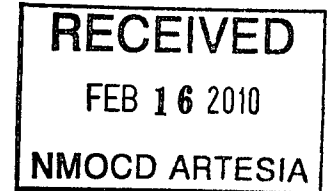


# ***Basin Environmental Consulting, LLC***

2800 Plains Highway  
P. O. Box 381  
Lovington, New Mexico 88260  
**cdstanley@basin-consulting.com**  
Office: (575) 396-2378 Fax: (575) 396-1429



## **REMEDIATION SUMMARY AND SITE CLOSURE PROPOSAL**

**GP II Energy, Inc. (8359)  
Federal Littlefield "BO" Tank Battery  
Eddy County, New Mexico  
UNIT "A" (NE/NE), Section 34, Township 26 South, Range 29 East  
Latitude 32° 00' 12.10" North, Longitude 103° 57' 59.06" West**

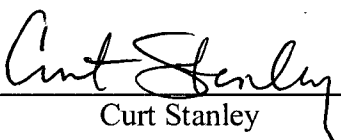
Prepared For:

GP II Energy, Inc.  
P.O. Box 50682  
Midland, Texas 79710

Prepared By:

Basin Environmental Consulting, LLC  
2800 Plains Highway  
Lovington, New Mexico 88260

**February 2010**

  
Curt Stanley  
Project Manager

## **TABLE OF CONTENTS**

INTRODUCTION AND BACKGROUND INFORMATION.....	1
NMOCD SITE CLASSIFICATION.....	1
SUMMARY OF FIELD ACTIVITIES .....	2
SITE CLOSURE PROPOSAL .....	3
REPORTING .....	3
LIMITATIONS.....	4
DISTRIBUTION.....	5

### **FIGURES**

Figure 1 – Site Location Map

Figure 2 – Site and Sample Location Map

### **TABLES**

Table 1 – Concentrations of BTEX, TPH and Chloride in Soil

### **APPENDICES**

Appendix A - Photographs

Appendix B - Laboratory Analytical Reports

Appendix C - Release Notification and Corrective Action (Form C-141)

## INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Consulting, LLC (Basin), on behalf of GP II Energy, Inc. (GP II), has prepared this Remediation Summary and Site Closure Proposal for the release site known as Federal Littlefield “BO” Tank Battery. The legal description of the release site is Unit Letter “A” (NE ¼ NE ¼), Section 34, Township 26 South, Range 29 East, in Eddy County, New Mexico. The property affected by the release is owned by the United States Bureau of Land Management (BLM). The release site GPS coordinates are 32° 00’ 12.10” North and 103° 57’ 59.06” West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site and Sample Location Map. Photographs are provided as Appendix A. The Release Notification and Corrective Action (Form C-141) is provided as Appendix C.

Prior to December 11, 2009, The BLM notified GP II of a release at the Federal Littlefield “BO” tank battery. The BLM indicated the release was reported by a New Mexico Oil Conservation Division (NMOCD) inspector. The release occurred following the “workover” of the Federal “BO” #6 well, which resulted in a production surge at a storage tank and the subsequent overflow of the storage tank. The release affected areas within the bermed secondary containment, ultimately compromising the containment wall and flowing along the north and/or south margins of an Eddy County road. Flowing generally west, the release continued along a “two-track” road in a pipeline right-of-way. On December 11, 2009, GP II submitted a Form C-141 to the NMOCD – Artesia District Office, indicating approximately ninety-two (92) barrels of produced oil was released, with approximately twenty (20) barrels recovered during the initial response activities, resulting in a net loss of approximately seventy-two (72) barrels of produced oil.

## NMOCD SITE CLASSIFICATION

According to data obtained from the New Mexico Office of the State Engineer (NMOSE), no water wells are recorded in Section 34 of the above referenced township. The NMOSE data indicates the nearest water well was recorded approximately one mile to the northeast of the release. The data indicates water in this well was encountered at approximately eighty-five (85) feet below ground surface (bgs). According to a depth to groundwater reference map utilized by the NMOCD, groundwater should be encountered at less than one hundred (100) feet bgs. This depth to groundwater results in a score of ten (10) being assigned to the site based on the NMOCD depth to groundwater criteria.

The water well database, maintained by the NMOSE, indicated there are no water wells less than 1,000 feet from the release, resulting in zero (0) points being assigned to this site as a result of this criteria.

The bank of Pecos River is located less than one-thousand (1,000) feet from the most western extent of the release. Based on the NMOCD ranking system ten (10) points will be assigned to the site as a result of the criteria.

The *Guidelines for Remediation of Leaks, Spills and Releases* (NMOCD, 1993) indicates the Federal Littlefield “BO” Tank Battery release site has a ranking score of twenty (20). Based on this score, the soil remediation levels for a site with a ranking score of twenty (20) points are as follows:

- Benzene – 10 mg/Kg (ppm)
- BTEX – 50 mg/Kg (ppm)
- TPH – 100 mg/Kg (ppm)

NMOCD chloride cleanup levels are site specific and are generally set at 250 mg/Kg.

## **SUMMARY OF FIELD ACTIVITIES**

Following the discovery of the release, crude oil saturated soil was removed from the release flow paths, stockpiled on-site and transported off-site.

On January 5, 2010, a backhoe was utilized to begin vertical delineation of the release site. Soil samples were collected at selected intervals and submitted to the laboratory for determination of benzene, toluene, ethylbenzene and xylene (BTEX) using EPA Method 8021b, total petroleum hydrocarbons (TPH) using Method SW846-8015M, and chloride using EPA Method 300.0. Along the western flowpath twelve (12) soil samples (SP-1 through SP-9, SP-5A, SP-6A and SP-8A) were collected from the north and/or south margins of Eddy County road. The analytical results indicated benzene concentrations were less than the appropriate laboratory method detection limit (MDL) in all twelve soil samples. BTEX concentrations ranged from less than the appropriate laboratory MDL in soil samples SP-2, SP-4, SP-5A, SP-7, SP-8, SP-8A, and SP-9 to 0.1375 mg/Kg in soil sample SP-5. TPH concentrations ranged from 137 mg/Kg in soil sample SP-2 to 1,249 mg/Kg in soil sample SP-6. Chloride concentrations ranged from 15.5 mg/Kg in soil sample SP-9 to 2,280 mg/Kg in soil sample SP-5. A summary of Concentrations of BTEX, TPH and Chloride in Soil is provided as Table 1. Laboratory analytical reports are provided as Appendix B.

Following the collection of soil samples along the Eddy County road, nine (9) soil samples (SP-10 through SP-16, SP-10A, and SP-12A) were collected along the “two-track” flowpath. Soil sample SP-16 was collected approximately forty (40) feet west of the most western extent of impact and will be used as a background sample. The analytical results indicated benzene concentrations were less than the appropriate laboratory MDL in all nine soil samples. BTEX concentrations ranged from less than the appropriate laboratory MDL in soil samples SP-11, SP-15 and SP-16 to 0.0619 mg/Kg in soil sample SP-10. TPH concentrations ranged from less than the laboratory MDL of 16.0 mg/Kg in soil sample SP-16 to 944 mg/Kg in soil sample SP-12. Chloride concentrations ranged from 79 mg/Kg in soil sample SP-13 to 1,300 mg/Kg in soil sample SP-10.

Following the collection of soil samples along the “two-track” road, two (2) soil samples (SP-17 and SP-18) were collected along a southern release flowpath off of the Eddy County road. The analytical results indicated benzene concentrations were less than the appropriate laboratory MDL in both soil samples. BTEX concentrations were 0.1603 mg/Kg and 0.0044 mg/Kg for soil samples SP-17 and SP-18, respectively. TPH concentrations were 136.5 mg/Kg and 103.1 mg/Kg for soil samples SP-17 and SP-18, respectively. Chloride concentrations were 70.5 mg/Kg and 607 mg/Kg for soil samples SP-17 and SP-18, respectively.

Soil samples SP-19 and SP-19A were collected outside of the secondary containment berm, north of the storage tanks. The analytical results indicated benzene concentrations were less than the laboratory MDL in soil sample SP-19A and 0.2386 mg/Kg in soil sample SP-19. BTEX concentrations were 7.53 mg/Kg and 0.006 mg/Kg for soil samples SP-19 and SP-19A, respectively. TPH concentrations were 1,474 mg/Kg and 18.3 mg/Kg for soil samples SP-19 and SP-19A, respectively. Chloride concentrations were 131 mg/Kg and less than the laboratory MDL of 17.7 mg/Kg for soil samples SP-19 and SP-19A, respectively.

Soil sample SP-20 was collected from the southeast side of the tank battery pad, in an area utilized for stockpiling impacted soil. The analytical results indicated the benzene, BTEX, TPH and chloride concentrations were less than the appropriate laboratory MDL.

Soil sample SP-21 was collected from a depression located northeast of the tank battery pad in an area utilized for stockpiling impacted soil. The analytical results indicated the benzene and BTEX concentrations were 0.0013 mg/Kg, the TPH concentration was 385 mg/Kg and chloride concentration was 650 mg/Kg.

## **SITE CLOSURE PROPOSAL**

Based on the analytical results, GP II proposes the following activities designed to progress the Federal Littlefield "BO" Tank Battery release site toward an NMOCD and BLM approved closure:

- GP II proposes to excavate impacted soil from the areas identified above. Excavated soil will be stockpiled adjacent to the excavation(s) on a poly liner to minimize leaching of contaminants to the unaffected soils. A five (5) point composite soil sample will be collected from each 500 cubic yards of stockpiled soil. The soil samples will be submitted to the laboratory and analyzed for concentrations of BTEX using EPA method 8021b, TPH using SW-846 8015M and chloride using EPA 300.1. Provided the analytical results indicate the TPH concentration of the soil sample is less than 100 mg/Kg, the benzene concentration is less than 10 mg/Kg, the BTEX concentration is less than 50 mg/Kg, and the chloride concentration is less than 250 mg/Kg the corresponding soil stockpile will be used as backfill material. If the analytical results indicate a soil sample exhibits a chloride concentration greater than 250 mg/Kg, the corresponding soil stockpile will be transported to an NMOCD approved landfill. If the analytical results indicate a soil sample exhibits benzene, BTEX or TPH concentrations in excess of the NMOCD regulatory standard and a chloride concentration less than 250 mg/Kg, the corresponding stockpile will be blended, resampled and evaluated for potential use as backfill material.
- Confirmation excavation sidewall and floor soil samples will be collected at every one-hundred foot interval or as directed by the NMOCD and submitted to the laboratory for BTEX, TPH and chloride analysis. On receipt of favorable analytical results, GP II will request NMOCD approval to backfill the excavation(s) with locally purchased non-impacted soil. GP II will backfill the excavation, placing the backfill material in the excavation in twelve (12) inch lifts. Each lift will be properly compacted to minimize any settling of the soil. Following the backfill activities, non-impacted caliche will be purchased from an off-site source and the Eddy County road will be repaired and any areas disturbed by remediation activities will be reseeded to BLM specifications. The Eddy County Road Department will be contacted and approval will be secured prior to beginning the activities proposed in this workplan.

