil	08/08/08 16:54	08/08/08 18:07
W05@22'	R808026-02	Soil	08/08/08 16:17	08/08/08 18:07

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
 Project Manager: John Peterson

Reported:
 08/11/08 06:49

B05@32'
R808026-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/08/08 16:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	12000	50	mg/kg	1	8080804	08/08/08	08/09/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	9100	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	280	50	"	"	"	"	"	"	

Date Sampled: **08/08/08 16:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		772 %	70-130		"	"	"	"	S-02
<i>Surrogate: Trifluorotoluene</i>		97.7 %	70-130		"	"	"	"	

Date Sampled: **08/08/08 16:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	21000		"	"	[CALC]	"	"	EPA 8015	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/11/08 06:49

W05@22'
R808026-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/08/08 16:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	ND	50	mg/kg	1	8080804	08/08/08	08/09/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/08/08 16:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		108 %	70-130		"	"	"	"	
Surrogate: Trifluorotoluene		100 %	70-130		"	"	"	"	

Date Sampled: **08/08/08 16:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C36 Total TEPH	0.0		"	"	[CALC]	"	"	EPA 8015	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/11/08 06:49

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 8080804 - EPA 5030 Soil GC

Blank (8080804-BLK1)

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

C6-C10 (TEPH-GRO)	ND	50	mg/kg								
C10-C28 (TEPH-DRO)	ND	50	"								
C28-C36 (TEPH-ORO)	ND	50	"								
Surrogate: o-Terphenyl	51.9		"	50.0		104	70-130				
Surrogate: Trifluorotoluene	97.9		"	100		97.9	70-130				

LCS (8080804-BS1)

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

C10-C28 (TEPH-DRO)	506	50	mg/kg	500		101	65.3-142				
Surrogate: o-Terphenyl	64.7		"	50.0		129	70-130				
Surrogate: Trifluorotoluene	97.5		"	100		97.5	70-130				

LCS Dup (8080804-BSD1)

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

C10-C28 (TEPH-DRO)	499	50	mg/kg	500		99.8	65.3-142	1.39	19.7		
Surrogate: o-Terphenyl	63.9		"	50.0		128	70-130				
Surrogate: Trifluorotoluene	97.4		"	100		97.4	70-130				

Matrix Spike (8080804-MS1)

Source: R808019-10

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

C10-C28 (TEPH-DRO)	482	50	mg/kg	500	14	93.6	55.2-139				
Surrogate: o-Terphenyl	64.5		"	50.0		129	70-130				
Surrogate: Trifluorotoluene	97.3		"	100		97.3	70-130				

Matrix Spike Dup (8080804-MSD1)

Source: R808019-10

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

C10-C28 (TEPH-DRO)	510	50	mg/kg	500	14	99.2	55.2-139	5.65	16.7		
Surrogate: o-Terphenyl	65.4		"	50.0		131	70-130				S-02
Surrogate: Trifluorotoluene	97.7		"	100		97.7	70-130				

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/11/08 06:49

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

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.374.5933 - fax

August 14, 2008

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

RE: PDC - Booth 11, 12, 21, 22, 31u & 31au

Enclosed are the results of analyses for samples received by Summit Scientific on 08/13/08 15:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
Vice President / Laboratory Director



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
 Project Manager: John Peterson

Reported:
 08/14/08 09:22

B06@35'
R808056-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/13/08 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (TEPH-GRO)	16000	50	mg/kg	1	8081303	08/13/08	08/14/08	8015 Full Carbon Chain	
C10-C28 (TEPH-DRO)	13000	50	"	"	"	"	"	"	
C28-C36 (TEPH-ORO)	680	50	"	"	"	"	"	"	

Date Sampled: **08/13/08 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>		1400 %	70-130		"	"	"	"	S-02
<i>Surrogate: Trifluorotoluene</i>		98.2 %	70-130		"	"	"	"	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/14/08 09:22

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 8081303 - EPA 5030 Soil GC

Blank (8081303-BLK1)

Prepared & Analyzed: 08/13/08

C6-C10 (TEPH-GRO)	ND	50	mg/kg							
C10-C28 (TEPH-DRO)	ND	50	"							
C28-C36 (TEPH-ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	54.2		"	50.0		108	70-130			
Surrogate: Trifluorotoluene	102		"	100		102	70-130			

LCS (8081303-BS1)

Prepared & Analyzed: 08/13/08

C10-C28 (TEPH-DRO)	542	50	mg/kg				65.3-142			
Surrogate: <i>o</i> -Terphenyl	65.8		"	50.0		132	70-130			
Surrogate: Trifluorotoluene	99.0		"	100		99.0	70-130			

LCS Dup (8081303-BSD1)

Prepared & Analyzed: 08/13/08

C10-C28 (TEPH-DRO)	523	50	mg/kg				65.3-142	3.57	19.7	
Surrogate: <i>o</i> -Terphenyl	66.2		"	50.0		132	70-130			
Surrogate: Trifluorotoluene	99.9		"	100		99.9	70-130			

Matrix Spike Dup (8081303-MSD1)

Source: R808054-01

Prepared & Analyzed: 08/13/08

Surrogate: Trifluorotoluene	106		mg/kg	100		106	70-130			
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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.