## **REPORTING**

On completion of the proposed site closure activities, GP II Energy will submit a Remediation Summary and Site Closure Request for NMOCD and BLM approval.

## **LIMITATIONS**

Basin Environmental Consulting, LLC has prepared this Remediation Summary and Site Closure Proposal to the best of its ability. No other warranty, expressed or implied, is made or intended.

Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Basin Environmental Consulting, LLC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Basin Environmental Consulting, LLC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

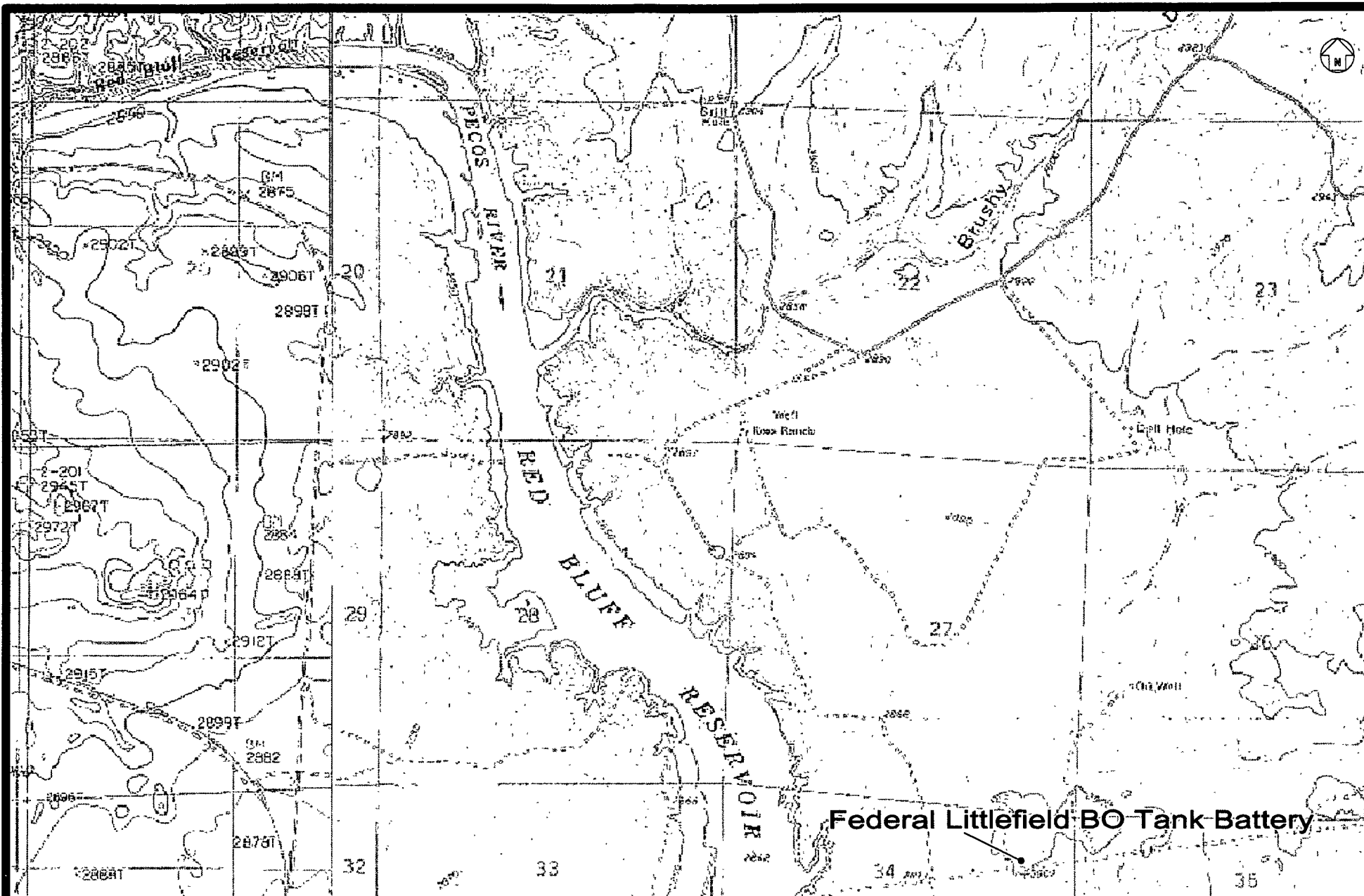
This report has been prepared for the benefit of GP II Energy, Inc. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of Basin Environmental Consulting, LLC and/or GP II Energy, Inc.

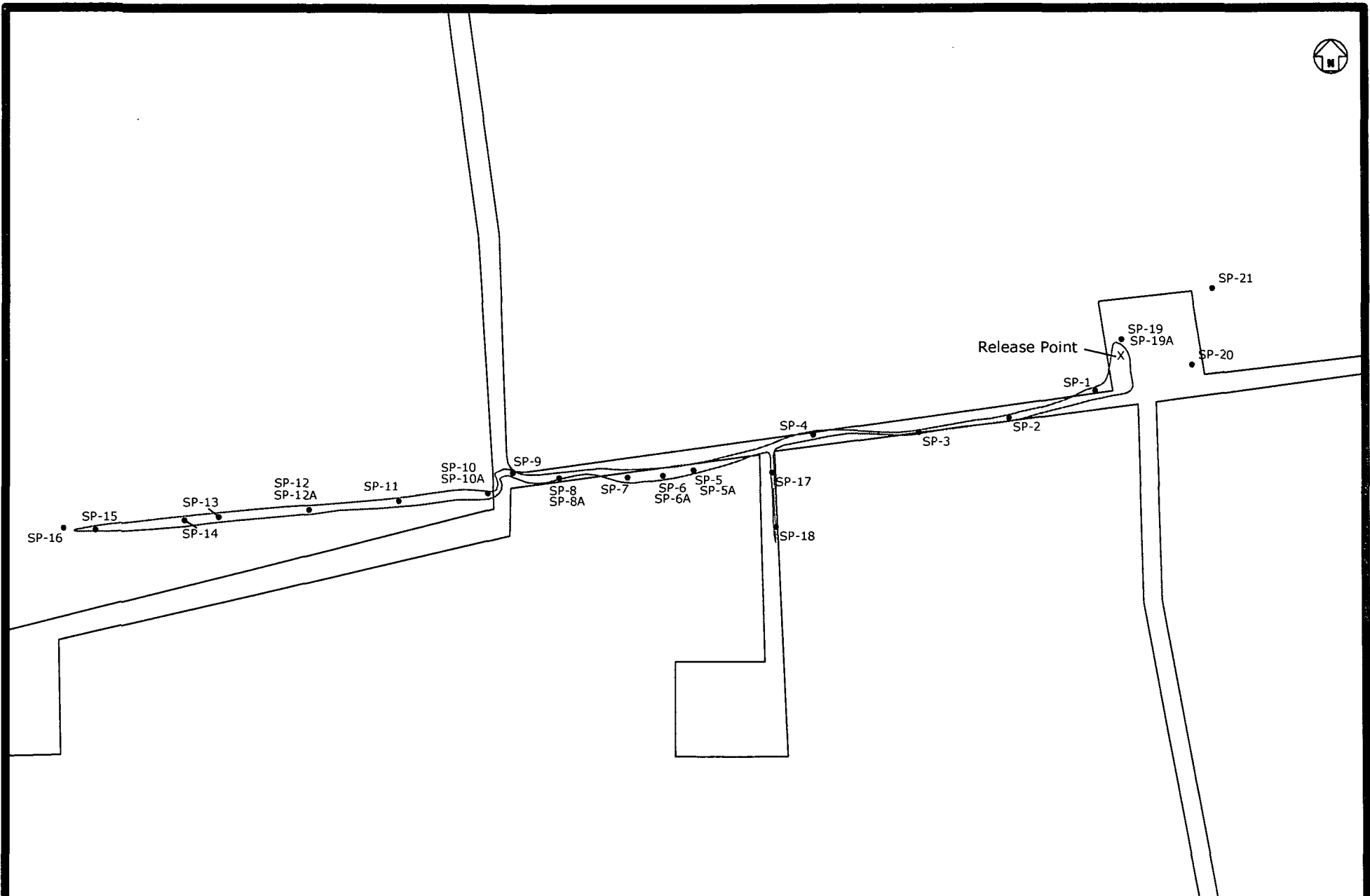
**DISTRIBUTION:**

- Copy 1: Sherry Bonham  
New Mexico Oil Conservation Division  
District 2  
1301 W. Grand Avenue  
Artesia, New Mexico 88210
- Copy 2: James Amos  
United States Department of Interior  
Bureau of Land Management  
P.O. Box 1778  
620 East Greene Street  
Carlsbad, New Mexico 88220
- Copy 3: Joe L. Compton  
GP II Energy, Inc.  
PO Box 50682  
Midland, Texas 79710
- Copy 4: Curt Stanley  
Basin Environmental Consulting, LLC  
P.O. Box 381  
Lovington, New Mexico 88260  
cdstanley@basin-consulting.com

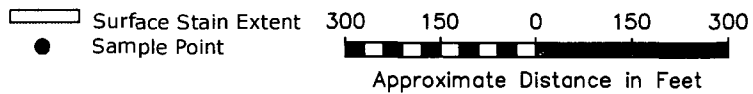
## Figures







**Legend:**



**Figure 2**  
**Site Map**  
**GP II Energy**  
**Federal Littlefield "BO"**  
**Tank Battery**  
**Eddy County, New Mexico**

**Basin Environmental Consulting**

Prep By: CDS	Checked By: CDS
January 27, 2010	Scale: Approximately 1"=300'

## Tables

Table 1

**Concentrations of Benzene, BTEX, TPH and Chloride in Soil**  
**GP II Energy, Inc.**  
**Federal Littlefield "BO" Tank Battery**  
**Eddy County, New Mexico**

*All measurements recorded in mg/Kg*

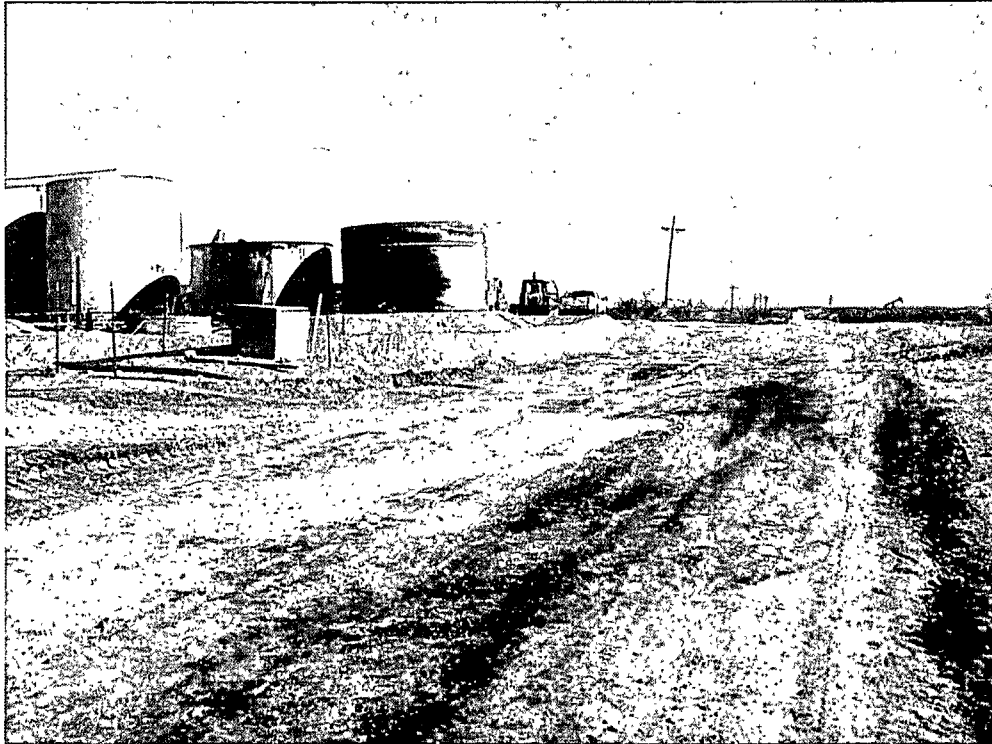
SAMPLE DATE	SAMPLE LOCATION	DEPTH	SOIL STATUS	Methods: EPA SW 846-8021B, 5030							SW 846-8015 M				EPA 300
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	m,p-XYLENE (mg/Kg)	o-XYLENE (mg/Kg)	TOTAL XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>28</sub> (mg/Kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/Kg)	TOTAL TPH C <sub>6</sub> -C <sub>35</sub> (mg/Kg)	Chloride (mg/Kg)
01/05/10	SP-1	1 foot bgs	In-Situ	<0.0012	<0.0025	0.0038	0.0098	0.0055	0.0153	0.0191	39	278	29	346	548
01/05/10	SP-2	1 foot bgs	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0011	<0.0022	<16.7	137	<16.7	137	568
01/05/10	SP-3	18 inches bgs	In-Situ	<0.0012	<0.0024	<0.0012	0.003	<0.0012	0.003	0.003	26	137	<17.7	163	2,240
01/05/10	SP-4	18 inches bgs	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0011	<0.0023	116	414	47.9	578	229
01/05/10	SP-5	18 inches bgs	In-Situ	<0.0011	0.0105	0.0293	0.0885	0.0092	0.0977	0.1375	185	602	<16.9	787	2,280
01/05/10	SP-5A	3 feet bgs	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0011	<0.0022	81	149	31.1	261	1,850
01/05/10	SP-6	18 inches bgs	In-Situ	<0.0011	0.0071	0.011	0.0244	0.0202	0.0446	0.0627	218	910	121	1,249	561
01/05/10	SP-6A	3.5 feet bgs	In-Situ	<0.0011	<0.0023	0.0037	0.0072	0.006	0.0132	0.0169	240	470	22.1	732	829
01/05/10	SP-7	18 inches bgs	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0011	<0.0022	229	262	29.6	521	1,480
01/05/10	SP-8	3 feet bgs	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0011	<0.0023	238	496	24.2	758	1,060
01/05/10	SP-8A	4 feet bgs	In-Situ	<0.0013	<0.0026	<0.0013	<0.0026	<0.0011	<0.0013	<0.0026	45.1	303	22.1	370	1,320
01/05/10	SP-9	1 foot bgs	In-Situ	<0.0013	<0.0027	<0.0013	<0.0027	<0.0013	<0.0013	<0.0027	44.3	334	<19.9	378	15.5
01/05/10	SP-10	2 feet bgs	In-Situ	<0.0011	0.0023	0.0168	0.0523	0.0096	0.0619	0.081	279	519	29.3	827	1,300
01/05/10	SP-10A	3.5 feet bgs	In-Situ	<0.0011	<0.0022	0.0011	0.0035	<0.0011	0.0035	0.0046	208	324	19.5	552	935
01/05/10	SP-11	3 feet bgs	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0011	<0.0021	139	238	28.3	405	98.5
01/05/10	SP-12	2 feet bgs	In-Situ	<0.0011	<0.0022	0.0078	0.0281	0.0108	0.0389	0.0467	269	653	22.1	944	473
01/05/10	SP-12A	3 feet bgs	In-Situ	<0.0011	<0.0021	0.0024	0.0083	0.0022	0.0105	0.0129	40.2	106	<16.1	146	275
01/05/10	SP-13	2.5 feet bgs	In-Situ	<0.0011	<0.0022	<0.0011	0.0024	<0.0011	0.0024	0.0024	38.9	495	24.9	559	79
01/05/10	SP-14	2 feet bgs	In-Situ	<0.0011	0.0028	0.0084	0.0281	0.0084	0.0365	0.0477	134	270	20.6	425	257
01/05/10	SP-15	3 feet bgs	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0011	<0.0021	<15.9	35.4	<15.9	35.4	732
01/05/10	SP-16	2.5 feet bgs	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0011	<0.0021	<16.0	<16.0	<16.0	<16.0	164
01/05/10	SP-17	4 feet bgs	In-Situ	<0.0013	0.0189	0.0312	0.0794	0.0308	0.1102	0.1603	45.8	90.7	<19.8	136.5	70.2
01/05/10	SP-18	4 feet bgs	In-Situ	<0.0011	<0.0021	<0.0011	0.0032	0.0012	0.0044	0.0044	22.6	80.5	<15.9	103.1	607
01/05/10	SP-19	3 feet bgs	In-Situ	0.2386	1.143	1.478	3.484	1.186	4.67	7.53	417	969	87.6	1,474	131
01/05/10	SP-19A	4 feet bgs	In-Situ	<0.0011	<0.0021	0.0015	0.0033	0.0012	0.0045	0.006	<15.8	18.3	<15.8	18.3	<17.7
01/05/10	SP-20	2 feet bgs	In-Situ	<0.0010	<0.0021	0.0012	<0.0021	<0.0010	<0.0010	0.0012	<15.5	<15.5	<15.5	<15.5	<4.34
01/05/10	SP-21	3 feet bgs	In-Situ	0.0013	<0.0022	<0.0011	<0.0022	<0.0011	<0.0011	0.0013	<16.8	343	42.4	385	650
<b>NMOC REGULATORY STANDARD</b>				<b>10</b>						<b>50</b>				<b>100</b>	<b>250</b>

**BOLD** indicates concentration exceeding NMOC amended regulatory standards.

## Appendices

# Appendix A

## Photographs



Initial Response at Federal Littlefield "BO" Tank Battery release, looking east toward tank battery



Initial Response at Federal Littlefield "BO" Tank Battery release, looking west along Eddy County road flowpath



Initial Response at Federal Littlefield "BO" Tank Battery release, looking west along Eddy County road flowpath



Initial Response at Federal Littlefield "BO" Tank Battery release, looking east along flowpath toward tank battery





Initial Response at Federal Littlefield "BO" Tank Battery release, looking west along Eddy County road flowpath



Initial Response at Federal Littlefield "BO" Tank Battery release, looking north along Eddy County road flowpath



Initial Response at Federal Littlefield "BO" Tank Battery release, looking west along pipeline right-of-way



Initial Response at Federal Littlefield "BO" Tank Battery release, looking west along pipeline right-of-way

## Appendix B

### Laboratory Analytical Reports

# **Analytical Report 357602**

**for**

## **GP II Energy**

**Project Manager: Curt Stanley**

**Littlefield "BO" Fed # 2**

**GP II Energy**

**12-JAN-10**



**12600 West I-20 East Odessa, Texas 79765**

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-08-TX), Arizona (AZ0738), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)  
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)  
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)  
Rhode Island (LAO00308), USDA (S-44102)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Utah (AALI1), West Virginia (362), Kentucky (85)  
Louisiana (04176), USDA (P330-07-00105)

Xenco-Miami (EPA Lab code: FL01152): Florida (E86678), Maryland (330)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-08-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-08-TX)

Xenco-Corpus Christi (EPA Lab code: TX02613): Texas (T104704370-08-TX)

Xenco-Boca Raton (EPA Lab Code: FL00449): Florida(E86240),

South Carolina(96031001), Louisiana(04154), Georgia(917)



12-JAN-10

Project Manager: **Curt Stanley**

**GP II Energy**

P.O. Box 50682

Midland, TX 79710

Reference: XENCO Report No: **357602**

**Littlefield "BO" Fed # 2**

Project Address: Eddy County, New Mexico

**Curt Stanley:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 357602. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 357602 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron, II**

Odessa Laboratory Manager

*Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.*

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - San Antonio - Austin - Tampa - Miami - Atlanta - Corpus Christi - Latin America

**GP II Energy, Midland, TX**

Littlefield "BO" Fed # 2

<b>Sample Id</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Sample Depth</b>	<b>Lab Sample Id</b>
SP-1	S	Jan-05-10 10:20		357602-001
SP-2	S	Jan-05-10 10:35		357602-002
SP-3	S	Jan-05-10 10:50		357602-003
SP-4	S	Jan-05-10 11:05		357602-004
SP-5	S	Jan-05-10 11:20		357602-005
SP-5 A	S	Jan-05-10 11:30		357602-006
SP-6	S	Jan-05-10 11:45		357602-007
SP-6 A	S	Jan-05-10 11:55		357602-008
SP-7	S	Jan-05-10 12:05		357602-009
SP-8	S	Jan-05-10 12:20		357602-010
SP-8 A	S	Jan-05-10 12:25		357602-011
SP-9	S	Jan-05-10 12:35		357602-012
SP-10	S	Jan-05-10 12:50		357602-013
SP-10 A	S	Jan-05-10 12:55		357602-014
SP-11	S	Jan-05-10 13:05		357602-015
SP-12	S	Jan-05-10 13:20		357602-016
SP-12 A	S	Jan-05-10 13:30		357602-017
SP-13	S	Jan-05-10 13:45		357602-018
SP-14	S	Jan-05-10 14:00		357602-019
SP-15	S	Jan-05-10 14:15		357602-020
SP-16	S	Jan-05-10 14:30		357602-021
SP-17	S	Jan-05-10 14:45		357602-022
SP-18	S	Jan-05-10 15:00		357602-023
SP-19	S	Jan-05-10 15:15		357602-024
SP-19 A	S	Jan-05-10 15:25		357602-025
SP-20	S	Jan-05-10 15:50		357602-026
SP-21	S	Jan-05-10 16:15		357602-027



## CASE NARRATIVE

*Client Name: GP II Energy*

*Project Name: Littlefield "BO" Fed # 2*

*Project ID: GP II Energy*

*Work Order Number: 357602*

*Report Date: 12-JAN-10*

*Date Received: 01/06/2010*

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**Sample receipt non conformances and Comments:**

None

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**Sample receipt Non Conformances and Comments per Sample:**

None

**Analytical Non Conformances and Comments:**

Batch: LBA-788416 Percent Moisture

None

Batch: LBA-788419 Percent Moisture

None

Batch: LBA-788427 Anions by E300

None

Batch: LBA-788428 Anions by E300

None

Batch: LBA-788467 BTEX by EPA 8021B

SW8021BM

Batch 788467, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 357602-013,357602-019,357602-017,357602-014.