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
08/14/08 09:22

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

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

September 25, 2008

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

RE: PDC - Booth 11, 12, 21, 22, 31u & 31au

Enclosed are the results of analyses for samples received by Summit Scientific on 09/23/08 17:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury For Ben Shrewsbury
Vice President / Laboratory Director



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
 Project Manager: John Peterson

Reported:
 09/25/08 10:50

B07@43'
R809111-01 (Soil)

Summit Scientific

Total Petroleum Hydrocarbons by 8015

Date Sampled: **09/23/08 14:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C6-C10 (GRO)	ND	50	mg/kg	1	8092304	09/23/08	09/24/08	8015 Full Carbon Chain	
C10-C28 (DRO)	ND	50	"	"	"	"	"	"	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	
C6-C36 TPH	ND	50	"	"	"	"	"	"	

Date Sampled: **09/23/08 14:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		93.2 %	77.7-123		"	"	"	"	
Surrogate: Trifluorotoluene		95.9 %	73.9-116		"	"	"	"	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
09/25/08 10:50

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 8092304 - EPA 3550A

Blank (8092304-BLK1)

Prepared: 09/23/08 Analyzed: 09/25/08

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

LCS (8092304-BS1)

Prepared: 09/23/08 Analyzed: 09/25/08

C10-C28 (DRO)	389	50	mg/kg	500		77.8	83.3-127			
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LCS Dup (8092304-BSD1)

Prepared: 09/23/08 Analyzed: 09/25/08

C10-C28 (DRO)	429	50	mg/kg	500		85.8	83.3-127	9.78	15	
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Matrix Spike (8092304-MS1)

Source: R809109-01

Prepared: 09/23/08 Analyzed: 09/25/08

C10-C28 (DRO)	376	50	mg/kg	500	ND	75.2	75.8-126			
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Matrix Spike Dup (8092304-MSD1)

Source: R809109-01

Prepared: 09/23/08 Analyzed: 09/25/08

C10-C28 (DRO)	367	50	mg/kg	500	ND	73.4	75.8-126	2.42	13.6	
---------------	-----	----	-------	-----	----	------	----------	------	------	--

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
09/25/08 10:50

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

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.

ATTACHMENT 2
MSDS FOR MICRO-BLAZE®



Material Safety Data Sheet
 May be used to comply with OSHA's Hazard
 Communication Standard, 29 CFR 1910 1200. Standard
 must be consulted for specific requirements.

U.S. Department of Labor
 Occupational Safety and Health Administration
 (Non-Mandatory Form)
 Form Approved
 OMB No. 1218-0072

IDENTITY) **Micro-Blaze® Emergency Liquid
 Spill Control**

*Note: Blank spaces are not permitted. If any item is not
 applicable or no information is available, the space
 must be marked to indicate that.*

Section I

Manufacturer's name	Verde Environmental, Inc.	Emergency Telephone Number	800 / 626-6598
Address	9223 Eastex Freeway Houston, Texas 77093-7001	Telephone Number for Information	713 / 691-6468
		Date Prepared	12 / 01 / 05
		Signature of Preparer	<i>William L. Scogin</i>
		William L. Scogin, President	

Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	CAS Number:	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
---	-------------	----------	-----------	--------------------------	--------------

**** NO HAZARDOUS COMPONENTS OR INGREDIENTS ****

Per OSHA -29 CFR 1910.1200 - All ingredients are organic and completely biodegradable.

Ingredients not precisely identified are proprietary or non-hazardous. All chemical ingredients appear on the
 EPA TSCA Inventory.