Batch: LBA-788765 BTEX by EPA 8021B

SW8021BM

Batch 788765, 4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 357602-022.



## CASE NARRATIVE

*Client Name: GP II Energy*

*Project Name: Littlefield "BO" Fed # 2*

*Project ID: GP II Energy*

*Work Order Number: 357602*

*Report Date: 12-JAN-10*

*Date Received: 01/06/2010*

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*Batch: LBA-788785 BTEX by EPA 8021B  
SW8021BM*

*Batch 788785, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis*

*Samples affected are: 357602-007.*

*4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis*

*Samples affected are: 357602-005,357602-016,357602-008,357602-007.*

*SW8021BM*

*Batch 788785, Ethylbenzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene, Toluene recovered below QC limits in the Matrix Spike Duplicate.*

*Samples affected are: 357602-005, -007, -008, -016.*

*The Laboratory Control Sample for Toluene, Benzene, Ethylbenzene is within laboratory Control Limits*

*Batch: LBA-788825 TPH By SW8015 Mod  
SW8015MOD\_NM*

*Batch 788825, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.*

*Samples affected are: 357602-017, -005, -009, -011, -014, -001, -003, -020, -002, -004, -006, -007, -008, -013, -015, -018, -010, -012, -016, -019.*

*The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits*





## CASE NARRATIVE

*Client Name: GP II Energy*

*Project Name: Littlefield "BO" Fed # 2*

*Project ID: GP II Energy*

*Work Order Number: 357602*

*Report Date: 12-JAN-10*

*Date Received: 01/06/2010*

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*Batch: LBA-788827 BTEX by EPA 8021B  
SW8021BM*

*Batch 788827, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis*

*Samples affected are: 357602-024.*

*4-Bromofluorobenzene recovered above QC limits . Matrix interferences is suspected; data confirmed by re-analysis*

*Samples affected are: 357602-024.*

*SW8021BM*

*Batch 788827, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.*

*Samples affected are: 357602-024.*

*The Laboratory Control Sample for Toluene, m,p-Xylenes , Benzene, Ethylbenzene, o-Xylene is within laboratory Control Limits*

*Batch: LBA-788838 TPH By SW8015 Mod*

*None*



# Certificate of Analysis Summary 357602

GP II Energy, Midland, TX

Project Name: Littlefield "BO" Fed # 2



Project Id: GP II Energy

Contact: Curt Stanley

Project Location: Eddy County, New Mexico

Date Received in Lab: Wed Jan-06-10 09:53 am


Report Date: 12-JAN-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	357602-001	357602-002	357602-003	357602-004	357602-005	357602-006
	<i>Field Id:</i>	SP-1	SP-2	SP-3	SP-4	SP-5	SP-5 A
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-05-10 10:20	Jan-05-10 10:35	Jan-05-10 10:50	Jan-05-10 11:05	Jan-05-10 11:20	Jan-05-10 11:30
<b>Anions by E300</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		548 26.2	568 23.3	2240 49.7	229 9.47	2280 47.0	1850 23.5
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jan-06-10 15:00	Jan-06-10 15:00	Jan-06-10 15:00	Jan-06-10 15:00	Jan-07-10 15:45	Jan-06-10 15:00
	<i>Analyzed:</i>	Jan-06-10 15:48	Jan-06-10 16:11	Jan-06-10 16:33	Jan-06-10 16:57	Jan-08-10 05:55	Jan-06-10 18:07
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.0012	ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011
Toluene		ND 0.0025	ND 0.0022	ND 0.0024	ND 0.0023	0.0105 0.0022	ND 0.0022
Ethylbenzene		0.0038 0.0012	ND 0.0011	ND 0.0012	ND 0.0011	0.0293 0.0011	ND 0.0011
m,p-Xylenes		0.0098 0.0025	ND 0.0022	0.0030 0.0024	ND 0.0023	0.0885 0.0022	ND 0.0022
o-Xylene		0.0055 0.0012	ND 0.0011	ND 0.0012	ND 0.0011	0.0092 0.0011	ND 0.0011
Total Xylenes		0.0153 0.0012	ND 0.0011	0.0030 0.0012	ND 0.0011	0.0977 0.0011	ND 0.0011
Total BTEX		0.0191 0.0012	ND 0.0011	0.0030 0.0012	ND 0.0011	0.1375 0.0011	ND 0.0011
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		19.8 1.00	9.79 1.00	15.5 1.00	11.3 1.00	10.7 1.00	10.6 1.00
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30
	<i>Analyzed:</i>	Jan-08-10 12:11	Jan-08-10 12:38	Jan-08-10 13:04	Jan-08-10 13:30	Jan-08-10 13:56	Jan-08-10 14:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		39.0 18.8	ND 16.7	26.0 17.7	116 16.9	185 16.9	81.0 16.8
C12-C28 Diesel Range Hydrocarbons		278 18.8	137 16.7	137 17.7	414 16.9	602 16.9	149 16.8
C28-C35 Oil Range Hydrocarbons		29.0 18.8	ND 16.7	ND 17.7	47.9 16.9	ND 16.9	31.1 16.8
Total TPH		346 18.8	137 16.7	163 17.7	578 16.9	787 16.9	261 16.8

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Brent Barron, II  
Odessa Laboratory Manager



# Certificate of Analysis Summary 357602

GP II Energy, Midland, TX

Project Name: Littlefield "BO" Fed # 2



Project Id: GP II Energy

Contact: Curt Stanley

Project Location: Eddy County, New Mexico

Date Received in Lab: Wed Jan-06-10 09:53 am


Report Date: 12-JAN-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	357602-007	357602-008	357602-009	357602-010	357602-011	357602-012
	<i>Field Id:</i>	SP-6	SP-6 A	SP-7	SP-8	SP-8 A	SP-9
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-05-10 11:45	Jan-05-10 11:55	Jan-05-10 12:05	Jan-05-10 12:20	Jan-05-10 12:25	Jan-05-10 12:35
Anions by E300	<i>Extracted:</i>	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25
	<i>Analyzed:</i>	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		561 9.24	829 9.49	1480 23.6	1060 48.2	1320 55.4	15.5 5.56
BTEX by EPA 8021B	<i>Extracted:</i>	Jan-07-10 15:45	Jan-07-10 15:45	Jan-06-10 15:00	Jan-06-10 15:00	Jan-06-10 15:00	Jan-06-10 15:00
	<i>Analyzed:</i>	Jan-08-10 06:17	Jan-08-10 06:39	Jan-06-10 19:16	Jan-06-10 19:39	Jan-06-10 20:47	Jan-06-10 21:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0013	ND 0.0013
Toluene		0.0071 0.0022	ND 0.0023	ND 0.0022	ND 0.0023	ND 0.0026	ND 0.0027
Ethylbenzene		0.0110 0.0011	0.0037 0.0011	ND 0.0011	ND 0.0011	ND 0.0013	ND 0.0013
m,p-Xylenes		0.0244 0.0022	0.0072 0.0023	ND 0.0022	ND 0.0023	ND 0.0026	ND 0.0027
o-Xylene		0.0202 0.0011	0.0060 0.0011	ND 0.0011	ND 0.0011	ND 0.0013	ND 0.0013
Total Xylenes		0.0446 0.0011	0.0132 0.0011	ND 0.0011	ND 0.0011	ND 0.0013	ND 0.0013
Total BTEX		0.0627 0.0011	0.0169 0.0011	ND 0.0011	ND 0.0011	ND 0.0013	ND 0.0013
Percent Moisture	<i>Extracted:</i>	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00
	<i>Analyzed:</i>	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		9.09 1.00	11.5 1.00	11.0 1.00	12.8 1.00	24.2 1.00	24.5 1.00
TPH By SW8015 Mod	<i>Extracted:</i>	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30
	<i>Analyzed:</i>	Jan-08-10 14:49	Jan-08-10 15:15	Jan-08-10 15:42	Jan-08-10 16:08	Jan-08-10 17:00	Jan-08-10 17:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		218 16.5	240 16.9	229 16.8	238 17.2	45.1 19.8	44.3 19.9
C12-C28 Diesel Range Hydrocarbons		910 16.5	470 16.9	262 16.8	496 17.2	303 19.8	334 19.9
C28-C35 Oil Range Hydrocarbons		121 16.5	22.1 16.9	29.6 16.8	24.2 17.2	22.1 19.8	ND 19.9
Total TPH		1249 16.5	732 16.9	521 16.8	758 17.2	370 19.8	378 19.9

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Brent Barron, II  
Odessa Laboratory Manager



# Certificate of Analysis Summary 357602

GP II Energy, Midland, TX

Project Name: Littlefield "BO" Fed # 2



Project Id: GP II Energy

Contact: Curt Stanley

Project Location: Eddy County, New Mexico

Date Received in Lab: Wed Jan-06-10 09:53 am

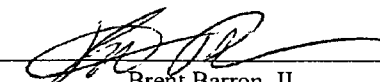
Report Date: 12-JAN-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	357602-013	357602-014	357602-015	357602-016	357602-017	357602-018
	<i>Field Id:</i>	SP-10	SP-10 A	SP-11	SP-12	SP-12 A	SP-13
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-05-10 12:50	Jan-05-10 12:55	Jan-05-10 13:05	Jan-05-10 13:20	Jan-05-10 13:30	Jan-05-10 13:45
<b>Anions by E300</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 20:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1300 18.3	935 18.3	98.5 8.97	473 9.30	275 9.02	79.0 4.60
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jan-06-10 15:00	Jan-06-10 15:00	Jan-06-10 15:00	Jan-07-10 15:45	Jan-06-10 15:00	Jan-06-10 15:00
	<i>Analyzed:</i>	Jan-06-10 21:33	Jan-06-10 21:56	Jan-06-10 22:19	Jan-08-10 07:01	Jan-06-10 23:04	Jan-06-10 23:27
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011
Toluene		0.0023 0.0022	ND 0.0022	ND 0.0021	ND 0.0022	ND 0.0021	ND 0.0022
Ethylbenzene		0.0168 0.0011	0.0011 0.0011	ND 0.0011	0.0078 0.0011	0.0024 0.0011	ND 0.0011
m,p-Xylenes		0.0523 0.0022	0.0035 0.0022	ND 0.0021	0.0281 0.0022	0.0083 0.0021	0.0024 0.0022
o-Xylene		0.0096 0.0011	ND 0.0011	ND 0.0011	0.0108 0.0011	0.0022 0.0011	ND 0.0011
Total Xylenes		0.0619 0.0011	0.0035 0.0011	ND 0.0011	0.0389 0.0011	0.0105 0.0011	0.0024 0.0011
Total BTEX		0.0810 0.0011	0.0046 0.0011	ND 0.0011	0.0467 0.0011	0.0129 0.0011	0.0024 0.0011
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		8.44 1.00	7.98 1.00	6.31 1.00	9.65 1.00	6.92 1.00	8.77 1.00
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 12:30
	<i>Analyzed:</i>	Jan-08-10 17:53	Jan-08-10 18:19	Jan-08-10 18:45	Jan-08-10 19:11	Jan-08-10 19:37	Jan-08-10 20:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		279 16.4	208 16.3	139 16.0	269 16.6	40.2 16.1	38.9 16.4
C12-C28 Diesel Range Hydrocarbons		519 16.4	324 16.3	238 16.0	653 16.6	106 16.1	495 16.4
C28-C35 Oil Range Hydrocarbons		29.3 16.4	19.5 16.3	28.3 16.0	22.1 16.6	ND 16.1	24.9 16.4
Total TPH		827 16.4	552 16.3	405 16.0	944 16.6	146 16.1	559 16.4

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Brent Barron, II  
Odessa Laboratory Manager



# Certificate of Analysis Summary 357602

GP II Energy, Midland, TX

Project Name: Littlefield "BO" Fed # 2



Project Id: GP II Energy

Contact: Curt Stanley

Project Location: Eddy County, New Mexico

Date Received in Lab: Wed Jan-06-10 09:53 am


Report Date: 12-JAN-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	357602-019	357602-020	357602-021	357602-022	357602-023	357602-024
	<i>Field Id:</i>	SP-14	SP-15	SP-16	SP-17	SP-18	SP-19
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jan-05-10 14:00	Jan-05-10 14:15	Jan-05-10 14:30	Jan-05-10 14:45	Jan-05-10 15:00	Jan-05-10 15:15
<b>Anions by E300</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-07-10 20:25	Jan-07-10 20:25	Jan-07-10 01:42	Jan-07-10 01:42	Jan-07-10 01:42	Jan-07-10 01:42
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		257 9.07	732 8.90	164 4.47	70.2 5.55	607 8.93	131 10.6
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jan-06-10 15:00	Jan-06-10 15:00	Jan-06-10 15:30	Jan-06-10 15:30	Jan-06-10 15:30	Jan-07-10 09:55
	<i>Analyzed:</i>	Jan-06-10 23:49	Jan-07-10 00:12	Jan-07-10 08:19	Jan-07-10 08:41	Jan-07-10 09:03	Jan-09-10 04:37
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0013	ND 0.0011	0.2386 0.0314
Toluene		0.0028 0.0022	ND 0.0021	ND 0.0021	0.0189 0.0026	ND 0.0021	1.143 0.0628
Ethylbenzene		0.0084 0.0011	ND 0.0011	ND 0.0011	0.0312 0.0013	ND 0.0011	1.478 0.0314
m,p-Xylenes		0.0281 0.0022	ND 0.0021	ND 0.0021	0.0794 0.0026	0.0032 0.0021	3.484 0.0628
o-Xylene		0.0084 0.0011	ND 0.0011	ND 0.0011	0.0308 0.0013	0.0012 0.0011	1.186 0.0314
Total Xylenes		0.0365 0.0011	ND 0.0011	ND 0.0011	0.1102 0.0013	0.0044 0.0011	4.670 0.0314
Total BTEX		0.0477 0.0011	ND 0.0011	ND 0.0011	0.1603 0.0013	0.0044 0.0011	7.530 0.0314
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00
	<i>Units/RL:</i>	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		7.38 1.00	5.64 1.00	5.99 1.00	24.3 1.00	5.95 1.00	20.7 1.00
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Jan-07-10 12:30	Jan-07-10 12:30	Jan-07-10 13:00	Jan-07-10 13:00	Jan-07-10 13:00	Jan-07-10 13:00
	<i>Analyzed:</i>	Jan-08-10 20:29	Jan-08-10 20:55	Jan-09-10 15:08	Jan-09-10 15:34	Jan-09-10 16:01	Jan-09-10 16:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		134 16.2	ND 15.9	ND 16.0	45.8 19.8	22.6 15.9	417 18.9
C12-C28 Diesel Range Hydrocarbons		270 16.2	35.4 15.9	ND 16.0	90.7 19.8	80.5 15.9	969 18.9
C28-C35 Oil Range Hydrocarbons		20.6 16.2	ND 15.9	ND 16.0	ND 19.8	ND 15.9	87.6 18.9
Total TPH		425 16.2	35.4 15.9	ND 16.0	136.5 19.8	103.1 15.9	1474 18.9

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Brent Barron, II  
Odessa Laboratory Manager



# Certificate of Analysis Summary 357602

GP II Energy, Midland, TX

Project Name: Littlefield "BO" Fed # 2



Project Id: GP II Energy

Contact: Curt Stanley

Project Location: Eddy County, New Mexico

Date Received in Lab: Wed Jan-06-10 09:53 am


Report Date: 12-JAN-10

Project Manager: Brent Barron, II

<i>Analysis Requested</i>	<i>Lab Id:</i>	357602-025	357602-026	357602-027			
	<i>Field Id:</i>	SP-19 A	SP-20	SP-21			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	Jan-05-10 15:25	Jan-05-10 15:50	Jan-05-10 16:15			
<b>Anions by E300</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-07-10 01:42	Jan-07-10 01:42	Jan-07-10 01:42			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		ND 17.7	ND 4.34	650 23.6			
<b>BTEX by EPA 8021B</b>	<i>Extracted:</i>	Jan-06-10 15:30	Jan-06-10 15:30	Jan-06-10 15:30			
	<i>Analyzed:</i>	Jan-07-10 09:47	Jan-07-10 10:10	Jan-07-10 10:32			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Benzene		ND 0.0011	ND 0.0010	0.0013 0.0011			
Toluene		ND 0.0021	ND 0.0021	ND 0.0022			
Ethylbenzene		0.0015 0.0011	0.0012 0.0010	ND 0.0011			
m,p-Xylenes		0.0033 0.0021	ND 0.0021	ND 0.0022			
o-Xylene		0.0012 0.0011	ND 0.0010	ND 0.0011			
Total Xylenes		0.0045 0.0011	ND 0.0010	ND 0.0011			
Total BTEX		0.0060 0.0011	0.0012 0.0010	0.0013 0.0011			
<b>Percent Moisture</b>	<i>Extracted:</i>						
	<i>Analyzed:</i>	Jan-06-10 17:00	Jan-06-10 17:00	Jan-06-10 17:00			
	<i>Units/RL:</i>	% RL	% RL	% RL			
Percent Moisture		5.06 1.00	3.13 1.00	10.9 1.00			
<b>TPH By SW8015 Mod</b>	<i>Extracted:</i>	Jan-07-10 13:00	Jan-07-10 13:00	Jan-07-10 13:00			
	<i>Analyzed:</i>	Jan-09-10 16:55	Jan-09-10 17:21	Jan-09-10 17:48			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
C6-C12 Gasoline Range Hydrocarbons		ND 15.8	ND 15.5	ND 16.8			
C12-C28 Diesel Range Hydrocarbons		18.3 15.8	ND 15.5	343 16.8			
C28-C35 Oil Range Hydrocarbons		ND 15.8	ND 15.5	42.4 16.8			
Total TPH		18.3 15.8	ND 15.5	385 16.8			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron, II  
Odessa Laboratory Manager



## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- \* Outside XENCO's scope of NELAC Accreditation.

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## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788467

Sample: 547095-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 01/06/10 13:49	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0343	0.0300	114	80-120
4-Bromofluorobenzene		0.0330	0.0300	110	80-120

Lab Batch #: 788467

Sample: 547095-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 01/06/10 14:16	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0335	0.0300	112	80-120
4-Bromofluorobenzene		0.0326	0.0300	109	80-120

Lab Batch #: 788467

Sample: 547095-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 01/06/10 15:25	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0268	0.0300	89	80-120
4-Bromofluorobenzene		0.0304	0.0300	101	80-120

Lab Batch #: 788467

Sample: 357602-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 01/06/10 15:48	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0253	0.0300	84	80-120
4-Bromofluorobenzene		0.0350	0.0300	117	80-120

Lab Batch #: 788467

Sample: 357602-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 01/06/10 16:11	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0260	0.0300	87	80-120
4-Bromofluorobenzene		0.0331	0.0300	110	80-120

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.





## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788467

Sample: 357602-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/10 16:33

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0340	0.0300	113	80-120	

Lab Batch #: 788467

Sample: 357602-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/10 16:57

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0263	0.0300	88	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 788467

Sample: 357602-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/10 18:07

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0258	0.0300	86	80-120	
4-Bromofluorobenzene	0.0319	0.0300	106	80-120	

Lab Batch #: 788467

Sample: 357602-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/10 19:16

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0266	0.0300	89	80-120	
4-Bromofluorobenzene	0.0360	0.0300	120	80-120	

Lab Batch #: 788467

Sample: 357602-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/10 19:39

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788467

Sample: 357602-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/10 20:47

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 788467

Sample: 357602-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/10 21:10

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0307	0.0300	102	80-120	

Lab Batch #: 788467

Sample: 357602-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/10 21:33

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0242	0.0300	81	80-120	
4-Bromofluorobenzene	0.0497	0.0300	166	80-120	*

Lab Batch #: 788467

Sample: 357602-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/10 21:56

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0371	0.0300	124	80-120	*

Lab Batch #: 788467

Sample: 357602-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/06/10 22:19

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0262	0.0300	87	80-120	
4-Bromofluorobenzene	0.0345	0.0300	115	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788467

Sample: 357602-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 01/06/10 23:04	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0252	0.0300	84	80-120
4-Bromofluorobenzene		0.0374	0.0300	125	80-120 *

Lab Batch #: 788467

Sample: 357602-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 01/06/10 23:27	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0263	0.0300	88	80-120
4-Bromofluorobenzene		0.0338	0.0300	113	80-120

Lab Batch #: 788467

Sample: 357602-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 01/06/10 23:49	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0255	0.0300	85	80-120
4-Bromofluorobenzene		0.0424	0.0300	141	80-120 *

Lab Batch #: 788467

Sample: 357602-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 01/07/10 00:12	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0272	0.0300	91	80-120
4-Bromofluorobenzene		0.0322	0.0300	107	80-120

Lab Batch #: 788467

Sample: 357602-015 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 01/07/10 00:34	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0324	0.0300	108	80-120
4-Bromofluorobenzene		0.0317	0.0300	106	80-120

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788467

Sample: 357602-015 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/10 00:57

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0321	0.0300	107	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

Lab Batch #: 788765

Sample: 547268-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/07/10 06:29

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0316	0.0300	105	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 788765

Sample: 547268-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/07/10 06:51

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 788765

Sample: 547268-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/07/10 07:57

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 788765

Sample: 357602-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/10 08:19

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788765

Sample: 357602-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/10 08:41

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0256	0.0300	85	80-120	
4-Bromofluorobenzene	0.0459	0.0300	153	80-120	*

Lab Batch #: 788765

Sample: 357602-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/10 09:03

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0259	0.0300	86	80-120	
4-Bromofluorobenzene	0.0328	0.0300	109	80-120	

Lab Batch #: 788765

Sample: 357602-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/10 09:47

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0253	0.0300	84	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 788765

Sample: 357602-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/10 10:10

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0259	0.0300	86	80-120	
4-Bromofluorobenzene	0.0349	0.0300	116	80-120	

Lab Batch #: 788765

Sample: 357602-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/10 10:32

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 \times A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788765

Sample: 357602-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/10 12:03

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0310	0.0300	103	80-120	

Lab Batch #: 788765

Sample: 357602-021 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/07/10 12:25

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 788785

Sample: 547277-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/08/10 02:16

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0308	0.0300	103	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 788785

Sample: 547277-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/08/10 03:00

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

Lab Batch #: 788785

Sample: 357602-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 05:55

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0253	0.0300	84	80-120	
4-Bromofluorobenzene	0.0683	0.0300	228	80-120	**

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788785

Sample: 357602-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 06:17

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0232	0.0300	77	80-120	**
4-Bromofluorobenzene	0.0396	0.0300	132	80-120	**

Lab Batch #: 788785

Sample: 357602-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 06:39

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0368	0.0300	123	80-120	**

Lab Batch #: 788785

Sample: 357602-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 07:01

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0441	0.0300	147	80-120	**

Lab Batch #: 788785

Sample: 357700-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 07:23

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0358	0.0300	119	80-120	

Lab Batch #: 788785

Sample: 357700-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 07:45

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0322	0.0300	107	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.

## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788827

Sample: 547316-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/08/10 20:33

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0320	0.0300	107	80-120	
4-Bromofluorobenzene		0.0297	0.0300	99	80-120	

Lab Batch #: 788827

Sample: 547316-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/08/10 20:56

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0316	0.0300	105	80-120	
4-Bromofluorobenzene		0.0303	0.0300	101	80-120	

Lab Batch #: 788827

Sample: 547316-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/08/10 21:41

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0273	0.0300	91	80-120	
4-Bromofluorobenzene		0.0292	0.0300	97	80-120	

Lab Batch #: 788827

Sample: 357602-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/09/10 04:37

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0205	0.0300	68	80-120	**
4-Bromofluorobenzene		0.0362	0.0300	121	80-120	**

Lab Batch #: 788827

Sample: 357767-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/09/10 05:43

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes						
1,4-Difluorobenzene		0.0283	0.0300	94	80-120	
4-Bromofluorobenzene		0.0297	0.0300	99	80-120	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788827

Sample: 357767-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/09/10 06:05

### SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0288	0.0300	96	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 788825

Sample: 547315-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/08/10 10:53

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	105	99.8	105	70-135	
o-Terphenyl	47.8	49.9	96	70-135	

Lab Batch #: 788825

Sample: 547315-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/08/10 11:19

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	93.7	100	94	70-135	
o-Terphenyl	43.8	50.1	87	70-135	

Lab Batch #: 788825

Sample: 547315-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/08/10 11:45

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	86.2	99.7	86	70-135	
o-Terphenyl	49.4	49.9	99	70-135	

Lab Batch #: 788825

Sample: 357602-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 12:11

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	90.3	101	89	70-135	
o-Terphenyl	51.6	50.3	103	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788825

Sample: 357602-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 12:38

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.5	100	89	70-135	
o-Terphenyl	50.5	50.1	101	70-135	

Lab Batch #: 788825

Sample: 357602-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 13:04

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	99.6	93	70-135	
o-Terphenyl	52.4	49.8	105	70-135	

Lab Batch #: 788825

Sample: 357602-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 13:30

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.9	100	92	70-135	
o-Terphenyl	50.6	50.1	101	70-135	

Lab Batch #: 788825

Sample: 357602-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 13:56

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.2	101	87	70-135	
o-Terphenyl	49.8	50.3	99	70-135	

Lab Batch #: 788825

Sample: 357602-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 14:23

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.6	100	87	70-135	
o-Terphenyl	49.8	50.1	99	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788825

Sample: 357602-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 14:49

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.9	100	92	70-135	
o-Terphenyl	50.0	50.0	100	70-135	

Lab Batch #: 788825

Sample: 357602-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 15:15

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.1	100	92	70-135	
o-Terphenyl	52.4	50.0	105	70-135	

Lab Batch #: 788825

Sample: 357602-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 15:42

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.1	99.6	86	70-135	
o-Terphenyl	49.7	49.8	100	70-135	

Lab Batch #: 788825

Sample: 357602-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 16:08

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	100	85	70-135	
o-Terphenyl	50.4	50.0	101	70-135	

Lab Batch #: 788825

Sample: 357602-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 17:00

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.3	100	91	70-135	
o-Terphenyl	52.2	50.0	104	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788825

Sample: 357602-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 17:27

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.2	100	88	70-135	
o-Terphenyl	51.3	50.0	103	70-135	

Lab Batch #: 788825

Sample: 357602-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 17:53

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.6	100	97	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 788825

Sample: 357602-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 18:19

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.9	100	91	70-135	
o-Terphenyl	50.0	50.0	100	70-135	

Lab Batch #: 788825

Sample: 357602-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 18:45

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	85.1	99.7	85	70-135	
o-Terphenyl	48.7	49.9	98	70-135	

Lab Batch #: 788825

Sample: 357602-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 19:11

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.1	100	94	70-135	
o-Terphenyl	54.7	50.0	109	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788825

Sample: 357602-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 19:37

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.2	100	92	70-135	
o-Terphenyl	51.8	50.0	104	70-135	

Lab Batch #: 788825

Sample: 357602-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 20:03

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.0	100	88	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 788825

Sample: 357602-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 20:29

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.2	100	88	70-135	
o-Terphenyl	50.0	50.0	100	70-135	

Lab Batch #: 788825

Sample: 357602-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 20:55

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.7	100	89	70-135	
o-Terphenyl	50.4	50.0	101	70-135	

Lab Batch #: 788825

Sample: 357602-006 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 21:21

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.9	99.5	99	70-135	
o-Terphenyl	46.1	49.8	93	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.

## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788825

Sample: 357602-006 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/08/10 21:47

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.8	99.7	99	70-135	
o-Terphenyl	45.7	49.9	92	70-135	

Lab Batch #: 788838

Sample: 547321-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/09/10 13:47

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.5	103	70-135	
o-Terphenyl	46.8	49.8	94	70-135	

Lab Batch #: 788838

Sample: 547321-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/09/10 14:14

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.9	101	70-135	
o-Terphenyl	46.7	50.0	93	70-135	

Lab Batch #: 788838

Sample: 547321-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 01/09/10 14:41

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.4	101	90	70-135	
o-Terphenyl	50.7	50.3	101	70-135	

Lab Batch #: 788838

Sample: 357602-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/09/10 15:08

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.0	100	96	70-135	
o-Terphenyl	53.6	50.0	107	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788838

Sample: 357602-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/09/10 15:34

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	62.0	50.0	124	70-135	

Lab Batch #: 788838

Sample: 357602-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/09/10 16:01

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.0	100	94	70-135	
o-Terphenyl	52.6	50.0	105	70-135	

Lab Batch #: 788838

Sample: 357602-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/09/10 16:28

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	55.1	50.1	110	70-135	

Lab Batch #: 788838

Sample: 357602-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/09/10 16:55

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.1	100	91	70-135	
o-Terphenyl	51.5	50.0	103	70-135	

Lab Batch #: 788838

Sample: 357602-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/09/10 17:21

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.0	100	97	70-135	
o-Terphenyl	53.6	50.0	107	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Littlefield "BO" Fed # 2

Work Orders : 357602,

Project ID: GP II Energy

Lab Batch #: 788838

Sample: 357602-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/09/10 17:48

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	113	100	113	70-135	
o-Terphenyl	62.5	50.0	125	70-135	

Lab Batch #: 788838

Sample: 357602-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/10/10 00:18

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	98.0	99.9	98	70-135	
o-Terphenyl	45.0	50.0	90	70-135	

Lab Batch #: 788838

Sample: 357602-021 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 01/10/10 00:44

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
I-Chlorooctane	100	99.9	100	70-135	
o-Terphenyl	46.1	50.0	92	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.