Section III—Physical/Chemical Characteristics

Boiling Point	100°C	Specific Gravity (H ₂ O = 1)	1.0
Vapor Pressure (mm Hg)	Equiv. water	Melting Point	N / A
Vapor Density (AIR = 1)	Equiv. water	Evaporation Rate (Butyl Acetate = 1)	N / A

Solubility in Water 99%

Appearance and Odor Cream to tan, opaque liquid, perfumed

Section IV—Fire and Explosion Hazard Data

Flash Point (Method Used)	N / A	Flammable Limits	LEL	UEL
		Non-flammable	---	---

Extinguishing Media Non-flammable

Special Fire Fighting Procedures None

Unusual Fire and Explosion Hazards None - NON-FLAMMABLE

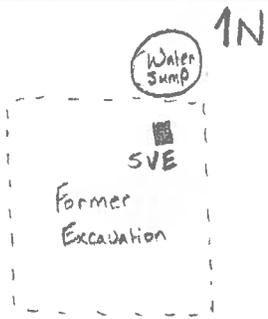
Section V—Reactivity Data			
Stability	Unstable		Conditions to Avoid
	Stable XXXX		
Incompatibility (<i>Materials to Avoid</i>) Strong acids or alkali compounds may inactivate biological cultures.			
Hazardous Decomposition or Byproducts			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	XXXX	
Section VI—Health Hazard Data			
Route(s) of Entry	Inhalation?	Skin?	Ingestion?
Health Hazards (<i>Acute and Chronic</i>) May cause diarrhea if ingested in large amounts. NON-TOXIC			
Organisms used are non-pathogenic. These organisms are susceptible to commonly use antibiotics.			
Carcinogenicity	N/A	NTP? N/A	IARC Monographs? N/A OSHA Regulated? N/A
Signs and Symptoms of Exposure Skin: slight redness on hands and forearms if individual has a history of dermal allergic reaction.			
Medical Conditions			
Generally Aggravated by Exposure Dermal allergic reaction on skin if susceptible person has continual exposure.			
Emergency and First Aid Procedures Ingestion: Drink water or milk to dilute. Induce vomiting only if advised by physician or poison control center.			
Section VII—Precautions for Safe Handling and Use			
Steps to Be Taken in Case Material Is Released or Spilled May mop up spills; may flush down sanitary drain into waste water treatment lines.			
Waste Disposal Method Disposal of this product or its residue must be done in accordance with all local, state and federal requirements.			
Precautions to Be Taken in Handling and Storing Avoid eye contact.			
Other Precautions To maintain shelf life, avoid temperatures under 32° or over 120°F for long periods of time. Microbes are viable up to 180° F. KEEP FROM PROLONGED FREEZING.			
Section VII—Control Measures			
Respiratory Protection (<i>Specify Type</i>) None required with adequate ventilation.			
Ventilation	Local Exhaust		Special
	Mechanical (<i>General</i>)		Other Normal room ventilation.
Protective Gloves	None required.	Eye Protection	None required.
Other Protective Clothing or Equipment None required.			
Work/Hygienic Practices Minimize exposure in accordance with good hygiene practices.			

We believe the statements, technical information and recommendations herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

ATTACHMENT 3
SVE WELL COMPLETION LOG



Location Map:



Compliance • Engineering • Remediation
LT Environmental, Inc.
 4400 W. 46th Avenue
 Denver, Colorado 80212

BORING LOG/MONITORING WELL COMPLETION DIAGRAM

Boring/Well Number: SVE-01		Project: <i>Booth 11, 12, 21, 22-31U + 31AU</i>	
Date: 9/23/2008		Project Number: PDC08151	
Logged By: A. Weinberg		Drilled By: High Plains	
Elevation: NA	Detector: NA	Drilling Method: Hollow Stem Auger	Sampling Method: Continuous
Gravel Pack: NA		Seal: NA	Grout: Sa Krete
Casing Type: Schedule 40 PVC	Diameter: 4"	Length: 34'	Hole Diameter: 8"
Screen Type: Schedule 40 PVC	Slot: 0.010"	Diameter: 4"	Length: 15'
			Total Depth: 43'
			Depth to Liquid: NM
			Depth to Water: NM

Penetration Resistance	Moisture Content	Vapor (ppm)	Staining	Sample #	Depth (ft. bgs.)	Sample Run	Soil/Rock Type	Lithology/Remarks	Well Completion
					3				
					6				
					9				
					12				
					15				
					18		SP	Poorly graded sands little to no fines	
					21				
					24				
					27				
	Dry	NM	265		30				
					33				
	Dry	NM	0.0		36		SP	Poorly graded sands little to no fines	
					39				
					42		SW	Well graded sands little to no fines	
	Dry	NM	0.0	43'	45				



ATTACHMENT 4
AIR ANALYTICAL REPORTS



Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

October 21, 2008

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

RE: PDC - Booth 11, 12, 21, 22, 31u & 31au

Enclosed are the results of analyses for samples received by Summit Scientific on 10/10/08 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury For Ben Shrewsbury
Vice President / Laboratory Director



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
 Project Manager: John Peterson

Reported:
 10/21/08 15:41

Air Sample 01
R810047-01 (Air)

Summit Scientific

Volatile Organic Compounds by TO-14

Date Sampled: **10/10/08 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	180	80	ug/m ³ Air	1	8101001	10/16/08	10/16/08	BTEX by TO-14	
Toluene	150	94	"	"	"	"	"	"	
Ethylbenzene	ND	110	"	"	"	"	"	"	
Xylenes (total)	260	110	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	22000	5000	"	"	"	"	"	"	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
 Project Manager: John Peterson

Reported:
 10/21/08 15:41

Volatile Organic Compounds by TO-14 - Quality Control
Summit Scientific

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

Batch 8101001 - air

Blank (8101001-BLK1)

Prepared & Analyzed: 10/10/08

Benzene	ND	80	ug/m ³ Air							
Toluene	ND	94	"							
Ethylbenzene	ND	110	"							
Xylenes (total)	ND	110	"							
Gasoline Range Hydrocarbons	ND	5000	"							

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
10/21/08 15:41

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

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 18, 2008

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

RE: PDC - Booth 11, 12, 21, 22, 31u & 31au

Enclosed are the results of analyses for samples received by Summit Scientific on 11/03/08 17:09. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury For Ben Shrewsbury
Vice President / Laboratory Director



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
 Project Manager: John Peterson

Reported:
 11/18/08 09:50

Air Sample 02
R811007-01 (Air)

Summit Scientific

Volatile Organic Compounds by TO-14

Date Sampled: **11/03/08 13:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	620	80	ug/m ³ Air	1	8110703	11/07/08	11/18/08	BTEX by TO-14	
Toluene	800	94	"	"	"	"	"	"	
Ethylbenzene	300	110	"	"	"	"	"	"	
Xylenes (total)	1300	110	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	52000	5000	"	"	"	"	"	"	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
 Project Manager: John Peterson

Reported:
 11/18/08 09:50

Volatile Organic Compounds by TO-14 - Quality Control
Summit Scientific

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

Batch 8110703 - air

Blank (8110703-BLK1)

Prepared: 11/07/08 Analyzed: 11/17/08

Benzene	ND	80	ug/m ³ Air							
Toluene	ND	94	"							
Ethylbenzene	ND	110	"							
Xylenes (total)	ND	110	"							
Gasoline Range Hydrocarbons	ND	5000	"							

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
11/18/08 09:50

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

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

December 23, 2008

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

RE: PDC - Booth 11, 12, 21, 22, 31u & 31au

Enclosed are the results of analyses for samples received by Summit Scientific on 12/18/08 14:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury For Ben Shrewsbury
Vice President / Laboratory Director



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
 Project Manager: John Peterson

Reported:
 12/23/08 15:17

Air Sample 03
R812125-01 (Air)

Summit Scientific

Volatile Organic Compounds by TO-14

Date Sampled: **12/18/08 10:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	85000	6500	ug/m ³ Air	81	8122101	12/21/08	12/23/08	BTEX by TO-14	
Toluene	69000	2500	"	27	"	"	"	"	
Ethylbenzene	2200	110	"	1	"	"	"	"	
Xylenes (total)	15000	110	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	3900000	140000	"	27	"	"	"	"	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
 Project Manager: John Peterson

Reported:
 12/23/08 15:17

Volatile Organic Compounds by TO-14 - Quality Control
Summit Scientific

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

Batch 8122101 - air

Blank (8122101-BLK1)

Prepared: 12/21/08 Analyzed: 12/22/08

Benzene	ND	80	ug/m ³ Air						
Toluene	ND	94	"						
Ethylbenzene	ND	110	"						
Xylenes (total)	ND	110	"						
Gasoline Range Hydrocarbons	ND	5000	"						

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC08151
Project Manager: John Peterson

Reported:
12/23/08 15:17

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

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

January 09, 2009

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

RE: PDC - Booth 11, 12, 21, 22, 31u & 31au

Enclosed are the results of analyses for samples received by Summit Scientific on 01/07/09 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Paul Shrewsbury For Ben Shrewsbury
Vice President / Laboratory Director



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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
01/09/09 09:34

ANALYTICAL REPORT FOR SAMPLES

All Results are Reported at Standard Temperature and Pressure (STP).

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Air Sample 04	R901033-01	Air	01/07/09 11:20	01/07/09 17:00

Summit Scientific 2901033

S₂
741 Corporate Circle Suite 1 • Golden, Colorado 80401
303-277-9310 • 303-277-9531 Fax

Page / of /

Client: LT Environmental, Inc.
Address: 4600 West 60th Avenue
City/State/Zip: Arvada, CO 80003
Phone: (303) 433-9788
Project Manager: John Peterson
E-Mail: jpeterson@ltenv.com
Project Name: Booth 11, 12, 21, 22, 31u & 31au
Project Number: PDC08151
Sampler Name: hwh

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative	Matrix	Analyze For:	Special Instructions
Air Sample 04	1-7-09	1120	1	HCl HNO ₃ None	Air - Canister Serial # Teller bag	Total Carbon Chain BTEX X Tot BTEX/TPH	
Relinquished by:	Date/Time:	1-7-09	1510	Received by:	Date/Time:	Turn Around Time (Check) Same Day 24 Hours 48 Hours 72 Hours Standard	Notes:
Relinquished by:	Date/Time:			Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 21.0 Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

www.s2scientific.com

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
 Project Manager: John Peterson

Reported:
 01/09/09 09:34

Air Sample 04
R901033-01 (Air)

Summit Scientific

Volatile Organic Compounds by TO-14

Date Sampled: **01/07/09 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	260	80	ug/m ³ Air	1	9010802	01/08/09	01/09/09	BTEX by TO-14	
Toluene	580	94	"	"	"	"	"	"	
Ethylbenzene	ND	110	"	"	"	"	"	"	
Xylenes (total)	890	110	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	18000	5000	"	"	"	"	"	"	

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: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
 Project Manager: John Peterson

Reported:
 01/09/09 09:34

Volatile Organic Compounds by TO-14 - Quality Control
Summit Scientific

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

Batch 9010802 - air

Blank (9010802-BLK1)

Prepared: 01/08/09 Analyzed: 01/09/09

Benzene	ND	80	ug/m ³ Air							
Toluene	ND	94	"							
Ethylbenzene	ND	110	"							
Xylenes (total)	ND	110	"							
Gasoline Range Hydrocarbons	ND	5000	"							

Summit Scientific

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

Project: PDC - Booth 11, 12, 21, 22, 31u & 31au

Project Number: PDC 08151
Project Manager: John Peterson

Reported:
01/09/09 09:34

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

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.

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.374.5933 - fax

March 06, 2009

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

RE: PDC - Booth 11, 12, 21, 22-31U & 31DU

Enclosed are the results of analyses for samples received by Summit Scientific on 02/18/09 17:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Ben Shrewsbury
Vice President / Laboratory Director

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

Project: PDC - Booth 11, 12, 21, 22-31U & 31DU

Project Number: PDC08151
Project Manager: John Peterson

Reported:
03/06/09 15:50

Air Sample 05
R902106-01 (Air)

Summit Scientific

Volatile Organic Compounds by TO-14

Date Sampled: **02/18/09 12:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Gasoline Range Hydrocarbons	6700	5000	ug/m ³ Air	1	9022402	02/24/09	02/26/09	BTEX by TO-14	
Benzene	ND	160	"	"	"	"	"	"	
Toluene	ND	190	"	"	"	"	"	"	
Ethylbenzene	ND	220	"	"	"	"	"	"	
o-Xylene	ND	220	"	"	"	"	"	"	
m,p-Xylene	ND	440	"	"	"	"	"	"	

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: PDC - Booth 11, 12, 21, 22-31U & 31DU

Project Number: PDC08151
Project Manager: John Peterson

Reported:
03/06/09 15:50

Volatile Organic Compounds by TO-14 - Quality Control
Summit Scientific

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

Batch 9022402 - air

Blank (9022402-BLK1)

Prepared: 02/24/09 Analyzed: 02/26/09

Gasoline Range Hydrocarbons	ND	5000	ug/m ³ Air								
Benzene	ND	160	"								
Toluene	ND	190	"								
Ethylbenzene	ND	220	"								
o-Xylene	ND	220	"								
m,p-Xylene	ND	440	"								

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: PDC - Booth 11, 12, 21, 22-31U & 31DU

Project Number: PDC08151
Project Manager: John Peterson

Reported:
03/06/09 15:50

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



ATTACHMENT 5

TVPH CONCENTRATIONS AND CUMULATIVE EMISSIONS GRAPH



TVPH CONCETRATIONS AND CUMULATIVE EMISSIONS Vs. TIME
BOOTH 11, 12, 21, 22-31U & 31AU
WELD COUNTY, COLORADO
PETROLEUM DEVELOPMENT CORPORATION