## Blank Spike Recovery



Project Name: Littlefield "BO" Fed # 2

Work Order #: 357602

Project ID:

GP II Energy

Lab Batch #: 788785

Sample: 547277-1-BKS

Matrix: Solid

Date Analyzed: 01/08/2010

Date Prepared: 01/07/2010

Analyst: ASA

Reporting Units: mg/kg

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Benzene	ND	0.1000	0.0892	89	70-130	
Toluene	ND	0.1000	0.0907	91	70-130	
Ethylbenzene	ND	0.1000	0.0913	91	71-129	
m,p-Xylenes	ND	0.2000	0.1875	94	70-135	
o-Xylene	ND	0.1000	0.0987	99	71-133	

Lab Batch #: 788427

Sample: 788427-1-BKS

Matrix: Solid

Date Analyzed: 01/07/2010

Date Prepared: 01/07/2010

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Anions by E300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.6	106	75-125	

Lab Batch #: 788428

Sample: 788428-1-BKS

Matrix: Solid

Date Analyzed: 01/07/2010

Date Prepared: 01/07/2010

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

### BLANK /BLANK SPIKE RECOVERY STUDY

Anions by E300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	10.7	107	75-125	

Blank Spike Recovery [D] =  $100 * [C] / [B]$

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



## BS / BSD Recoveries



Project Name: Littlefield "BO" Fed # 2

Work Order #: 357602

Analyst: ASA

Date Prepared: 01/06/2010

Project ID: GP II Energy

Date Analyzed: 01/06/2010

Lab Batch ID: 788467

Sample: 547095-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	ND	0.1000	0.1029	103	0.1	0.1010	101	2	70-130	35	
Toluene	ND	0.1000	0.1055	106	0.1	0.1037	104	2	70-130	35	
Ethylbenzene	ND	0.1000	0.1053	105	0.1	0.1035	104	2	71-129	35	
m,p-Xylenes	ND	0.2000	0.2167	108	0.2	0.2126	106	2	70-135	35	
o-Xylene	ND	0.1000	0.1127	113	0.1	0.1108	111	2	71-133	35	

Analyst: ASA

Date Prepared: 01/06/2010

Date Analyzed: 01/07/2010

Lab Batch ID: 788765

Sample: 547268-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	ND	0.1000	0.0941	94	0.1	0.0932	93	1	70-130	35	
Toluene	ND	0.1000	0.0893	89	0.1	0.0912	91	2	70-130	35	
Ethylbenzene	ND	0.1000	0.0869	87	0.1	0.0892	89	3	71-129	35	
m,p-Xylenes	ND	0.2000	0.1780	89	0.2	0.1829	91	3	70-135	35	
o-Xylene	ND	0.1000	0.0940	94	0.1	0.0964	96	3	71-133	35	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



## BS / BSD Recoveries



Project Name: Littlefield "BO" Fed # 2

Work Order #: 357602

Analyst: ASA

Date Prepared: 01/07/2010

Project ID: GP II Energy

Date Analyzed: 01/08/2010

Lab Batch ID: 788827

Sample: 547316-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	ND	0.1000	0.0939	94	0.1	0.0928	93	1	70-130	35	
Toluene	ND	0.1000	0.0951	95	0.1	0.0944	94	1	70-130	35	
Ethylbenzene	ND	0.1000	0.0939	94	0.1	0.0938	94	0	71-129	35	
m,p-Xylenes	ND	0.2000	0.1910	96	0.2	0.1913	96	0	70-135	35	
o-Xylene	ND	0.1000	0.1006	101	0.1	0.1011	101	0	71-133	35	

Analyst: BEV

Date Prepared: 01/07/2010

Date Analyzed: 01/08/2010

Lab Batch ID: 788825

Sample: 547315-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK/BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	998	915	92	1000	849	85	7	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	998	945	95	1000	783	78	19	70-135	35	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



## BS / BSD Recoveries



Project Name: Littlefield "BO" Fed # 2

Work Order #: 357602

Analyst: BEV

Date Prepared: 01/07/2010

Project ID: GP II Energy

Date Analyzed: 01/09/2010

Lab Batch ID: 788838

Sample: 547321-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	995	890	89	999	877	88	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	995	846	85	999	844	84	0	70-135	35	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries



Project Name: Littlefield "BO" Fed # 2

Work Order #: 357602

Lab Batch #: 788427

Date Analyzed: 01/07/2010

Date Prepared: 01/07/2010

Project ID: GP II Energy

Analyst: LATCOR

QC- Sample ID: 357602-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	548	748	1300	101	75-125	

Lab Batch #: 788428

Date Analyzed: 01/07/2010

Date Prepared: 01/07/2010

Analyst: LATCOR

QC- Sample ID: 357602-021 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	164	160	323	99	75-125	

Matrix Spike Percent Recovery [D] =  $100 \times (C-A)/B$

Relative Percent Difference [E] =  $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



# Form 3 - MS / MSD Recoveries



Project Name: Littlefield "BO" Fed # 2

Work Order #: 357602

Project ID: GP II Energy

Lab Batch ID: 788467

QC- Sample ID: 357602-015 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/07/2010

Date Prepared: 01/06/2010

Analyst: ASA

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1067	0.0936	88	0.1067	0.0905	85	3	70-130	35	
Toluene	ND	0.1067	0.0942	88	0.1067	0.0914	86	3	70-130	35	
Ethylbenzene	ND	0.1067	0.0907	85	0.1067	0.0883	83	3	71-129	35	
m,p-Xylenes	ND	0.2135	0.1857	87	0.2135	0.1813	85	2	70-135	35	
o-Xylene	ND	0.1067	0.0965	90	0.1067	0.0935	88	3	71-133	35	

Lab Batch ID: 788765

QC- Sample ID: 357602-021 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/07/2010

Date Prepared: 01/06/2010

Analyst: ASA

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1064	0.0928	87	0.1064	0.0889	84	4	70-130	35	
Toluene	ND	0.1064	0.0952	89	0.1064	0.0902	85	5	70-130	35	
Ethylbenzene	ND	0.1064	0.0917	86	0.1064	0.0866	81	6	71-129	35	
m,p-Xylenes	ND	0.2127	0.1889	89	0.2127	0.1781	84	6	70-135	35	
o-Xylene	ND	0.1064	0.0965	91	0.1064	0.0910	86	6	71-133	35	

Matrix Spike Percent Recovery  $[D] = 100 \cdot (C-A)/B$   
Relative Percent Difference  $RPD = 200 \cdot |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \cdot (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Form 3 - MS / MSD Recoveries



Project Name: Littlefield "BO" Fed # 2

Work Order #: 357602

Project ID: GP II Energy

Lab Batch ID: 788785

QC- Sample ID: 357700-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/08/2010

Date Prepared: 01/07/2010

Analyst: ASA

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1045	0.0749	72	0.1045	0.0699	67	7	70-130	35	X
Toluene	ND	0.1045	0.0750	72	0.1045	0.0719	69	4	70-130	35	X
Ethylbenzene	ND	0.1045	0.0731	70	0.1045	0.0727	70	1	71-129	35	X
m,p-Xylenes	ND	0.2090	0.1497	72	0.2090	0.1499	72	0	70-135	35	
o-Xylene	ND	0.1045	0.0775	74	0.1045	0.0767	73	1	71-133	35	

Lab Batch ID: 788827

QC- Sample ID: 357767-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/09/2010

Date Prepared: 01/07/2010

Analyst: ASA

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	ND	0.1237	0.0161	13	0.1232	0.0181	15	12	70-130	35	X
Toluene	ND	0.1237	0.0104	8	0.1232	0.0131	11	23	70-130	35	X
Ethylbenzene	ND	0.1237	0.0139	11	0.1232	0.0160	13	14	71-129	35	X
m,p-Xylenes	ND	0.2474	0.0284	11	0.2464	0.0313	13	10	70-135	35	X
o-Xylene	ND	0.1237	0.0162	13	0.1232	0.0183	15	12	71-133	35	X

Matrix Spike Percent Recovery  $[D] = 100 \cdot (C-A)/B$   
Relative Percent Difference  $RPD = 200 \cdot |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \cdot (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not  
ApplicableN = See Narrative, EQL = Estimated Quantitation Limit



# Form 3 - MS / MSD Recoveries



Project Name: Littlefield "BO" Fed # 2

Work Order #: 357602

Project ID: GP II Energy

Lab Batch ID: 788825

QC- Sample ID: 357602-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/08/2010

Date Prepared: 01/07/2010

Analyst: BEV

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	81.0	1110	973	80	1120	977	80	0	70-135	35	
C12-C28 Diesel Range Hydrocarbons	149	1110	901	68	1120	919	69	2	70-135	35	X

Lab Batch ID: 788838

QC- Sample ID: 357602-021 S

Batch #: 1 Matrix: Soil

Date Analyzed: 01/10/2010

Date Prepared: 01/07/2010

Analyst: BEV

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1060	931	88	1060	921	87	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1060	872	82	1060	861	81	1	70-135	35	

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
Relative Percent Difference  $RPD = 200 \times (C-F)/(C+F)$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not  
ApplicableN = See Narrative, EQL = Estimated Quantitation Limit





## Sample Duplicate Recovery



Project Name: Littlefield "BO" Fed # 2

Work Order #: 357602

Lab Batch #: 788427

Project ID: GP II Energy

Date Analyzed: 01/07/2010

Date Prepared: 01/07/2010

Analyst: LATCOR

QC- Sample ID: 357602-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	548	547	0	20	

Lab Batch #: 788428

Date Prepared: 01/07/2010

Analyst: LATCOR

Date Analyzed: 01/07/2010

QC- Sample ID: 357602-021 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by E300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	164	160	2	20	

Lab Batch #: 788416

Date Prepared: 01/06/2010

Analyst: MOV

Date Analyzed: 01/06/2010

QC- Sample ID: 357602-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	19.8	20.7	5	20	

Lab Batch #: 788419

Date Prepared: 01/06/2010

Analyst: MOV

Date Analyzed: 01/06/2010

QC- Sample ID: 357602-021 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	5.99	5.83	3	20	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$

All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

**A Xenco Laboratories Company**

**12600 West I-20 East  
Odessa, Texas 79765**

**Phone: 432-563-1800**  
**Fax: 432-563-1713**

Page 1 of 3

**Project Name: Littlefield "BO" Fed #2**

**Project #: GP II Energy**

**Project Loc:** Eddy County, New Mexico

PO #:

**Fax No: 575-396-1429**

**Report Format:** ☒ Standard ☐ TRRP ☐ NPDES

**e-mail:** [cdstanley@basin-consulting.com](mailto:cdstanley@basin-consulting.com)

(lab use only)

**ORDER #:**

357602

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Isc	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify)	DW=Drinking Water SL=Sludge GW=Groundwater SS=Soil/Solid NP=Non-Petroleum Spills/Other	TPH: 418.1 8015M 8015M	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8280	RCI	N.O.R.M.	Chlorides EPA 300	HOLD	RUSH TAT (Pre-Schedule) 24, 48	Standard TAT
01	SP-1			1/5/2010	1020	1	X									Soil	X							X		X					X
02	SP-2			1/5/2010	1035	1	X									Soil	X							X		X					X
03	SP-3			1/5/2010	1050	1	X									Soil	X							X		X					X
04	SP-4			1/5/2010	1105	1	X									Soil	X							X		X					X
05	SP-5			1/5/2010	1120	1	X									Soil	X							X		X					X
06	SP-5A			1/5/2010	1130	1	X									Soil	X							X		X					X
07	SP-6			1/5/2010	1145	1	X									Soil	X							X		X					X
08	SP-6A			1/5/2010	1155	1	X									Soil	X							X		X					X
09	SP-7			1/5/2010	1205	1	X									Soil	X							X		X					X
10	SP-8			1/5/2010	1220	1	X									Soil	X							X		X					X

**Special Instructions:**

**BILL TO GP H ENERGY**

Reinquished by:

Date	Time
6/10	0953

Received by:

Date	Time
------	------

Relinquished by:

Date	Time
------	------

Received by.

Date	Time
------	------

Relinquished by:

Date	Time
------	------

Received by ELOT:

Date	Time
------	------

**Laboratory Comments:**

## Simple Containers Instruct?

## VOCs Free of Headspace?

Labels on containers:

### Custody seals on containers

Custody seals on books (a)

**Sample Hand Delivered**  
by Complaint Client: E. J. [redacted]

by Sampler/Client Rep. ?  
by Courier? \_\_\_\_\_ HBB

U 07.91958

Temperature Upon Receipt \_\_\_\_\_

31. 0

# Environmental Lab of Texas

A Xenco Laboratories Company

## CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East  
Odessa, Texas 79765

Phone: 432-563-1800  
Fax: 432-563-1713

Project Manager: Curt Stanley Page 2 of 3

Project Name: Littlefield "BO" Fed #2

Company Name: GP II Energy

Project #: GP II Energy

Company Address: P.O. Box 50682

Project Loc: Eddy County, New Mexico

City/State/Zip: Midland, Texas 79710

PO #:

Telephone No: 575-441-2244

Fax No: 575-396-1429

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

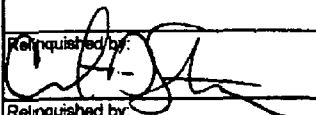
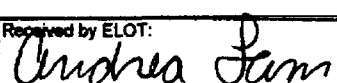
Sampler Signature: 

e-mail: cdstanley@basin-consulting.com

(lab use only)												Analyze For:																	
ORDER #: 357602												TCLP: TOTAL:																	
LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Preservation & # of Containers							Matrix	TPH: 418.1 8015M 8015B TX 1005 TX 1008	Cations (Ca, Mg, Na, K)	Anions (Cl, SO4, Alkalinity)	BAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semi-volatiles	BTX: 9021B/5020 or BTX 6260	RCI	NORM	Chloride EPA 300	HOLD	RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
								Ice	HNO3	HCl	H2SO4	NaOH	Na2S2O3	None															
11	SP-8A			1/5/2010	1225		1	X							Soil	X							X			X			X
12	SP-9			1/5/2010	1235		1	X							Soil	X							X			X			X
13	SP-10			1/5/2010	1250		1	X							Soil	X							X			X			X
14	SP-10A			1/5/2010	1255		1	X							Soil	X							X			X			X
15	SP-11			1/5/2010	1305		1	X							Soil	X							X			X			X
16	SP-12			1/5/2010	1320		1	X							Soil	X							X			X			X
17	SP-12A			1/5/2010	1330		1	X							Soil	X							X			X			X
18	SP-13			1/5/2010	1345		1	X							Soil	X							X			X			X
19	SP-14			1/5/2010	1400		1	X							Soil	X							X			X			X
20	SP-15			1/5/2010	1415		1	X							Soil	X							X			X			X

**Special Instructions:**

BILL TO GP II ENERGY

Relinquished by: 	Date: 1/6/10	Time: 0953	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by: 	Date: 1.6.10	Time: 9:53

**Laboratory Comments:**

Sample Containers intact

VOCs Free of Headspace?

Labels on container(s)

Custody seals on container(s)

Sample Hand Delivered

by Sampler/Client Rep. ?

by Courier? UPS DHL FedEx Lone Star

4 oz glass

Temperature Upon Receipt: 3.6 °C

**A Xenco Laboratories Company**

**12600 West I-20 East  
Odessa, Texas 79765**

**Phone: 432-563-1800**  
**Fax: 432-563-1713**

Project Name: Littlefield "BO" Fed #2

Project #: GP II Energy

**Project Loc:** Eddy County, New Mexico

PO 数:

**Fax No:** 575-396-1429

**Report Format:** ☒ Standard ☐ TRRP ☐ NPDES

**e-mail:** [cdstanley@basin-consulting.com](mailto:cdstanley@basin-consulting.com)

**ORDER #:**



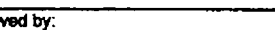
357602

**TCLP:**

**TOTAL:**

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO <sub>3</sub>	HCl	H <sub>2</sub> SO <sub>4</sub>	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	None	Other (Specify)	DW=Drinking Water SL=Sludge GW=Groundwater SS=Soil/Solid NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015H TX 1008	TPH: TX 1008 TX 1008	Cations (Ca, Mg, Na, K)	Anions (Cl, SO <sub>4</sub> , Alkalinity)	SAR / ESP / CEC	Metals As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTX 8021 BTX 8030 or BTX 8260	RCI	N.O.R.M.	Chloride EPA 300	HOLD	RUSH TAT (Pre-Schedule) 24, 48	Standard TAT
21	SP-16			1/5/2010	1430	1	X									Soil	X							X			X				X
22	SP-17			1/5/2010	1445	1	X									Soil	X							X			X				X
23	SP-18			1/5/2010	1500	1	X									Soil	X							X			X				X
24	SP-19			1/5/2010	1515	1	X									Soil	X							X			X				X
25	SP-19A			1/5/2010	1525	1	X									Soil	X							X			X				X
26	SP-20			1/5/2010	1550	1	X									Soil	X							X			X				X
27	SP-21			1/5/2010	1615	1	X									Soil	X							X			X				X

**BILL TO GP II ENERGY**

Relinquished by: 	Date 1/6/10	Time 0953	Received by:	Date	Time
Relinquished by: 	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by: ELOT: 	Date 1.6.10	Time 9:5

Sample Container intact?	<input checked="" type="checkbox"/>	Y
VOCs Free of Headspace?	<input type="checkbox"/>	N
Labels on container(s)	<input checked="" type="checkbox"/>	N
Custody seals on container(s)	<input checked="" type="checkbox"/>	N
Custody seals on vial(s)	<input checked="" type="checkbox"/>	N
Sample Hand Delivered	<input checked="" type="checkbox"/>	N
by Sampler/Client Rep. ?	<input checked="" type="checkbox"/>	N
by Courier?	<input type="checkbox"/>	Y
UPS	<input type="checkbox"/>	
DHL	<input type="checkbox"/>	
FedEx	<input type="checkbox"/>	
Lone Star	<input type="checkbox"/>	
40291955		
Temperature Upon Receipt	3.6	°C

# Environmental Lab of Texas

## Variance/ Corrective Action Report- Sample Log-In

Client: GP II Energy  
 Date/ Time: 1.6.10 9:53  
 Lab ID #: 357602  
 Initials: AL

### Sample Receipt Checklist

Client Initials

#1 Temperature of container/ cooler?	<u>Yes</u>	No	<u>3.6 °C</u>	
#2 Shipping container in good condition?	<u>Yes</u>	No		
#3 Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4 Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	<u>Not Present</u>	
#5 Chain of Custody present?	<u>Yes</u>	No		
#6 Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7 Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8 Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9 Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10 Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11 Containers supplied by ELOT?	<u>Yes</u>	No		
#12 Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13 Samples properly preserved?	<u>Yes</u>	No	See Below	
#14 Sample bottles intact?	<u>Yes</u>	No		
#15 Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16 Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17 Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18 All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19 Subcontract of sample(s)?	<u>Yes</u>	No	<u>Not Applicable</u>	
#20 VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

### Variance Documentation

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken:

Check all that Apply:

☐  
☐  
☐

See attached e-mail/ fax  
 Client understands and would like to proceed with analysis  
 Cooling process had begun shortly after sampling event

Appendix C  
Release Notification and Corrective Action  
(Form C-141)

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	GP II Energy, Inc. 8359	Contact	Joe Compton
Address	PO Box 50682	Telephone No.	432-684-4748
Facility Name	Federal Littlefield "BO" Tank Battery	Facility Type	Tank Battery - Oil and Produced Water Storage

Surface Owner	Federal	Mineral Owner	Federal	Lease No.	LC-065928A
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LITTLEFIELD BO FEDERAL 002

30-015-24529

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	34	26S	29E	~710 724	N	~750 660	E	Eddy

Latitude N 32 0' 12.10" Longitude W -103 57' 59.06"

#### NATURE OF RELEASE

night of Dec. 7, 2009

~11:00am Dec. 8, 2009


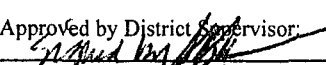
Type of Release	Produced Oil	Volume of Release	~92.5 Bbls.	Volume Recovered	20 Bbls.
Source of Release	Oil Storage Tank	Date and Hour of Occurrence		Date and Hour of Discovery	
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Bureau of Land Management notified GP II Energy that a spill had been reported by New Mexico OCD field inspector at the Federal Littlefield "BO" tank battery.			
By Whom?		Date and Hour Check with BLM			
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* Worked over Federal "BO" #6. Well flowed during night and pushed water from the gun barrel into oil storage tank. Equalizer was unable to accommodate flow and oil ran over the storage tank. We are going to install a larger gun barrel capable of handling production surges of this volume.

Describe Area Affected and Cleanup Action Taken.\* Please refer to attached google earth map. The green line marks the length and path of the spill. We are currently removing contaminated soil and cleaning up the road under the direct supervision of a BLM field agent. We will have the cut areas sampled and analyzed for contamination prior to backfilling with approved soil or road material.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: Joe L. Compton		Approved by District Supervisor: 	
Title: Agent		Approval Date: 12-16-09	Expiration Date: 02-16-2010
E-mail Address: compton@gp2energy.com		Conditions of Approval: 01-21-2010	
Date: 12-11-2009	Phone: 432-684-4748	Within 30 days, on or before completion of a remediation work plan based on delineation should be finalized and submitted for approval to the Division summarizing all actions taken and/or to be taken to mitigate environmental damage.	

Remediation Actions to be completed and Final C-141 submitted with confirmation analyses/documentation on or before the Expiration Date.

NMOCD approval shall be obtained prior to any backfilling activities.

Notify OCD 48 hours prior to obtaining samples where analyses are to be presented to OCD

\* Attach Additional Sheets If Necessary

SE8093484774  
NSE80934847342  
i SE80934847740

The plan must include general site characteristics, site ranking score, soil remediation action levels, soil remediation methods, and planned analytical testing for TPH, B-TEX, Chlorides or any other COCs as applicable. Please use the "Guidelines for Remediation of Leaks, Spills, & Releases" as your guide. This document may be found at the following link: