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REMEDIATION SUMMARY AND SITE CLOSURE PROPOSAL

**LEGACY RESERVES, LP
LR Chamberlain Tank Battery
Lea County, New Mexico
UNIT LTR "C" (NE ¼ NW ¼), Section 14, Township 15 South, Range 37 East
Latitude 33° 01' 20.3" North, Longitude 103° 10' 16.6" West
NMOCD Reference # 1RP-2390 and 1RP-2513**

Prepared For:

Legacy Reserves, L.P.
P.O. Box 10848
Midland, TX 79702

RECEIVED

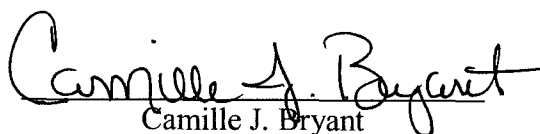
AUG 11 2010

HOBBSOCD

Prepared By:

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

August 2010


Camille J. Bryant

Project Manager

approved by
Jeff Leung
Environmental eng
NMOCD-Hobbs
08/11/10

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INTRODUCTION AND BACKGROUND INFORMATION

Basin Environmental Consulting, LLC (Basin), on behalf of Legacy Reserves, LP (Legacy), has prepared this Remediation Summary and Site Closure Proposal for the release site known as LR Chamberlain Tank Battery. The legal description of the release site is Unit Letter "C" (NE $\frac{1}{4}$ NW $\frac{1}{4}$), Section 14, Township 15 South, Range 37 East, in Lea County, New Mexico. The property affected by the release is owned by Mr. Darr Angell. The release site latitude is 32° 01' 20.3" North and the longitude is 103° 10' 16.6" West. Please reference Figure 1 for a Site Location Map and Figure 2 for a Site Map. General photographs are provided as Appendix C.

On January 6, 2010, Legacy discovered a release had occurred at the LR Chamberlain Tank Battery. The transfer line on a 500 barrel tank was obstructed, resulting in a release of produced water and crude oil. The release was reported to the New Mexico Oil Conservation Division (NMOCD) Hobbs District Office on January 7, 2010. The Release Notification and Corrective Action (Form C-141) indicated approximately 680 barrels of produced water and crude oil was released and 600 barrels were recovered. The release was confined inside the tank battery. The Release Notification and Corrective Action (Form C-141) is provided as Appendix D.

On May 5, 2010, Legacy discovered an additional release had occurred at the LR Chamberlain Tank Battery. Equipment failure of a 3:1 swedge on the discharge side of the transfer pump resulted in a release of produced water. The release was reported to the NMOCD Hobbs District Office on May 6, 2010. The Release Notification and Corrective Action (Form C-141) indicated approximately 80 barrels of produced water was released and approximately 60 barrels were recovered. The release was confined inside the tank battery. The Release Notification and Corrective Action (Form C-141) is provided as Appendix D.

Remediation activities of the January 6, 2010 and May 5, 2010, releases will be conducted simultaneously.

NMOCD SITE CLASSIFICATION

A search of the New Mexico Office of the State Engineer (NMOSE) database indicates the average depth to groundwater is approximately forty (40) feet below ground surface (bgs) in the section. This depth to groundwater results in a score of twenty (20) points 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.

There are no surface water bodies located within 1,000 feet of the site. Based on the NMOCD ranking system zero (0) points will be assigned to the site as a result of the criteria.

The NMOCD guidelines indicate the LR Chamberlain Tank Battery release site has an initial 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)

The NMOCD chloride clean up level concentrations are site specific and will be determined by the NMOCD Hobbs District Office.

SUMMARY OF SOIL REMEDIATION ACTIVITIES

On January 22, 2010, Basin began excavation activities at the LR Chamberlain Tank Battery release site. The area inside the tank battery was excavated to approximately 1.5 feet bgs. Approximately 1,200 cubic yards (cy) of impacted soil was excavated and stockpiled on-site pending final disposition.

On March 30, 2010, two (2) trenches (NE Corner and S. Middle) were advanced at the site to investigate the vertical and horizontal extent of impact at the site. Selected soil samples were submitted to the laboratory and analyzed for concentrations of benzene, toluene, ethyl-benzene and xylenes (BTEX), total petroleum hydrocarbons (TPH) and chlorides using EPA SW 846-8021b, SW 846-8015M and E 300, respectively. A summary of the analytical results are included in Table 1, Concentrations of BTEX, TPH and Chlorides in Soil. Laboratory analytical reports are provided as Appendix B.

The NE trench was advanced in the northeast corner of the tank battery to approximately seventeen (17) feet bgs. Four (4) soil samples (NE Corner 5', NE Corner 10', NE Corner @ 15' and NE Corner 17') were collected from the trench and submitted to the laboratory for analysis. Following soil sample collection the trench was backfilled. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory method detection limit (MDL) for all the submitted soil samples. BTEX concentrations ranged from 0.0256 mg/Kg for soil sample NE Corner @ 17' to 25.5 mg/Kg for soil sample NE Corner @ 15'. TPH concentrations ranged from 431 mg/Kg for soil sample NE Corner @ 17' to 5,435 mg/Kg for soil sample NE Corner @ 15'. Chloride concentrations ranged from 624 mg/Kg for soil sample NE Corner @ 15' to 1,420 mg/Kg for soil sample NE Corner @ 5'.

The S. Middle trench was advanced in the center of the tank battery approximately forty (40) feet south of the eastern most tank, to approximately fifteen (15) feet bgs. Four (4) soil samples (S. Middle @ 5', S. Middle @ 10', S. Middle @ 12' and S. Middle @ 15') were collected from the trench and submitted to the laboratory for analysis. Following soil sample collection the trench was backfilled. Laboratory analytical results indicated benzene concentrations were less than the appropriate laboratory MDL for all the submitted soil samples. BTEX concentrations ranged from 2.773 mg/Kg for soil sample S. Middle @ 5' to 173.5 mg/Kg for soil sample S. Middle @ 12'. TPH concentrations ranged from 3,391 mg/Kg for soil sample S. Middle @ 5' to 9,477 mg/Kg for soil sample S. Middle @ 12'. Chloride concentrations ranged from 1,680 mg/Kg for soil sample S. Middle @ 10' to 3,110 mg/Kg for soil sample S. Middle @ 12'.

On April 28, 2010, five (5) delineation trenches (T-1, T-2, T-3, T-4 and T-5) were advanced outside of the tank battery to investigate the vertical and horizontal extent of impacted soil at the site. One (1) trench was advanced to the east (T-5) and west (T-4) of the tank battery and three (3) trenches (T-1, T-2 and T-3) were advanced to the north of the tank battery. The delineation

trenches were positioned against the berm and extended perpendicular to the direction of the berm. Selected soil samples were collected from the trenches and submitted to the laboratory for determination of BTEX, TPH and chloride concentrations.

Trench #1 was advanced on the northwest side of the tank battery to an approximate depth of seventeen (17) feet bgs. Twelve (12) soil samples (T-1 Sample 1 @ 2', T-1 Sample 1 @ 7', T-1 Sample 1 @ 15', T-1 Sample 1 @ 17', T-1 Sample 2 @ 2', T-1 Sample 2 @ 5', T-1 Sample 3 @ 2', T-1 Sample 3 @ 5', T-1 Sample 4 @ 2', T-1 Sample 4 @ 5', T-1 Sample 5 @ 2' and T-1 Sample 5 @ 3') were collected and submitted to the laboratory for analysis. Following soil sample collection the trench was backfilled. Laboratory analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL for all the submitted soil samples. TPH concentrations were less than the appropriate laboratory MDL for all the submitted soil samples, with the exception of soil samples T-1 Sample 5 @ 2' and T-1 Sample 5 @ 3' which exhibited TPH concentrations of 113.5 mg/Kg and 180.6 mg/Kg, respectively. Chloride concentrations ranged from 8.95 mg/Kg for soil sample T-1 Sample 5 @ 3' to 1,460 mg/Kg for soil sample T-1 Sample 4 @ 5'.

Trench #2 was advanced on the north central side of the tank battery to an approximate depth of thirteen (13) feet bgs, where a solid rock layer was encountered. Eight (8) soil samples (T-2 Sample 1 @ 2', T-2 Sample 1 @ 7', T-2 Sample 1 @ 12', T-2 Sample 1 @ 13', T-2 Sample 2 @ 2', T-2 Sample 2 @ 5', T-2 Sample 3 @ 2' and T-2 Sample 3 @ 5') were collected and submitted to the laboratory for analysis. Following soil sample collection the trench was backfilled. Laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL for all the submitted soil samples. Chloride concentrations ranged from 66.3 mg/Kg for soil sample T-2 Sample 3 @ 5' to 837 mg/Kg for soil sample T-2 Sample 1 @ 2'.

Trench #3 was advanced on the northeast side of the tank battery to an approximate depth of seven (7) feet bgs. Seven (7) soil samples (T-3 Sample 1 @ 2', T-3 Sample 1 @ 5', T-3 Sample 1 @ 7', T-3 Sample 2 @ 5', T-3 Sample 3 @ 5', T-3 Sample 4 @ 2' and T-3 Sample 4 @ 5') were collected and submitted to the laboratory for analysis. Following soil sample collection the trench was backfilled. Laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL for all submitted soil samples. Chloride concentrations ranged from 71.6 mg/Kg for soil sample T-3 Sample 4 @ 2' to 981 mg/Kg for soil sample T-3 Sample 3 @ 5'.

Trench #4 was advanced on the west side of the tank battery to an approximate depth of three (3) feet bgs. A solid rock layer was encountered on the west side of the tank battery at depths ranging from one and half (1.5) feet to three (3) feet bgs. Four soil samples (T-4 Sample 1 @ 1.5', T-4 Sample 2 @ 1.5', T-4 Sample 3 @ 2' and T-4 Sample 3 @ 3') were collected and submitted to the laboratory for analysis. Following soil sample collection the trench was backfilled. Laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL for all the submitted soil samples. Chloride concentrations ranged from 67.6 mg/Kg for soil sample T-4 Sample 3 @ 2' to 885 mg/Kg for soil sample T-4 Sample 2 @ 1.5'.

Trench #5 was advanced on the east side of the tank battery to an approximate depth of three and a half (3.5) feet bgs. A solid rock layer was encountered on the east side of the battery at depths

ranging from approximately one and a half (1.5) feet to three and a half (3.5) feet bgs. Three (3) soil samples were collected and submitted to the laboratory for analysis. Following soil sample collection the trench was backfilled. Laboratory analytical results indicated benzene, BTEX and TPH concentrations were less than the appropriate laboratory MDL for all the submitted soil samples. Chloride concentrations ranged from 66.4 mg/Kg for soil sample T-5 Sample 2 @ 2' to 2,870 mg/Kg for soil sample T-5 Sample 1 @ 2'.

On June 29, 2010, with NMOCD approval, one (1) soil boring (SB-1) was advanced inside the LR Chamberlain Tank Battery to investigate the vertical extent of soil impact. Soil boring logs are provided as Appendix A. Soil samples were collected at five (5) foot drilling intervals and field screened using a Photo-Ionization Detector (PID) and a chloride field screening kit. Selected soil samples were submitted to the laboratory for determination of concentrations of BTEX, TPH and chlorides.

Soil boring SB-1 was advanced in the southern portion of the tank battery to a total depth of approximately thirty (30) feet bgs. Soil samples collected at five (5) feet, ten (10) feet, fifteen (15) feet, twenty (20) feet, twenty five (25) feet and thirty (30) feet were submitted to the lab for analysis. Laboratory analytical results indicated benzene and BTEX concentrations were less than the appropriate laboratory MDL for all the submitted soil samples. TPH concentrations ranged from less than the appropriate laboratory MDL for soil samples SB-1 @ 10', SB-1 @ 15', SB-1 @ 20' and SB-1 @ 25' to 51.9 mg/Kg for soil sample SB-1 @ 5'. Chloride concentrations ranged from 72.7 mg/Kg for soil sample SB-1 @ 25' to 2,170 mg/Kg for soil sample SB-1 @ 5'.

PROPOSED ACTIONS

Legacy proposes the following risk-based closure strategy designed to progress the LR Chamberlain Tank Battery release site toward an NMOCD approved closure:

- The area defined by and including Trench #1 will be excavated to approximately ten (10) feet bgs. The area defined by and including Trench #2 will be excavated to approximately eight (8) feet bgs. The area defined by and including Trench #3 will be excavated to approximately five (5) feet bgs. The area defined by and including Trench #4 will be excavated to approximately one and a half (1.5) feet bgs or to the solid rock layer. No excavation activities will be conducted on the east side of the tank battery in the area defined by Trench #5 due to multiple pipelines in the area. A map depicting the Proposed Excavation Area is provided as Figure 3. The limits of the excavation will be determined by field screening using a chloride field test kit. Due to this being an active tank battery and a high traffic area the excavation will be backfilled based on chloride field test results. Soil samples will be collected at approximately seventy five (75) foot intervals from the excavation sidewalls and field tested for concentrations of chlorides. When chloride field tests indicate chloride concentrations of the soil samples collected from the sidewalls of the excavation are less than 500 mg/Kg excavation activities will cease. All excavated soil will be transported to Gandy-Marley Inc. (NMOCD permit # DP-1041) for disposal.
- Following excavation activities, the area will be backfilled with non-impacted soil obtained from the landowner, to approximately two and a half (2.5) feet bgs. A one (1) foot clay cap will be installed and compacted in the excavation to inhibit vertical

migration of the contaminants left in place below the clay cap, while allowing for the natural attenuation of the contaminants left in-situ. The remaining portion of the excavation will be backfilled with caliche obtained from the landowner and compacted.

- The area inside the tank battery will be excavated to the solid rock layer. The areas defined by and including the Northeast Corner Trench and the South Middle Trench will be excavated to approximately fifteen (15) feet bgs.
- Following excavation activities, the deeper excavated areas will be backfilled and compacted with non-impacted soil obtained from the landowner, to approximately one and a half (1.5) feet bgs. A one (1) foot of clay cap will be installed and compacted in the excavation to inhibit vertical migration of the contaminants left in place below the clay cap, while allowing for the natural attenuation of the contaminants left in-situ. The excavation will be backfilled with caliche obtained from the landowner and compacted. Following backfilling activities, the berms around the tank battery will be repaired.

REPORTING

On review and approval of this proposal by the NMOCD, Legacy is prepared to begin the field activities and perform the corrective actions summarized in this Remediation Summary and Site Closure Proposal. Upon completion of the field activities summarized in this proposal, Legacy will submit a Site Closure Request to the NMOCD, documenting the results of confirmation soil samples, and final site activities.

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.

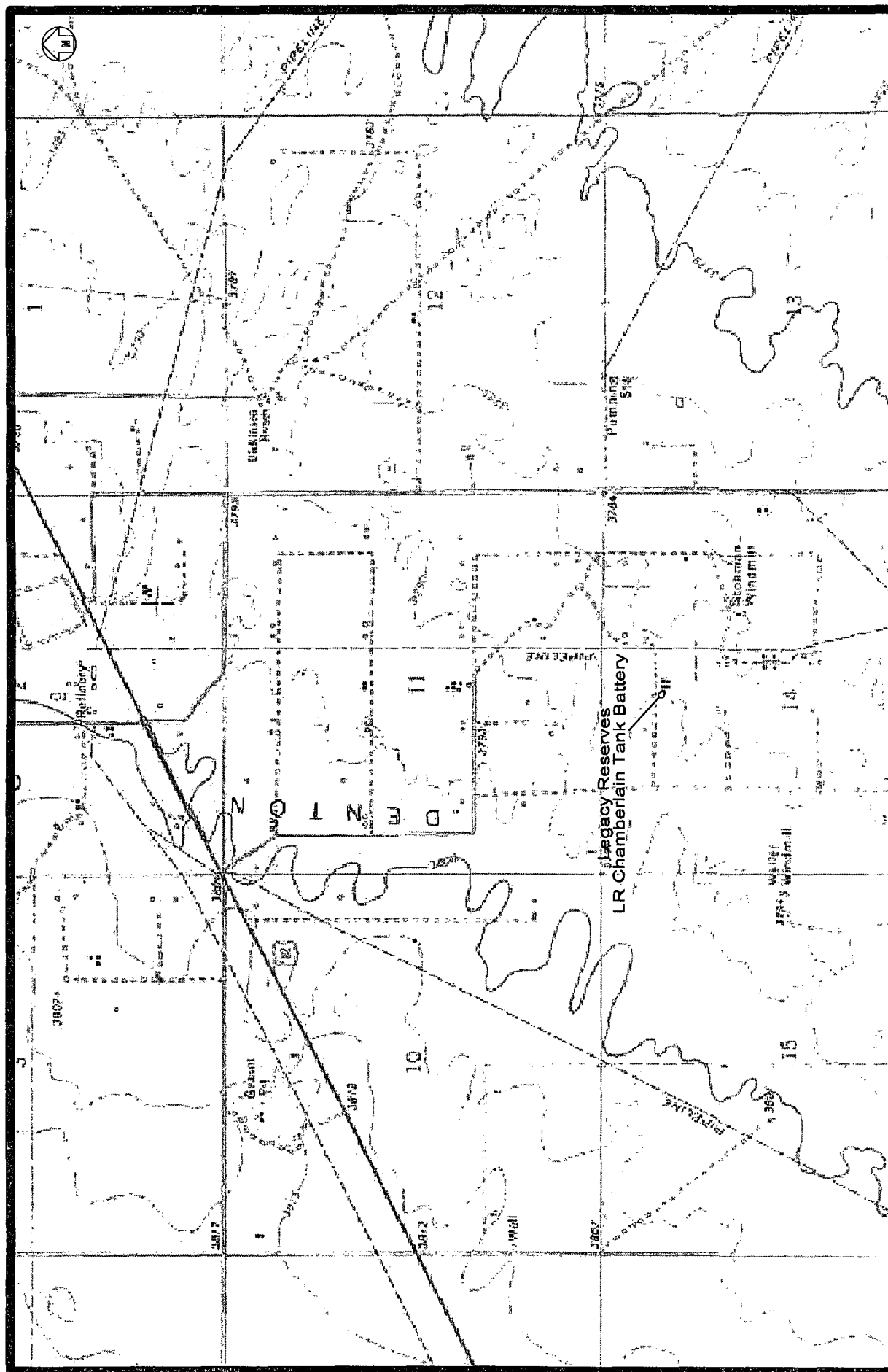
Basin Environmental Consulting, LLC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Basin Environmental Consulting, LLC has not conducted an independent examination of the facts contained in referenced materials and statements. 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 Legacy Reserves, L.P. 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 Legacy Reserves, L.P.

DISTRIBUTION:

- Copy 1: Geoffrey Leking
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division (District 1)
625 N. French Drive
Hobbs, New Mexico 88240
- Copy 2: Kevin Bracey
Legacy Reserves, LP
PO Box 10848
Midland, Texas 79702
- Copy 3: Mr. Darr Angell
P.O. Box 190
Lovington, New Mexico 88260
- Copy 3: Basin Environmental Consulting, LLC
P.O. Box 381
Lovington, New Mexico 88260

Figures



Basin Environmental Consulting

Figure 1
Site Location Map
LR Chamberlain Tank Battery

Legacy Reserves, LP
Lea County, New Mexico

3000 1500 0 1500 3000



Distance in Feet

Prep By: CDS

Checked By: CJB

April 14, 2010

Scale 1"=3000'

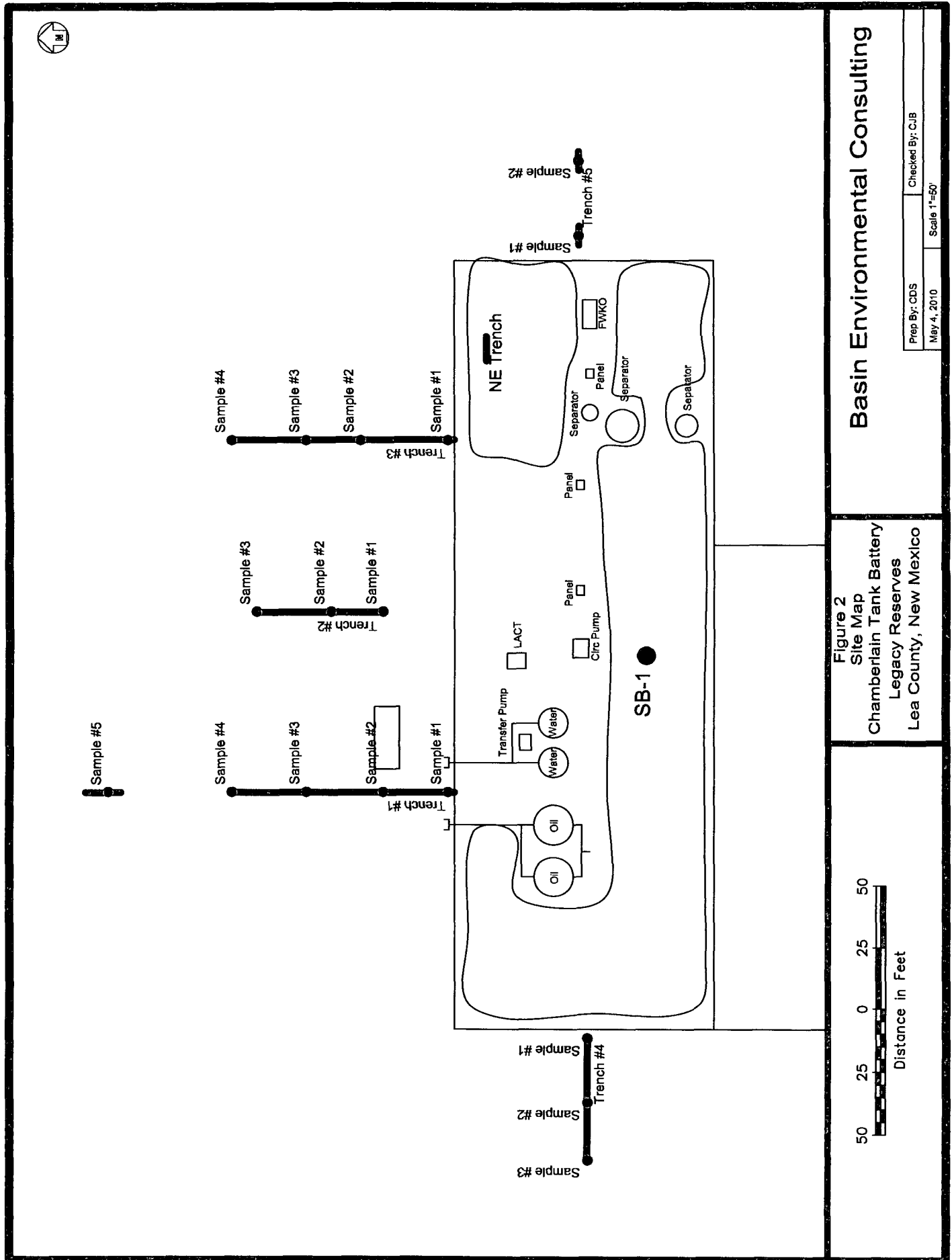
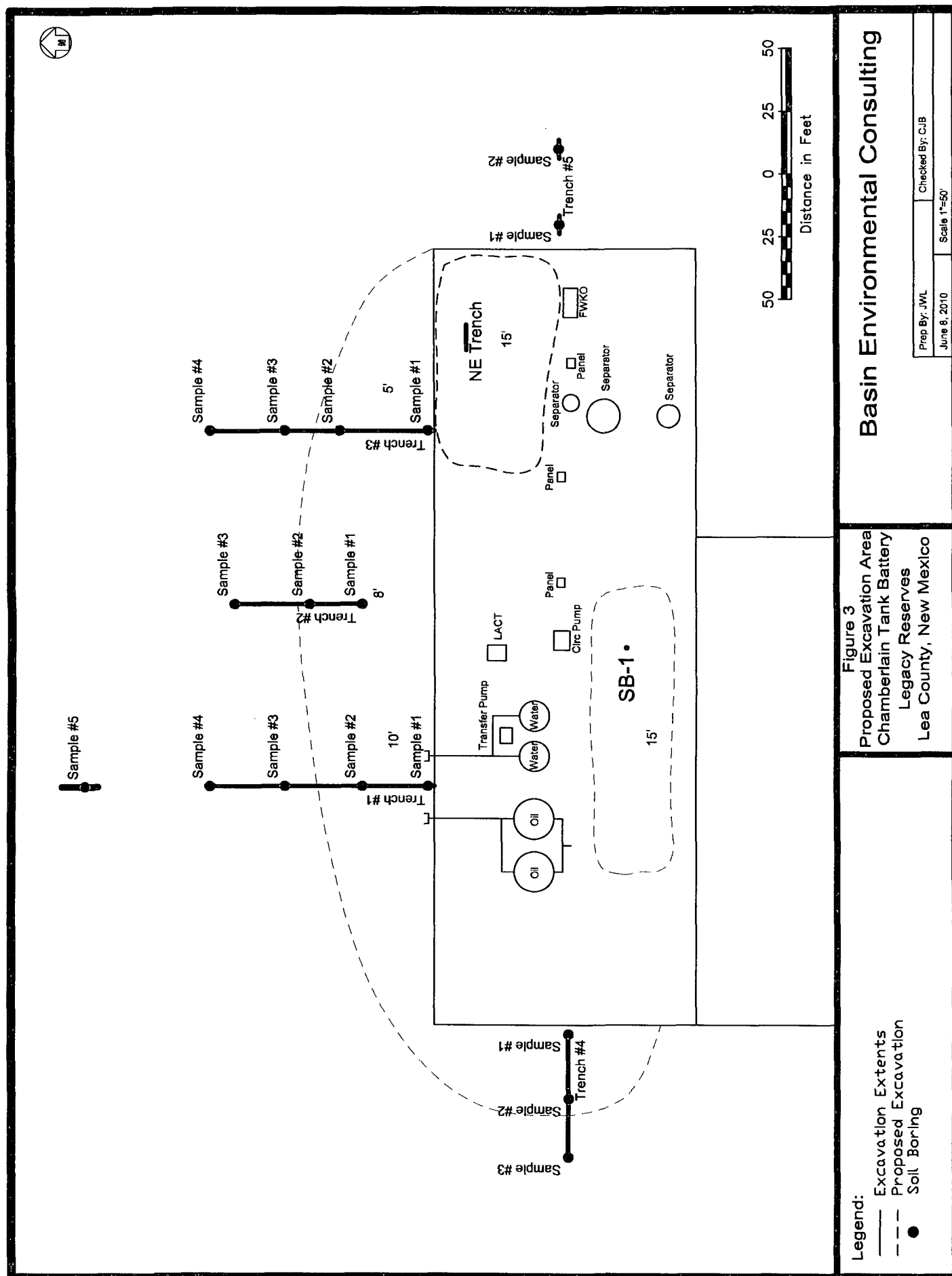


Figure 2
Site Map
 Chamberlain Tank Battery
 Legacy Reserves
 Lea County, New Mexico

50 25 0 25 50
 Distance in Feet

Basin Environmental Consulting

Prep By: CDS
 May 4, 2010
 Checked By: CJB
 Scale 1"=50'



Tables

Analytical Report 367582

for

Basin Environmental Consulting, LLC

Project Manager: Camille Bryant

LR Chamberlain Tank Battery

Legacy Reserves West

07-APR-10



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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 (LAO00312), 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-TX)

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

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

Xenco-Boca Raton (EPA Lab Code: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)



07-APR-10

Project Manager: **Camille Bryant**
Basin Environmental Consulting, LLC
P.O. Box 381
Lovington, NM 88260

Reference: XENCO Report No: **367582**
LR Chamberlain Tank Battery
Project Address: Lea County, NM

Camille Bryant:

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 367582. 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. 367582 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

**Sample Cross Reference 367582****Basin Environmental Consulting, LLC, Lovington, NM**

LR Chamberlain Tank Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NE Corner @ 5'	S	Mar-30-10 12:30		367582-001
NE Corner @ 10'	S	Mar-30-10 12:45		367582-002
NE Corner @ 15'	S	Mar-30-10 13:10		367582-003
NE Corner @ 17'	S	Mar-30-10 13:30		367582-004
S. Middle @ 5'	S	Mar-30-10 14:10		367582-005
S. Middle @ 10'	S	Mar-30-10 14:30		367582-006
S. Middle @ 12'	S	Mar-30-10 14:45		367582-007
S. Middle @ 15'	S	Mar-30-10 15:00		367582-008

**CASE NARRATIVE****Client Name: Basin Environmental Consulting, LLC****Project Name: LR Chamberlain Tank Battery**

Project ID: Legacy Reserves West
Work Order Number: 367582

Report Date: 07-APR-10
Date Received: 04/01/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-800761 TPH By SW8015 Mod
SW8015MOD_NM

Batch 800761, o-Terphenyl recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 367582-001.

1-Chlorooctane recovered above QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 367582-001,367582-002.

Batch: LBA-800773 Percent Moisture
None

Batch: LBA-800848 BTEX by EPA 8021B
SW8021BM

Batch 800848, Ethylbenzene, m,p-Xylenes , o-Xylene RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 367582-003, -002.

SW8021BM

Batch 800848, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 367078-001 D,367582-002,367582-003.

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

Samples affected are: 367078-001 D,367582-003,367582-002.

**CASE NARRATIVE***Client Name: Basin Environmental Consulting, LLC**Project Name: LR Chamberlain Tank Battery**Project ID: Legacy Reserves West*
*Work Order Number: 367582**Report Date: 07-APR-10*
Date Received: 04/01/2010

Batch: LBA-801040 BTEX by EPA 8021B
SW8021BM

Batch 801040, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 367582-005,367582-007,367582-006.

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

Samples affected are: 367582-005.

Batch: LBA-801122 Inorganic Anions by EPA 300
None

Batch: LBA-801206 BTEX by EPA 8021B
SW8021BM

Batch 801206, 1,4-Difluorobenzene recovered below QC limits . Matrix interferences is suspected; data confirmed by re-analysis

Samples affected are: 367582-004,367582-001.

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

Samples affected are: 367432-001 D,367582-004,367582-001.

SW8021BM

Batch 801206, Ethylbenzene, m,p-Xylenes , o-Xylene RPD is outside the QC limit. This is most likely due to sample non-homogeneity.

Samples affected are: 367582-004, -001.



Certificate of Analysis Summary 367582

Basin Environmental Consulting, LLC, Lovington, NM

Project Name: LR Chamberlain Tank Battery



Project Id: Legacy Reserves West
Contact: Camille Bryant
Project Location: Lea County, NM

Date Received in Lab: Thu Apr-01-10 08:52 am
Report Date: 07-APR-10

Project Manager: Brent Barron, II

Project Manager: Brent Barron, III											
Analysis Requested		Lab Id: Field Id: Depth: Matrix: Sampled:	367582-001 NE Corner @ 5' Mar-30-10 12:30 SOIL	367582-002 NE Corner @ 10' Mar-30-10 12:45 SOIL	367582-003 NE Corner @ 15' Mar-30-10 13:10 SOIL	367582-004 NE Corner @ 17' Mar-30-10 13:30 SOIL	367582-005 S. Middle @ 5' Mar-30-10 14:10 SOIL	367582-006 S. Middle @ 10' Mar-30-10 14:30 SOIL			
Anions by E300		Extracted: Analyzed: Units/RL:	Apr-05-10 20:14 mg/kg RL 1420 25.1	Apr-05-10 20:14 mg/kg RL 867 9.63	Apr-05-10 20:14 mg/kg RL 624 9.47	Apr-05-10 20:14 mg/kg RL 755 9.60	Apr-05-10 20:14 mg/kg RL 2790 49.6	Apr-05-10 20:14 mg/kg RL 1680 23.4			
BTEX by EPA 8021B		Extracted: Analyzed: Units/RL:	Apr-06-10 07:30 mg/kg RL ND 0.0012	Apr-01-10 09:00 mg/kg RL ND 0.1147	Apr-01-10 09:00 mg/kg RL ND 0.5637	Apr-06-10 07:30 mg/kg RL ND 0.0023	Apr-03-10 11:00 mg/kg RL ND 0.0118	Apr-03-10 11:00 mg/kg RL ND 5.562			
Benzene			ND 0.0024	ND 0.2294	ND 1.127	ND 0.0023	0.0281 0.0236	ND 11.12			
Toluene			0.0077 0.0012	0.7867 0.1147	8.455 0.5637	0.0035 0.0011	0.4166 0.0118	32.48 5.562			
Ethylbenzene			0.0257 0.0024	2.546 0.2294	11.23 1.127	0.0142 0.0023	1.366 0.0236	54.84 11.12			
m,p-Xylenes			0.0222 0.0012	0.1846 0.1147	5.829 0.5637	0.0079 0.0011	0.9622 0.0118	10.18 5.562			
o-Xylene			0.0479 0.0012	2.731 0.1147	17.06 0.5637	0.0221 0.0011	2.328 0.0118	65.02 5.562			
Total Xylenes			0.0556 0.0012	3.517 0.1147	25.51 0.5637	0.0256 0.0011	2.773 0.0118	97.50 5.562			
Total BTEX											
Percent Moisture		Extracted: Analyzed: Units/RL:	Apr-01-10 17:00 % RL 16.5 1.00	Apr-01-10 17:00 % RL 12.8 1.00	Apr-01-10 17:00 % RL 11.3 1.00	Apr-01-10 17:00 % RL 12.5 1.00	Apr-01-10 17:00 % RL 15.3 1.00	Apr-01-10 17:00 % RL 10.1 1.00			
TPH By SW8015 Mod		Extracted: Analyzed: Units/RL:	Apr-01-10 14:00 mg/kg RL 137 90.1	Apr-01-10 14:00 mg/kg RL 621 86.2	Apr-01-10 14:00 mg/kg RL 1870 84.6	Apr-01-10 14:00 mg/kg RL 102 17.1	Apr-01-10 14:00 mg/kg RL 611 17.8	Apr-01-10 14:00 mg/kg RL 3240 167			
C6-C12 Gasoline Range Hydrocarbons			475 90.1	1020 86.2	3340 84.6	308 17.1	2600 17.8	4290 167			
C12-C28 Diesel Range Hydrocarbons			111 90.1	90.6 86.2	225 84.6	21.0 17.1	180 17.8	334 167			
C28-C35 Oil Range Hydrocarbons			723 90.1	1732 86.2	5435 84.6	431 17.1	3391 17.8	7864 167			
Total TPH											

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



Certificate of Analysis Summary 367582

Basin Environmental Consulting, LLC, Lovington, NM

Project Id: Legacy Reserves West
Contact: Camille Bryant
Project Location: Lea County, NM

Date Received in Lab: Thu Apr-01-10 08:52 am
Report Date: 07-APR-10
Project Manager: Brent Barron, II



Analysis Requested	Lab Id:	367582-007	367582-008		
	Field Id: Depth: Matrix: Sampled:	S. Middle @ 12' SOIL Mar-30-10 14:45	S. Middle @ 15' SOIL Mar-30-10 15:00		
Anions by E300	Extracted:				
	Analyzed:	Apr-05-10 20:14	Apr-05-10 20:14		
	Units/RL:	mg/kg RL	mg/kg RL		
Chloride		3110 47.7	1700 23.5		
BTEX by EPA 8021B	Extracted:	Apr-03-10 11:00	Apr-03-10 11:00		
	Analyzed:	Apr-03-10 20:36	Apr-03-10 20:58		
	Units/RL:	mg/kg RL	mg/kg RL		
Benzene		ND 5.682	ND 5.605		
Toluene		ND 11.36	ND 11.21		
Ethylbenzene		43.07 5.682	26.68 5.605		
m,p-Xylenes		104.1 11.36	64.24 11.21		
o-Xylene		26.31 5.682	16.87 5.605		
Total Xylenes		130.4 5.682	81.11 5.605		
Total BTEX		173.5 5.682	107.79 5.605		
Percent Moisture	Extracted:				
	Analyzed:	Apr-01-10 17:00	Apr-01-10 17:00		
	Units/RL:	% RL	% RL		
Percent Moisture		12.0 1.00	10.8 1.00		
TPH By SW8015 Mod	Extracted:	Apr-01-10 14:00	Apr-01-10 14:00		
	Analyzed:	Apr-01-10 21:50	Apr-01-10 22:46		
	Units/RL:	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		3770 171	2680 168		
C12-C28 Diesel Range Hydrocarbons		5330 171	3770 168		
C28-C35 Oil Range Hydrocarbons		377 171	279 168		
Total TPH		9477 171	6729 168		

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: LR Chamberlain Tank Battery

Work Orders : 367582,

Project ID: Legacy Reserves West

Lab Batch #: 800848

Sample: 559729-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/01/10 10:27

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	0.0272	0.0300	91	80-120	

Lab Batch #: 800848

Sample: 559729-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/01/10 10:48

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0324	0.0300	108	80-120	
4-Bromofluorobenzene	0.0270	0.0300	90	80-120	

Lab Batch #: 800848

Sample: 559729-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/01/10 11:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0281	0.0300	94	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 800848

Sample: 367582-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/01/10 18:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0173	0.0300	58	80-120	**
4-Bromofluorobenzene	0.0204	0.0300	68	80-120	**

Lab Batch #: 800848

Sample: 367582-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/01/10 18:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0219	0.0300	73	80-120	**
4-Bromofluorobenzene	0.0232	0.0300	77	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: LR Chamberlain Tank Battery

Work Orders : 367582,

Project ID: Legacy Reserves West

Lab Batch #: 800848

Sample: 367078-001 D / MD

Batch: 1 Matrix: Sludge

Units: mg/kg Date Analyzed: 04/01/10 21:09		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0235	0.0300	78	80-120
4-Bromofluorobenzene		0.0170	0.0300	57	80-120

Lab Batch #: 801040

Sample: 559843-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 04/03/10 11:58		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0291	0.0300	97	80-120
4-Bromofluorobenzene		0.0313	0.0300	104	80-120

Lab Batch #: 801040

Sample: 559843-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 04/03/10 12:21		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0293	0.0300	98	80-120
4-Bromofluorobenzene		0.0305	0.0300	102	80-120

Lab Batch #: 801040

Sample: 559843-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg Date Analyzed: 04/03/10 13:29		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0244	0.0300	81	80-120
4-Bromofluorobenzene		0.0315	0.0300	105	80-120

Lab Batch #: 801040

Sample: 367582-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg Date Analyzed: 04/03/10 19:06		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0221	0.0300	74	80-120
4-Bromofluorobenzene		0.1796	0.0300	599	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: LR Chamberlain Tank Battery

Work Orders : 367582,

Project ID: Legacy Reserves West

Lab Batch #: 801040

Sample: 367582-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/03/10 19:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0227	0.0300	76	80-120	*
4-Bromofluorobenzene	0.0353	0.0300	118	80-120	

Lab Batch #: 801040

Sample: 367582-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/03/10 20:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0221	0.0300	74	80-120	*
4-Bromofluorobenzene	0.0357	0.0300	119	80-120	

Lab Batch #: 801040

Sample: 367582-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/03/10 20:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0227	0.0300	76	80-120	*
4-Bromofluorobenzene	0.0348	0.0300	116	80-120	

Lab Batch #: 801206

Sample: 559940-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/06/10 08:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0313	0.0300	104	80-120	
4-Bromofluorobenzene	0.0326	0.0300	109	80-120	

Lab Batch #: 801206

Sample: 559940-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/06/10 08:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0300	0.0300	100	80-120	
4-Bromofluorobenzene	0.0327	0.0300	109	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: LR Chamberlain Tank Battery

Work Orders : 367582,

Project ID: Legacy Reserves West

Lab Batch #: 801206

Sample: 559940-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/06/10 10:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0320	0.0300	107	80-120	

Lab Batch #: 801206

Sample: 367582-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/06/10 11:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0237	0.0300	79	80-120	**
4-Bromofluorobenzene	0.0862	0.0300	287	80-120	**

Lab Batch #: 801206

Sample: 367582-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/06/10 13:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0233	0.0300	78	80-120	**
4-Bromofluorobenzene	0.0668	0.0300	223	80-120	**

Lab Batch #: 801206

Sample: 367432-001 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/06/10 14:52

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	0.0499	0.0300	166	80-120	**

Lab Batch #: 800761

Sample: 559673-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/01/10 16:27

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	116	101	115	70-135	
o-Terphenyl	54.8	50.3	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: LR Chamberlain Tank Battery

Work Orders : 367582,

Project ID: Legacy Reserves West

Lab Batch #: 800761

Sample: 559673-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/01/10 16:54

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	124	100	124	70-135	
o-Terphenyl	58.4	50.2	116	70-135	

Lab Batch #: 800761

Sample: 559673-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 04/01/10 17:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	99.8	129	70-135	
o-Terphenyl	64.2	49.9	129	70-135	

Lab Batch #: 800761

Sample: 367582-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/01/10 19:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	140	100	140	70-135	*
o-Terphenyl	73.0	50.2	145	70-135	*

Lab Batch #: 800761

Sample: 367582-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/01/10 19:34

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	137	100	137	70-135	*
o-Terphenyl	65.5	50.1	131	70-135	

Lab Batch #: 800761

Sample: 367582-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/01/10 20:01

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	100	126	70-135	
o-Terphenyl	64.7	50.0	129	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: LR Chamberlain Tank Battery

Work Orders : 367582,

Project ID: Legacy Reserves West

Lab Batch #: 800761

Sample: 367582-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/01/10 20:28

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	99.5	122	70-135	
o-Terphenyl	60.0	49.8	120	70-135	

Lab Batch #: 800761

Sample: 367582-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/01/10 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	130	100	130	70-135	
o-Terphenyl	63.7	50.2	127	70-135	

Lab Batch #: 800761

Sample: 367582-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/01/10 21:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	65.4	50.1	131	70-135	

Lab Batch #: 800761

Sample: 367582-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/01/10 21:50

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	101	118	70-135	
o-Terphenyl	64.0	50.3	127	70-135	

Lab Batch #: 800761

Sample: 367582-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 04/01/10 22:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	126	99.7	126	70-135	
o-Terphenyl	64.3	49.9	129	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: LR Chamberlain Tank Battery

Work Order #: 367582

Project ID: Legacy Reserves West

Lab Batch #: 801122

Sample: 801122-1-BKS

Matrix: Solid

Date Analyzed: 04/05/2010

Date Prepared: 04/05/2010

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	11.0	11.1	101	75-125	

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

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

BRL - Below Reporting Limit



BS / BSD Recoveries



Project Name: LR Chamberlain Tank Battery

Work Order #: 367582

Analyst: ASA

Lab Batch ID: 800848

Date Prepared: 04/01/2010

Sample: 559729-1-BKS

Batch #: 1

Project ID: Legacy Reserves West

Date Analyzed: 04/01/2010

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
BTEX by EPA 8021B Analytes	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
	Benzene	ND	0.1000	0.0961	96	0.1	0.1020	102	6	70-130	35
	Toluene	ND	0.1000	0.0967	97	0.1	0.1028	103	6	70-130	35
	Ethylbenzene	ND	0.1000	0.0985	99	0.1	0.1046	105	6	71-129	35
	m,p-Xylenes	ND	0.2000	0.1999	100	0.2	0.2130	107	6	70-135	35
	o-Xylene	ND	0.1000	0.0985	99	0.1	0.1054	105	7	71-133	35

Analyst: JLG

Lab Batch ID: 801040

Sample: 559843-1-BKS

Date Prepared: 04/03/2010

Batch #: 1

Date Analyzed: 04/03/2010

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Units: mg/kg	BTEX by EPA 8021B	Analytes	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
			ND	0.1000	0.0979	98	0.1	0.1045	105	7	70-130	35	
			ND	0.1000	0.0952	95	0.1	0.1017	102	7	70-130	35	
			ND	0.1000	0.0970	97	0.1	0.1033	103	6	71-129	35	
			ND	0.2000	0.1922	96	0.2	0.2044	102	6	70-135	35	
			ND	0.1000	0.0960	96	0.1	0.1024	102	6	71-133	35	
			ND	0.1000	0.0960	96	0.1	0.1024	102	6	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: LR Chamberlain Tank Battery

Work Order #: 367582

Analyst: ASA

Lab Batch ID: 801206

Sample: 559940-1-BKS

Date Prepared: 04/06/2010

Batch #: 1

Project ID: Legacy Reserves West

Date Analyzed: 04/06/2010

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	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
	ND	0.1000	0.0936	94	0.1	0.1011	101	8	70-130	35	
	ND	0.1000	0.0915	92	0.1	0.0992	99	8	70-130	35	
	ND	0.1000	0.0933	93	0.1	0.1010	101	8	71-129	35	
	ND	0.2000	0.1853	93	0.2	0.2007	100	8	70-135	35	
	ND	0.1000	0.0930	93	0.1	0.1013	101	9	71-133	35	
Units: mg/kg											
BTEX by EPA 8021B											
Benzene	ND	0.1000	0.0936	94	0.1	0.1011	101	8	70-130	35	
Toluene	ND	0.1000	0.0915	92	0.1	0.0992	99	8	70-130	35	
Ethylbenzene	ND	0.1000	0.0933	93	0.1	0.1010	101	8	71-129	35	
m,p-Xylenes	ND	0.2000	0.1853	93	0.2	0.2007	100	8	70-135	35	
o-Xylene	ND	0.1000	0.0930	93	0.1	0.1013	101	9	71-133	35	

Analyst: BEV

Lab Batch ID: 800761

Sample: 559673-1-BKS

Date Prepared: 04/01/2010

Batch #: 1

Date Analyzed: 04/01/2010

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Units: mg/kg	TPH By SW8015 Mod	Analytes	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	
			ND	1010	1160	115	1000	1210	121	4	70-135	35		
			ND	1010	985	98	1000	1010	101	3	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: LR Chamberlain Tank Battery



Work Order #: 367582

Lab Batch #: 801122

Date Analyzed: 04/05/2010

Date Prepared: 04/05/2010

Project ID: Legacy Reserves West

Analyst: LATCOR

QC- Sample ID: 367288-001 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	1540	1290	2870	103	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



Sample Duplicate Recovery



Project Name: LR Chamberlain Tank Battery

Work Order #: 367582

Lab Batch #: 801122

Project ID: Legacy Reserves West

Date Analyzed: 04/05/2010

Date Prepared: 04/05/2010

Analyst: LATCOR

QC- Sample ID: 367288-001 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	1540	1540	0	20	

Lab Batch #: 800848

Date Analyzed: 04/01/2010

Date Prepared: 04/01/2010

Analyst: ASA

QC- Sample ID: 367078-001 D

Batch #: 1

Matrix: Sludge

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
BTEX by EPA 8021B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Benzene	0.0028	0.0022	24	35	
Toluene	0.0057	0.0054	5	35	
Ethylbenzene	0.0021	0.0066	103	35	F
m,p-Xylenes	0.0033	0.0050	41	35	F
o-Xylene	0.0011	0.0066	143	35	F
a,a,a-Trifluorotoluene	0.030	0.030	0	35	

Lab Batch #: 801206

Date Analyzed: 04/06/2010

Date Prepared: 04/06/2010

Analyst: ASA

QC- Sample ID: 367432-001 D

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

SAMPLE / SAMPLE DUPLICATE RECOVERY					
BTEX by EPA 8021B	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Benzene	ND	ND	NC	35	
Toluene	ND	ND	NC	35	
Ethylbenzene	0.0025	0.0015	50	35	F
m,p-Xylenes	0.0099	0.0057	54	35	F
o-Xylene	0.0067	0.0034	65	35	F
a,a,a-Trifluorotoluene	0.032	0.032	0	35	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit



Sample Duplicate Recovery



Project Name: LR Chamberlain Tank Battery

Work Order #: 367582

Lab Batch #: 800773

Project ID: Legacy Reserves West

Date Analyzed: 04/01/2010

Date Prepared: 04/01/2010

Analyst: JLG

QC- Sample ID: 367572-001 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	16.0	16.0	0	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

Appendix B Analytical Reports

Soil Boring SB-1

Depth
below
ground
surface

Soil
Columns

Chloride
Field Test

PID
Reading

Petroleum
Odor

Petroleum
Stain

Soil Description

Boring SB-1

Date Drilled June 29, 2010
Thickness of Bentonite Seal 30 Ft
Depth of Exploratory Boring 30 Ft bgs
Depth to Groundwater _____
Ground Water Elevation _____

▼ Indicates the PSH level measured on _____
▼ Indicates the groundwater level measured on _____
○ Indicates samples selected for Laboratory Analysis.
PID Head-space reading in ppm obtained with a photo-ionization detector.

0
5
10
15
20
25
30



2,040 6.3

Slight Slight

0-10' - Caliche, tan, minor clay, dry

1,788 4.8

None None

1,256 15.8

None None

280 2.2

None None 10-30' - Sand, tan, fine grained, minor sandstone nodules, dry

128 3.3

None None

128 6.1

None None

Completion Notes

- 1.) The monitor well was advanced on date using air rotary drilling techniques.
- 2.) The lines between material types shown on the profile log represent approximate boundaries. Actual transitions may be gradual.

Soil Boring SB-1

Legacy Reserves
Chamberlain Tank Battery
Lea County, New Mexico

Basin Environmental Consulting

Prep By: JWJ

Checked By: CJB

July 7, 2010

Appendices

Appendix A Soil Boring Logs

TABLE 1

CONCENTRATIONS OF BTEX, TPH AND CHLORIDES IN SOIL

LEGACY RESERVES, LP
LR CHAMBERLAIN TANK BATTERY
LEA COUNTY, NEW MEXICO
NMOCD # 1RP-2390

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						SW 846-8015M				300.1
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TOTAL TPH C ₆ -C ₃₅ (mg/Kg)	
NE Corner @ 5'	5 Feet	03/30/10	In-Situ	<0.0012	<0.0024	0.0077	0.0257	0.0222	0.0556	137	475	111	723	1,420
NE Corner @ 10'	10 Feet	03/30/10	In-Situ	<0.1147	<0.2294	0.7867	2.546	0.1846	3.517	621	1,020	90.6	1,731.6	867
NE Corner @ 15'	15 Feet	03/30/10	In-Situ	<0.5637	<1.127	8.455	11.23	5.829	25.5	1,870	3,340	225	5,435	624
NE Corner @ 17'	17 Feet	03/30/10	In-Situ	<0.0011	<0.0023	0.0035	0.0142	0.0079	0.0256	102	308	21.0	431	755
S. Middle @ 5'	5 Feet	03/30/10	In-Situ	<0.0118	0.0281	0.4166	1.366	0.9622	2.773	611	2,600	180	3,391	2,790
S. Middle @ 10'	10 Feet	03/30/10	In-Situ	<5.562	<11.12	32.48	54.84	10.18	97.5	3,240	4,290	334	7,864	1,680
S. Middle @ 12'	12 Feet	03/30/10	In-Situ	<5.682	<11.36	43.07	104.1	26.31	173.5	3,770	5,330	377	9,477	3,110
S. Middle @ 15'	15 Feet	03/30/10	In-Situ	<5.605	<11.21	26.68	64.24	16.87	107.79	2,680	3,770	279	6,729	1,700
T-1 Sample 1 @ 2'	2 Feet	04/28/10	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.3	<17.3	<17.3	<17.3	1,180
T-1 Sample 1 @ 7'	7 Feet	04/28/10	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.7	<17.7	<17.7	<17.7	976
T-1 Sample 1 @ 15'	15 Feet	04/28/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<17.0	<17.0	<17.0	<17.0	317
T-1 Sample 1 @ 17'	17 Feet	04/28/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	144
T-1 Sample 2 @ 2'	2 Feet	04/28/10	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.1	<17.1	<17.1	<17.1	530
T-1 Sample 2 @ 5'	5 Feet	04/28/10	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.1	<17.1	<17.1	<17.1	387
T-1 Sample 3 @ 2'	2 Feet	04/28/10	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.4	<17.4	<17.4	<17.4	218
T-1 Sample 3 @ 5'	5 Feet	04/28/10	In-Situ	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0025	<18.3	<18.3	<18.3	<18.3	428
T-1 Sample 4 @ 2'	2 Feet	04/28/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.0	<16.0	<16.0	<16.0	23.2
T-1 Sample 4 @ 5'	5 Feet	04/28/10	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.8	<16.8	<16.8	<16.8	1,460
T-1 Sample 5 @ 2'	2 Feet	04/30/10	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.0	88.1	25.4	113.5	14.1
T-1 Sample 5 @ 3'	3 Feet	04/30/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.8	129	51.6	180.6	8.95
T-2 Sample 1 @ 2'	2 Feet	04/28/10	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.3	<17.3	<17.3	<17.3	837
T-2 Sample 1 @ 7'	7 Feet	04/28/10	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.2	<18.2	<18.2	<18.2	818
T-2 Sample 1 @ 12'	12 Feet	04/28/10	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.1	<16.1	<16.1	<16.1	250
T-2 Sample 1 @ 13'	13 Feet	04/28/10	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.1	<16.1	<16.1	<16.1	228
T-2 Sample 2 @ 2'	2 Feet	04/28/10	In-Situ	<0.0012	<0.0025	<0.0012	<0.0025	<0.0012	<0.0025	<18.3	<18.3	<18.3	<18.3	820
T-2 Sample 2 @ 5'	5 Feet	04/28/10	In-Situ	<0.0013	<0.0025	<0.0013	<0.0025	<0.0013	<0.0025	<18.9	<18.9	<18.9	<18.9	553
T-2 Sample 3 @ 2'	2 Feet	04/29/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	<16.4	<16.4	<16.4	184
T-2 Sample 3 @ 5'	5 Feet	04/29/10	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.2	<18.2	<18.2	<18.2	66.3
T-3 Sample 1 @ 2'	2 Feet	04/29/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.9	<16.9	<16.9	<16.9	497

TABLE 1

CONCENTRATIONS OF BTEX, TPH AND CHLORIDES IN SOIL

LEGACY RESERVES, LP
LR CHAMBERLAIN TANK BATTERY
LEA COUNTY, NEW MEXICO
NMOCD # 1RP-2390

SAMPLE LOCATION	SAMPLE DEPTH (Below Grade Surface)	SAMPLE DATE	SOIL STATUS	METHOD: EPA SW 846-8021B, 5030						SW 846-8015M				300.1
				BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL-BENZENE (mg/Kg)	M,P-XYLENE (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C ₆ -C ₁₂ (mg/Kg)	DRO C ₁₂ -C ₂₈ (mg/Kg)	ORO C ₂₈ -C ₃₅ (mg/Kg)	TOTAL TPH C ₆ -C ₃₅ (mg/Kg)	
T-3 Sample 1 @ 5'	5 Feet	04/29/10	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.0	<17.0	<17.0	<17.0	135
T-3 Sample 1 @ 7'	7 Feet	04/29/10	In-Situ	<0.0012	<0.0023	<0.0012	<0.0023	<0.0012	<0.0023	<17.4	<17.4	<17.4	<17.4	117
T-3 Sample 2 @ 5'	5 Feet	04/29/10	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.8	<17.8	<17.8	<17.8	784
T-3 Sample 3 @ 5'	5 Feet	04/29/10	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.9	<16.9	<16.9	<16.9	981
T-3 Sample 4 @ 2'	2 Feet	04/29/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	<16.4	<16.4	<16.4	71.6
T-3 Sample 4 @ 5'	5 Feet	04/29/10	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<16.0	<16.0	<16.0	<16.0	84.3
T-4 Sample 1 @ 1.5'	1.5 Feet	04/29/10	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	<15.8	<15.8	<15.8	669
T-4 Sample 2 @ 1.5'	1.5 Feet	04/29/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.4	<16.4	<16.4	<16.4	885
T-4 Sample 3 @ 2'	2 Feet	04/29/10	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.1	<17.1	<17.1	<17.1	67.6
T-4 Sample 3 @ 3'	3 Feet	04/29/10	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.0	<18.0	<18.0	<18.0	123
T-5 Sample 1 @ 2'	2 Feet	04/29/10	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<18.1	<18.1	<18.1	<18.1	2,870
T-5 Sample 1 @ 3.5'	3.5 Feet	04/29/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.6	<16.6	<16.6	<16.6	1,550
T-5 Sample 2 @ 2'	2 Feet	04/29/10	In-Situ	<0.0012	<0.0024	<0.0012	<0.0024	<0.0012	<0.0024	<17.5	<17.5	<17.5	<17.5	66.4
SB-1 @ 5'	5 Feet	06/29/10	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<17.2	51.9	<17.2	51.9	2,170
SB-1 @ 10'	10 Feet	06/29/10	In-Situ	<0.0011	<0.0023	<0.0011	<0.0023	<0.0011	<0.0023	<16.8	<16.8	<16.8	<16.8	1,250
SB-1 @ 15'	15 Feet	06/29/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.7	<16.7	<16.7	<16.7	778
SB-1 @ 20'	20 Feet	06/29/10	In-Situ	<0.0010	<0.0021	<0.0010	<0.0021	<0.0010	<0.0021	<15.8	<15.8	<15.8	<15.8	169
SB-1 @ 25'	25 Feet	06/29/10	In-Situ	<0.0011	<0.0022	<0.0011	<0.0022	<0.0011	<0.0022	<16.1	<16.1	<16.1	<16.1	72.7
SB-1 @ 30'	30 Feet	06/29/10	In-Situ	<0.0011	<0.0021	<0.0011	<0.0021	<0.0011	<0.0021	<15.8	26.3	<15.8	26.3	103
NMOCD Regulatory Standard				10					50				100	250

Environmental Lab of Texas
Variance/ Corrective Action Report- Sample Log-In

Client: Basin
 Date/ Time: 4/1/10 08:52
 Lab ID #: 367582
 Initials: AS

Sample Receipt Checklist

				Client Initials
#1	Temperature of container/ cooler?	<u>Yes</u>	No	36 °C
#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	Not Present
#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

Analytical Report 371873

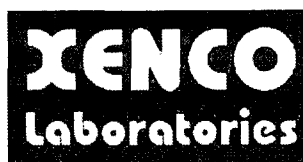
for

Basin Environmental Consulting, LLC

Project Manager: Camille Bryant

LR Chamberlain Tank Battery

14-MAY-10



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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 (LAO00312), 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-TX)

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

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

Xenco-Boca Raton (EPA Lab Code: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)

North Carolina(444), Texas(T104704468-TX), Illinois(002295)



14-MAY-10

Project Manager: **Camille Bryant**
Basin Environmental Consulting, LLC
P.O. Box 381
Lovington, NM 88260

Reference: XENCO Report No: **371873**
LR Chamberlain Tank Battery
Project Address: Lea County, NM

Camille Bryant:

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 371873. 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. 371873 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

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Sample Cross Reference 371873



Basin Environmental Consulting, LLC, Lovington, NM

LR Chamberlain Tank Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 Sample 1 @ 2'	S	Apr-28-10 08:00		371873-001
T-1 Sample 1 @ 7'	S	Apr-28-10 08:20		371873-002
T-1 Sample 1 @ 15'	S	Apr-28-10 08:40		371873-003
T-1 Sample 1 @ 17'	S	Apr-28-10 09:00		371873-004
T-1 Sample 2 @ 2'	S	Apr-28-10 09:40		371873-005
T-1 Sample 2 @ 5'	S	Apr-28-10 10:00		371873-006
T-1 Sample 3 @ 2'	S	Apr-28-10 10:40		371873-007
T-1 Sample 3 @ 5'	S	Apr-28-10 11:00		371873-008
T-1 Sample 4 @ 2'	S	Apr-28-10 11:20		371873-009
T-1 Sample 4 @ 5'	S	Apr-28-10 11:40		371873-010
T-1 Sample 5 @ 2'	S	Apr-30-10 11:00		371873-011
T-1 Sample 5 @ 3'	S	Apr-30-10 11:30		371873-012
T-2 Sample 1 @ 2'	S	Apr-28-10 12:00		371873-013
T-2 Sample 1 @ 7'	S	Apr-28-10 12:30		371873-014
T-2 Sample 1 @ 12'	S	Apr-28-10 13:00		371873-015
T-2 Sample 1 @ 13'	S	Apr-28-10 13:20		371873-016
T-2 Sample 2 @ 2'	S	Apr-28-10 14:20		371873-017
T-2 Sample 2 @ 5'	S	Apr-28-10 14:40		371873-018
T-2 Sample 3 @ 2'	S	Apr-29-10 08:00		371873-019
T-2 Sample 3 @ 5'	S	Apr-29-10 08:30		371873-020
T-3 Sample 1 @ 2'	S	Apr-29-10 09:00		371873-021
T-3 Sample 1 @ 5'	S	Apr-29-10 09:20		371873-022
T-3 Sample 1 @ 7'	S	Apr-29-10 09:40		371873-023
T-3 Sample 2 @ 5'	S	Apr-29-10 10:00		371873-024
T-3 Sample 3 @ 5'	S	Apr-29-10 11:00		371873-025
T-3 Sample 4 @ 2'	S	Apr-29-10 12:00		371873-026
T-3 Sample 4 @ 5'	S	Apr-29-10 12:20		371873-027
T-4 Sample 1 @ 1.5'	S	Apr-29-10 13:00		371873-028
T-4 Sample 2 @ 1.5'	S	Apr-29-10 13:30		371873-029
T-4 Sample 3 @ 2'	S	Apr-29-10 14:00		371873-030
T-4 Sample 3 @ 3'	S	Apr-29-10 14:20		371873-031
T-5 Sample 1 @ 2'	S	Apr-29-10 14:40		371873-032
T-5 Sample 1 @ 3.5'	S	Apr-29-10 15:00		371873-033
T-5 Sample 2 @ 2'	S	Apr-29-10 15:30		371873-034

**CASE NARRATIVE***Client Name: Basin Environmental Consulting, LLC**Project Name: LR Chamberlain Tank Battery**Project ID:**Work Order Number: 371873**Report Date: 14-MAY-10**Date Received: 05/06/2010***Sample receipt non conformances and Comments:***None***Sample receipt Non Conformances and Comments per Sample:***None***Analytical Non Conformances and Comments:***Batch: LBA-805736 TPH By SW8015 Mod**None**Batch: LBA-805744 Percent Moisture**None**Batch: LBA-805751 Percent Moisture**None**Batch: LBA-805752 TPH By SW8015 Mod**SW8015MOD_NM**Batch 805752, C12-C28 Diesel Range Hydrocarbons recovered below QC limits in the Matrix Spike Duplicate.**Samples affected are: 371873-025, -030, -032, -026, -028, -033, -021, -023, -024, -027, -029, -034, -031, -022.**The Laboratory Control Sample for C12-C28 Diesel Range Hydrocarbons is within laboratory Control Limits*



CASE NARRATIVE

Client Name: Basin Environmental Consulting, LLC

Project Name: LR Chamberlain Tank Battery



Project ID:

Work Order Number: 371873

Report Date: 14-MAY-10

Date Received: 05/06/2010

*Batch: LBA-805828 BTEX by EPA 8021B
SW8021BM*

Batch 805828, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene, Ethylbenzene, Toluene, m,p-Xylenes recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 371873-007, -015, -002, -016, -004, -008, -011, -017, -018, -013, -001, -003, -010, -014, -020, -006, -009, -012, -005, -019.

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

SW8021BM

Batch 805828, 1,4-Difluorobenzene recovered below QC limits. Matrix interferences is suspected; data not confirmed by re-analysis

Samples affected are: 371873-012, 371873-011.

**CASE NARRATIVE***Client Name: Basin Environmental Consulting, LLC**Project Name: LR Chamberlain Tank Battery**Project ID:**Work Order Number: 371873**Report Date: 14-MAY-10**Date Received: 05/06/2010*

*Batch: LBA-805963 BTEX by EPA 8021B
SW8021BM*

*Batch 805963, 1,4-Difluorobenzene recovered above QC limits . Matrix interferences is suspected; QC data not confirmed by re-analysis
Samples affected are: 371873-021 S.*

SW8021BM

Batch 805963, Benzene, Ethylbenzene, Toluene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. m,p-Xylenes recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 371873-025, -030, -032, -026, -028, -033, -021, -023, -024, -027, -029, -034, -031, -022.

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

SW8021BM

Batch 805963, o-Xylene RPD was outside QC limits.

Samples affected are: 371873-025, -030, -032, -026, -028, -033, -021, -023, -024, -027, -029, -034, -031, -022

*Batch: LBA-806338 Inorganic Anions by EPA 300
None*

*Batch: LBA-806340 Inorganic Anions by EPA 300
None*



Certificate of Analysis Summary 371873

Basin Environmental Consulting, LLC, Lovington, NM

Project Name: LR Chamberlain Tank Battery



Project Id:
Contact: Camille Bryant
Project Location: Lea County, NM

Date Received in Lab: Thu May-06-10 05:08 pm
Report Date: 14-MAY-10
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	371873-001	371873-002	371873-003	371873-004	371873-005	371873-006
	Field Id:	T-1 Sample 1 @ 2'	T-1 Sample 1 @ 7'	T-1 Sample 1 @ 15'	T-1 Sample 1 @ 17'	T-1 Sample 2 @ 2'	T-1 Sample 2 @ 5'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Anions by E300	Sampled:	Apr-28-10 08:00	Apr-28-10 08:20	Apr-28-10 08:40	Apr-28-10 09:00	Apr-28-10 09:40	Apr-28-10 10:00
	Extracted:						
	Analyzed:	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32
	Units/RL:	mg/kg RL 1180 19.3	mg/kg RL 976 49.5	mg/kg RL 317 9.48	mg/kg RL 144 4.70	mg/kg RL 530 9.55	mg/kg RL 387 19.2
BTX by EPA 8021B	Extracted:	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30
	Analyzed:	May-08-10 18:01	May-08-10 18:24	May-08-10 18:46	May-08-10 19:08	May-08-10 19:31	May-08-10 19:53
	Units/RL:	mg/kg RL ND 0.0012	mg/kg RL ND 0.0012	mg/kg RL ND 0.0011	mg/kg RL ND 0.0011	mg/kg RL ND 0.0011	mg/kg RL ND 0.0011
		ND 0.0023	ND 0.0024	ND 0.0022	ND 0.0022	ND 0.0023	ND 0.0023
Percent Moisture	Extracted:						
	Analyzed:	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00
	Units/RL:	% RL 13.0 1.00	% RL 15.1 1.00	% RL 11.4 1.00	% RL 10.6 1.00	% RL 12.0 1.00	% RL 12.3 1.00
		May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
TPH By SW8015 Mod	Extracted:	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
	Analyzed:	May-07-10 18:14	May-07-10 18:41	May-07-10 19:08	May-07-10 19:35	May-07-10 20:02	May-07-10 20:29
	Units/RL:	mg/kg RL ND 17.3	mg/kg RL ND 17.7	mg/kg RL ND 17.0	mg/kg RL ND 16.7	mg/kg RL ND 17.1	mg/kg RL ND 17.1
		ND 17.3	ND 17.7	ND 17.0	ND 16.7	ND 17.1	ND 17.1
C6-C12 Gasoline Range Hydrocarbons	Extracted:						
	Analyzed:	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00
	Units/RL:	% RL 13.0 1.00	% RL 15.1 1.00	% RL 11.4 1.00	% RL 10.6 1.00	% RL 12.0 1.00	% RL 12.3 1.00
		May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
C12-C28 Diesel Range Hydrocarbons	Extracted:						
	Analyzed:	May-07-10 18:14	May-07-10 18:41	May-07-10 19:08	May-07-10 19:35	May-07-10 20:02	May-07-10 20:29
	Units/RL:	mg/kg RL ND 17.3	mg/kg RL ND 17.7	mg/kg RL ND 17.0	mg/kg RL ND 16.7	mg/kg RL ND 17.1	mg/kg RL ND 17.1
		ND 17.3	ND 17.7	ND 17.0	ND 16.7	ND 17.1	ND 17.1
C28-C35 Oil Range Hydrocarbons	Extracted:						
	Analyzed:	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00
	Units/RL:	% RL 13.0 1.00	% RL 15.1 1.00	% RL 11.4 1.00	% RL 10.6 1.00	% RL 12.0 1.00	% RL 12.3 1.00
		May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
Total TPH	Extracted:						
	Analyzed:	May-07-10 18:14	May-07-10 18:41	May-07-10 19:08	May-07-10 19:35	May-07-10 20:02	May-07-10 20:29
	Units/RL:	mg/kg RL ND 17.3	mg/kg RL ND 17.7	mg/kg RL ND 17.0	mg/kg RL ND 16.7	mg/kg RL ND 17.1	mg/kg RL ND 17.1
		ND 17.3	ND 17.7	ND 17.0	ND 16.7	ND 17.1	ND 17.1

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



Certificate of Analysis Summary 371873
Basin Environmental Consulting, LLC, Lovington, NM
Project Name: LR Chamberlain Tank Battery



Project Id:
Contact: Camille Bryant
Project Location: Lea County, NM

Date Received in Lab: Thu May-06-10 05:08 pm
Report Date: 14-MAY-10
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	371873-007	371873-008	371873-009	371873-010	371873-011	371873-012
	Field Id:	T-1 Sample 3 @ 2'	T-1 Sample 3 @ 5'	T-1 Sample 4 @ 2'	T-1 Sample 4 @ 5'	T-1 Sample 5 @ 2'	T-1 Sample 5 @ 3'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Anions by E300	Sampled:	Apr-28-10 10:40	Apr-28-10 11:00	Apr-28-10 11:20	Apr-28-10 11:40	Apr-30-10 11:00	Apr-30-10 11:30
	Extracted:						
	Analyzed:	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		218 9.71	428 10.3	23.2 4.49	1460 23.6	14.1 4.77	8.95 4.71
BTEX by EPA 8021B	Sampled:	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30
	Extracted:						
	Analyzed:	May-08-10 20:16	May-08-10 20:38	May-08-10 21:01	May-08-10 21:23	May-08-10 22:30	May-08-10 22:53
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011
Toluene		ND 0.0023	ND 0.0025	ND 0.0022	ND 0.0023	ND 0.0023	ND 0.0022
Ethylbenzene		ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011
m,p-Xylenes		ND 0.0023	ND 0.0025	ND 0.0022	ND 0.0023	ND 0.0023	ND 0.0022
o-Xylene		ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011
Total Xylenes		ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011
Total BTEX		ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0011
Percent Moisture	Sampled:	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00
	Extracted:						
	Analyzed:						
	Units/RL:	% RL	% RL	% RL	% RL	% RL	% RL
Percent Moisture		13.5 1.00	18.2 1.00	6.43 1.00	11.1 1.00	12.0 1.00	10.9 1.00
TPH By SW8015 Mod	Sampled:	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
	Extracted:						
	Analyzed:	May-07-10 20:56	May-07-10 21:23	May-07-10 21:50	May-07-10 22:16	May-07-10 23:11	May-07-10 23:38
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		ND 17.4	ND 18.3	ND 16.0	ND 16.8	ND 17.0	ND 16.8
C12-C28 Diesel Range Hydrocarbons		ND 17.4	ND 18.3	ND 16.0	ND 16.8	88.1 17.0	129 16.8
C28-C35 Oil Range Hydrocarbons		ND 17.4	ND 18.3	ND 16.0	ND 16.8	25.4 17.0	51.6 16.8
Total TPH		ND 17.4	ND 18.3	ND 16.0	ND 16.8	113.5 17.0	181 16.8

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Brent Barron, II
Odessa Laboratory Manager



Certificate of Analysis Summary 371873
Basin Environmental Consulting, LLC, Lovington, NM
Project Name: LR Chamberlain Tank Battery



Project Id:
Contact: Camille Bryant
Project Location: Lea County, NM

Date Received in Lab: Thu May-06-10 05:08 pm
Report Date: 14-MAY-10
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	371873-013	371873-014	371873-015	371873-016	371873-017	371873-018
	Field Id: Depth: Matrix: Sampled:	T-2 Sample 1 @ 2' SOIL Apr-28-10 12:00	T-2 Sample 1 @ 7' SOIL Apr-28-10 12:30	T-2 Sample 1 @ 12' SOIL Apr-28-10 13:00	T-2 Sample 1 @ 13' SOIL Apr-28-10 13:20	T-2 Sample 2 @ 2' SOIL Apr-28-10 14:20	T-2 Sample 2 @ 5' SOIL Apr-28-10 14:40
Anions by E300	Extracted:	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32	May-12-10 10:32
	Analyzed:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BTEX by EPA 8021B	Units/RL:	837 19.5	818 20.2	250 9.08	228 9.04	820 20.5	553 52.8
	Chloride						
Percent Moisture	Extracted:	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30	May-08-10 11:30
	Analyzed:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TPH By SW8015 Mod	Units/RL:	ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0012	ND 0.0013
	Benzene						
C6-C12 Gasoline Range Hydrocarbons	Extracted:	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00
	Analyzed:	%	%	%	%	%	%
C12-C28 Diesel Range Hydrocarbons	Units/RL:	13.8 1.00	17.0 1.00	7.46 1.00	7.12 1.00	18.2 1.00	20.5 1.00
	Total Xylenes						
C28-C35 Oil Range Hydrocarbons	Extracted:	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
	Analyzed:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total TPH	Units/RL:	ND 17.3	ND 18.2	ND 16.1	ND 16.1	ND 18.3	ND 18.9
	Total TPH						

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



Certificate of Analysis Summary 371873
Basin Environmental Consulting, LLC, Lovington, NM
Project Name: LR Chamberlain Tank Battery



Project Id:
Contact: Camille Bryant
Project Location: Lea County, NM

Date Received in Lab: Thu May-06-10 05:08 pm
Report Date: 14-MAY-10
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	371873-019	371873-020	371873-021	371873-022	371873-023	371873-024
	Field Id: Depth: Matrix: Sampled:	T-2 Sample 3 @ 2' Apr-29-10 08:00 SOIL	T-2 Sample 3 @ 5' Apr-29-10 08:30 SOIL	T-3 Sample 1 @ 2' Apr-29-10 09:00 SOIL	T-3 Sample 1 @ 5' Apr-29-10 09:20 SOIL	T-3 Sample 1 @ 7' Apr-29-10 09:40 SOIL	T-3 Sample 2 @ 5' Apr-29-10 10:00 SOIL
Anions by E300	Extracted:						
	Analyzed:	May-12-10 10:32 mg/kg	May-12-10 10:32 mg/kg	May-12-10 19:30 mg/kg	May-12-10 19:30 mg/kg	May-12-10 19:30 mg/kg	May-12-10 19:30 mg/kg
	Units/RL:	184 9.22 RL	66.3 5.08 RL	497 9.44 RL	135 9.52 RL	117 9.70 RL	784 20.0 RL
BTEX by EPA 8021B	Extracted:	May-08-10 11:30	May-08-10 11:30	May-10-10 14:30	May-10-10 14:30	May-10-10 14:30	May-10-10 14:30
	Analyzed:	May-09-10 01:28 mg/kg	May-09-10 01:51 mg/kg	May-10-10 15:23 mg/kg	May-10-10 15:44 mg/kg	May-10-10 16:04 mg/kg	May-10-10 16:25 mg/kg
	Units/RL:	ND 0.0011 RL	ND 0.0012 RL	ND 0.0011 RL	ND 0.0011 RL	ND 0.0012 RL	ND 0.0012 RL
Benzene		ND 0.0022	ND 0.0024	ND 0.0022	ND 0.0023	ND 0.0023	ND 0.0024
Toluene		ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0012	ND 0.0012
Ethylbenzene		ND 0.0022	ND 0.0024	ND 0.0022	ND 0.0023	ND 0.0023	ND 0.0024
m,p-Xylenes		ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0012	ND 0.0012
o-Xylene		ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0012	ND 0.0012
Total Xylenes		ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0012	ND 0.0012
Total BTEX		ND 0.0011	ND 0.0012	ND 0.0011	ND 0.0011	ND 0.0012	ND 0.0012
Percent Moisture	Extracted:						
	Analyzed:	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00
	Units/RL:	% 8.85 1.00 RL	% 17.4 1.00 RL	% 11.0 1.00 RL	% 11.8 1.00 RL	% 13.4 1.00 RL	% 15.8 1.00 RL
TPH By SW8015 Mod	Extracted:	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
	Analyzed:	May-08-10 02:48 mg/kg	May-08-10 03:15 mg/kg	May-07-10 22:16 mg/kg	May-07-10 22:46 mg/kg	May-07-10 23:15 mg/kg	May-07-10 23:44 mg/kg
	Units/RL:	ND 16.4 RL	ND 18.2 RL	ND 16.9 RL	ND 17.0 RL	ND 17.4 RL	ND 17.8 RL
C6-C12 Gasoline Range Hydrocarbons		ND 16.4	ND 18.2	ND 16.9	ND 17.0	ND 17.4	ND 17.8
C12-C28 Diesel Range Hydrocarbons		ND 16.4	ND 18.2	ND 16.9	ND 17.0	ND 17.4	ND 17.8
C28-C35 Oil Range Hydrocarbons		ND 16.4	ND 18.2	ND 16.9	ND 17.0	ND 17.4	ND 17.8
Total TPH		ND 16.4	ND 18.2	ND 16.9	ND 17.0	ND 17.4	ND 17.8

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Brent Barron, II
Odessa Laboratory Manager



Certificate of Analysis Summary 371873

Basin Environmental Consulting, LLC, Lovington, NM

Project Name: LR Chamberlain Tank Battery



Project Id:
Contact: Camille Bryant
Project Location: Lea County, NM

Date Received in Lab: Thu May-06-10 05:08 pm
Report Date: 14-MAY-10
Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	371873-025	371873-026	371873-027	371873-028	371873-029	371873-030
	Field Id:	T-3 Sample 3 @ 5'	T-3 Sample 4 @ 2'	T-3 Sample 4 @ 5'	T-4 Sample 1 @ 1.5'	T-4 Sample 2 @ 1.5'	T-4 Sample 3 @ 2'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Anions by E300	Sampled:	Apr-29-10 11:00	Apr-29-10 12:00	Apr-29-10 12:20	Apr-29-10 13:00	Apr-29-10 13:30	Apr-29-10 14:00
	Extracted:						
	Analyzed:	May-12-10 19:30	May-12-10 19:30	May-12-10 19:30	May-12-10 19:30	May-12-10 19:30	May-12-10 19:30
	Units/RL:	mg/kg RL 981 47.5	mg/kg RL 71.6 4.58	mg/kg RL 84.3 4.48	mg/kg RL 669 17.8	mg/kg RL 885 18.4	mg/kg RL 67.6 9.61
BTEX by EPA 8021B	Extracted:	May-10-10 14:30	May-10-10 14:30	May-10-10 14:30	May-10-10 14:30	May-10-10 14:30	May-10-10 14:30
	Analyzed:	May-10-10 16:45	May-10-10 17:06	May-10-10 17:27	May-10-10 17:47	May-10-10 18:08	May-10-10 18:29
	Units/RL:	mg/kg RL ND 0.0011	mg/kg RL ND 0.0011	mg/kg RL ND 0.0011	mg/kg RL ND 0.0011	mg/kg RL ND 0.0011	mg/kg RL ND 0.0011
		ND 0.0023	ND 0.0022	ND 0.0021	ND 0.0021	ND 0.0022	ND 0.0023
Percent Moisture	Extracted:	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00
	Analyzed:						
	Units/RL:	% RL 11.5 1.00	% RL 8.31 1.00	% RL 6.17 1.00	% RL 5.74 1.00	% RL 8.62 1.00	% RL 12.6 1.00
		May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
TPH By SW8015 Mod	Extracted:	May-08-10 00:15	May-08-10 00:46	May-08-10 01:18	May-08-10 01:50	May-08-10 02:22	May-08-10 02:53
	Analyzed:						
	Units/RL:	mg/kg RL ND 16.9	mg/kg RL ND 16.4	mg/kg RL ND 16.0	mg/kg RL ND 15.8	mg/kg RL ND 16.4	mg/kg RL ND 17.1
		ND 16.9	ND 16.4	ND 16.0	ND 15.8	ND 16.4	ND 17.1
C6-C12 Gasoline Range Hydrocarbons	Extracted:	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
	Analyzed:						
	Units/RL:	mg/kg RL ND 16.9	mg/kg RL ND 16.4	mg/kg RL ND 16.0	mg/kg RL ND 15.8	mg/kg RL ND 16.4	mg/kg RL ND 17.1
		ND 16.9	ND 16.4	ND 16.0	ND 15.8	ND 16.4	ND 17.1
C12-C28 Diesel Range Hydrocarbons	Extracted:	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
	Analyzed:						
	Units/RL:	mg/kg RL ND 16.9	mg/kg RL ND 16.4	mg/kg RL ND 16.0	mg/kg RL ND 15.8	mg/kg RL ND 16.4	mg/kg RL ND 17.1
		ND 16.9	ND 16.4	ND 16.0	ND 15.8	ND 16.4	ND 17.1
C28-C35 Oil Range Hydrocarbons	Extracted:	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
	Analyzed:						
	Units/RL:	mg/kg RL ND 16.9	mg/kg RL ND 16.4	mg/kg RL ND 16.0	mg/kg RL ND 15.8	mg/kg RL ND 16.4	mg/kg RL ND 17.1
		ND 16.9	ND 16.4	ND 16.0	ND 15.8	ND 16.4	ND 17.1
Total TPH	Extracted:	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
	Analyzed:						
	Units/RL:	mg/kg RL ND 16.9	mg/kg RL ND 16.4	mg/kg RL ND 16.0	mg/kg RL ND 15.8	mg/kg RL ND 16.4	mg/kg RL ND 17.1
		ND 16.9	ND 16.4	ND 16.0	ND 15.8	ND 16.4	ND 17.1

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Brent Barron, II
Odessa Laboratory Manager



Certificate of Analysis Summary 371873
Basin Environmental Consulting, LLC, Lovington, NM

Project Name: LR Chamberlain Tank Battery

Project Id:

Contact: Camille Bryant
Project Location: Lea County, NM

Date Received in Lab: Thu May-06-10 05:08 pm


Report Date: 14-MAY-10

Project Manager: Brent Barron, II

Analysis Requested		Lab Id:	371873-031	371873-032	371873-033	371873-034
		Field Id:	T-4 Sample 3 @ 3'	T-5 Sample 1 @ 2'	T-5 Sample 1 @ 3.5'	T-5 Sample 2 @ 2'
		Depth:				
		Matrix:	SOIL	SOIL	SOIL	SOIL
		Sampled:	Apr-29-10 14:20	Apr-29-10 14:40	Apr-29-10 15:00	Apr-29-10 15:30
Anions by E300	Extracted:					
	Analyzed:	May-12-10 19:30	May-12-10 19:30	May-12-10 19:30	May-12-10 19:30	May-12-10 19:30
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride			123 10.1	2870 50.6	1550 23.2	66.4 4.94
BTEX by EPA 8021B	Extracted:	May-10-10 14:30	May-10-10 14:30	May-10-10 14:30	May-10-10 14:30	May-10-10 14:30
	Analyzed:	May-10-10 19:31	May-10-10 19:52	May-10-10 20:12	May-10-10 20:33	May-10-10 20:33
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene			ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0012
Toluene			ND 0.0024	ND 0.0024	ND 0.0022	ND 0.0024
Ethylbenzene			ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0012
m,p-Xylenes			ND 0.0024	ND 0.0024	ND 0.0022	ND 0.0024
o-Xylene			ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0012
Total Xylenes			ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0012
Total BTEX			ND 0.0012	ND 0.0012	ND 0.0011	ND 0.0012
Percent Moisture	Extracted:					
	Analyzed:	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00	May-07-10 17:00
	Units/RL:	% RL	% RL	% RL	% RL	% RL
Percent Moisture			16.9 1.00	17.0 1.00	9.31 1.00	14.9 1.00
TPH By SW8015 Mod	Extracted:	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15	May-07-10 13:15
	Analyzed:	May-08-10 03:54	May-08-10 04:25	May-08-10 04:56	May-08-10 05:29	May-08-10 05:29
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons			ND 18.0	ND 18.1	ND 16.6	ND 17.5
C12-C28 Diesel Range Hydrocarbons			ND 18.0	ND 18.1	ND 16.6	ND 17.5
C28-C35 Oil Range Hydrocarbons			ND 18.0	ND 18.1	ND 16.6	ND 17.5
Total TPH			ND 18.0	ND 18.1	ND 16.6	ND 17.5

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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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805828

Sample: 562820-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 05/08/10 16:10	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0295	0.0300	98	80-120
4-Bromofluorobenzene		0.0300	0.0300	100	80-120

Lab Batch #: 805828

Sample: 562820-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 05/08/10 16:33	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0300	0.0300	100	80-120
4-Bromofluorobenzene		0.0293	0.0300	98	80-120

Lab Batch #: 805828

Sample: 562820-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg	Date Analyzed: 05/08/10 17:39	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0243	0.0300	81	80-120
4-Bromofluorobenzene		0.0294	0.0300	98	80-120

Lab Batch #: 805828

Sample: 371873-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 05/08/10 18:01	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0243	0.0300	81	80-120
4-Bromofluorobenzene		0.0300	0.0300	100	80-120

Lab Batch #: 805828

Sample: 371873-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg	Date Analyzed: 05/08/10 18:24	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					Flags
1,4-Difluorobenzene		0.0244	0.0300	81	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805828

Sample: 371873-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 18:46

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	0.0287	0.0300	96	80-120	

Lab Batch #: 805828

Sample: 371873-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 19:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 805828

Sample: 371873-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 19:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 805828

Sample: 371873-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 19:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 805828

Sample: 371873-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 20:16

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0284	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] = $100 * A / B$

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



Form 2 - Surrogate Recoveries

Project Name: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805828

Sample: 371873-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 20:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0239	0.0300	80	80-120	
4-Bromofluorobenzene	0.0282	0.0300	94	80-120	

Lab Batch #: 805828

Sample: 371873-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 21:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0247	0.0300	82	80-120	
4-Bromofluorobenzene	0.0305	0.0300	102	80-120	

Lab Batch #: 805828

Sample: 371873-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 21:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 805828

Sample: 371873-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 22:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0238	0.0300	79	80-120	*
4-Bromofluorobenzene	0.0273	0.0300	91	80-120	

Lab Batch #: 805828

Sample: 371873-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 22:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0235	0.0300	78	80-120	*
4-Bromofluorobenzene	0.0273	0.0300	91	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805828

Sample: 371873-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 23:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0244	0.0300	81	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 805828

Sample: 371873-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 23:38

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	0.0290	0.0300	97	80-120	

Lab Batch #: 805828

Sample: 371873-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/09/10 00:00

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0243	0.0300	81	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 805828

Sample: 371873-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/09/10 00:22

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	0.0291	0.0300	97	80-120	

Lab Batch #: 805828

Sample: 371873-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/09/10 00:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0245	0.0300	82	80-120	
4-Bromofluorobenzene	0.0296	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805828

Sample: 371873-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/09/10 01:06

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	0.0293	0.0300	98	80-120	

Lab Batch #: 805828

Sample: 371873-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/09/10 01:28

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	0.0287	0.0300	96	80-120	

Lab Batch #: 805828

Sample: 371873-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/09/10 01:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0244	0.0300	81	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 805828

Sample: 371873-020 S / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/09/10 02:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 805828

Sample: 371873-020 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/09/10 02:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0284	0.0300	95	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805963

Sample: 562918-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/10/10 09:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 805963

Sample: 562918-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/10/10 09:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0304	0.0300	101	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 805963

Sample: 562918-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/10/10 10:35

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	0.0296	0.0300	99	80-120	

Lab Batch #: 805963

Sample: 371873-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 15:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0278	0.0300	93	80-120	

Lab Batch #: 805963

Sample: 371873-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 15:44

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	0.0306	0.0300	102	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805963

Sample: 371873-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 16:04

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	0.0310	0.0300	103	80-120	

Lab Batch #: 805963

Sample: 371873-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 16:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

Lab Batch #: 805963

Sample: 371873-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 16:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

Lab Batch #: 805963

Sample: 371873-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 17:06

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0270	0.0300	90	80-120	

Lab Batch #: 805963

Sample: 371873-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 17:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0330	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805963

Sample: 371873-028 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 17:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0268	0.0300	89	80-120	
4-Bromofluorobenzene	0.0272	0.0300	91	80-120	

Lab Batch #: 805963

Sample: 371873-029 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 18:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0272	0.0300	91	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 805963

Sample: 371873-030 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 18:29

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0303	0.0300	101	80-120	

Lab Batch #: 805963

Sample: 371873-031 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 19:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0279	0.0300	93	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 805963

Sample: 371873-032 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 19:52

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0294	0.0300	98	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805963

Sample: 371873-033 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 20:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 805963

Sample: 371873-034 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 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	0.0269	0.0300	90	80-120	
4-Bromofluorobenzene	0.0301	0.0300	100	80-120	

Lab Batch #: 805963

Sample: 371873-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 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	0.0362	0.0300	121	80-120	*
4-Bromofluorobenzene	0.0313	0.0300	104	80-120	

Lab Batch #: 805963

Sample: 371873-021 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/10/10 22:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 805736

Sample: 562786-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/07/10 16:54

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	44.7	50.2	89	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805736

Sample: 562786-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/07/10 17:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	44.0	50.2	88	70-135	

Lab Batch #: 805736

Sample: 562786-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/07/10 17:47

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	96.2	99.6	97	70-135	
o-Terphenyl	48.1	49.8	97	70-135	

Lab Batch #: 805736

Sample: 371873-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 18:14

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.5	100	99	70-135	
o-Terphenyl	49.0	50.2	98	70-135	

Lab Batch #: 805736

Sample: 371873-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 18:41

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	96.0	100	96	70-135	
o-Terphenyl	48.0	50.2	96	70-135	

Lab Batch #: 805736

Sample: 371873-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 19:08

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.2	100	98	70-135	
o-Terphenyl	48.8	50.2	97	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805736

Sample: 371873-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 19:35

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.8	99.8	94	70-135	
o-Terphenyl	46.3	49.9	93	70-135	

Lab Batch #: 805736

Sample: 371873-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 20:02

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.7	100	95	70-135	
o-Terphenyl	46.3	50.1	92	70-135	

Lab Batch #: 805736

Sample: 371873-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 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	95.5	100	96	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 805736

Sample: 371873-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 20:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.8	100	95	70-135	
o-Terphenyl	47.9	50.2	95	70-135	

Lab Batch #: 805736

Sample: 371873-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 21:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	99.8	96	70-135	
o-Terphenyl	47.9	49.9	96	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805736

Sample: 371873-009 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 21:50

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.3	100	94	70-135	
o-Terphenyl	46.8	50.1	93	70-135	

Lab Batch #: 805736

Sample: 371873-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 22:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.5	99.8	96	70-135	
o-Terphenyl	47.5	49.9	95	70-135	

Lab Batch #: 805736

Sample: 371873-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 23:11

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	99.8	95	70-135	
o-Terphenyl	47.5	49.9	95	70-135	

Lab Batch #: 805736

Sample: 371873-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 23:38

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.3	99.8	94	70-135	
o-Terphenyl	47.3	49.9	95	70-135	

Lab Batch #: 805736

Sample: 371873-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 00:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.8	99.5	95	70-135	
o-Terphenyl	47.3	49.8	95	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805736

Sample: 371873-014 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 00:32

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	95.0	101	94	70-135	
o-Terphenyl	47.5	50.3	94	70-135	

Lab Batch #: 805736

Sample: 371873-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 00:59

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	96.3	99.5	97	70-135	
o-Terphenyl	47.9	49.8	96	70-135	

Lab Batch #: 805736

Sample: 371873-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 01:26

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	92.9	99.5	93	70-135	
o-Terphenyl	46.1	49.8	93	70-135	

Lab Batch #: 805736

Sample: 371873-017 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 01:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	90.5	100	91	70-135	
o-Terphenyl	46.3	50.0	93	70-135	

Lab Batch #: 805736

Sample: 371873-018 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 02:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	94.0	100	94	70-135	
o-Terphenyl	47.2	50.0	94	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805736

Sample: 371873-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 02:48

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.2	99.5	99	70-135	
o-Terphenyl	48.6	49.8	98	70-135	

Lab Batch #: 805736

Sample: 371873-020 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 03:15

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	94.8	100	95	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

Lab Batch #: 805736

Sample: 371873-020 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 03:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	48.2	50.1	96	70-135	

Lab Batch #: 805736

Sample: 371873-020 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 04:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	119	99.5	120	70-135	
o-Terphenyl	47.2	49.8	95	70-135	

Lab Batch #: 805752

Sample: 562796-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/07/10 20:43

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.2	100	98	70-135	
o-Terphenyl	45.0	50.2	90	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805752

Sample: 562796-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/07/10 21:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.6	99.6	85	70-135	
o-Terphenyl	46.9	49.8	94	70-135	

Lab Batch #: 805752

Sample: 371873-021 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 22:16

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.0	100	82	70-135	
o-Terphenyl	44.6	50.1	89	70-135	

Lab Batch #: 805752

Sample: 371873-022 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 22:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	81.3	99.9	81	70-135	
o-Terphenyl	44.3	50.0	89	70-135	

Lab Batch #: 805752

Sample: 371873-023 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 23:15

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	57.9	50.2	115	70-135	

Lab Batch #: 805752

Sample: 371873-024 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/07/10 23:44

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	57.3	50.0	115	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805752

Sample: 371873-025 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 00:15

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	87.9	99.5	88	70-135	
o-Terphenyl	48.0	49.8	96	70-135	

Lab Batch #: 805752

Sample: 371873-026 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 00:46

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	97.0	100	97	70-135	
o-Terphenyl	53.2	50.0	106	70-135	

Lab Batch #: 805752

Sample: 371873-027 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 01:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	55.2	50.0	110	70-135	

Lab Batch #: 805752

Sample: 371873-028 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 01:50

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	99.5	94	70-135	
o-Terphenyl	50.8	49.8	102	70-135	

Lab Batch #: 805752

Sample: 371873-029 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 02:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	95.0	100	95	70-135	
o-Terphenyl	52.4	50.1	105	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805752

Sample: 371873-030 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 02:53

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	95.9	99.6	96	70-135	
o-Terphenyl	52.0	49.8	104	70-135	

Lab Batch #: 805752

Sample: 371873-031 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 03:54

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	87.8	99.8	88	70-135	
o-Terphenyl	48.2	49.9	97	70-135	

Lab Batch #: 805752

Sample: 371873-032 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 04:25

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	83.0	100	83	70-135	
o-Terphenyl	45.5	50.1	91	70-135	

Lab Batch #: 805752

Sample: 371873-033 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 04:56

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	55.5	50.1	111	70-135	

Lab Batch #: 805752

Sample: 371873-034 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 05:29

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	90.1	99.5	91	70-135	
o-Terphenyl	49.5	49.8	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: LR Chamberlain Tank Battery

Work Orders : 371873,

Project ID:

Lab Batch #: 805752

Sample: 371873-034 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 08:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.2	99.6	94	70-135	
o-Terphenyl	42.7	49.8	86	70-135	

Lab Batch #: 805752

Sample: 371873-034 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/08/10 08:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.9	100	98	70-135	
o-Terphenyl	44.8	50.2	89	70-135	

Lab Batch #: 805752

Sample: 562796-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/10/10 11:00

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	118	100	118	70-135	
o-Terphenyl	53.6	50.2	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.

BS / BSD Recoveries

Project Name: LR Chamberlain Tank Battery

Work Order #: 371873

Analyst: ASA

Lab Batch ID: 805828

Sample: 562820-1-BKS

Batch #: 1

Date Prepared: 05/08/2010

Project ID:

Date Analyzed: 05/08/2010

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	0.1042	104	0.1	0.1056	106	1	70-130	35	
Toluene		ND	0.1000	0.1006	101	0.1	0.1013	101	1	70-130	35	
Ethylbenzene		ND	0.1000	0.1051	105	0.1	0.1055	106	0	71-129	35	
m,p-Xylenes		ND	0.2000	0.2026	101	0.2	0.2032	102	0	70-135	35	
o-Xylene		ND	0.1000	0.0970	97	0.1	0.0973	97	0	71-133	35	

Analyst: ASA

Lab Batch ID: 805963

Sample: 562918-1-BKS

Date Prepared: 05/10/2010

Date Analyzed: 05/10/2010

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/kg												
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	0.0861	86	0.1	0.0857	86	0	70-130	35	
Toluene		ND	0.1000	0.0896	90	0.1	0.0891	89	1	70-130	35	
Ethylbenzene		ND	0.1000	0.0872	87	0.1	0.0867	87	1	71-129	35	
m,p-Xylenes		ND	0.2000	0.1948	97	0.2	0.1938	97	1	70-135	35	
o-Xylene		ND	0.1000	0.0964	96	0.1	0.0959	96	1	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: LR Chamberlain Tank Battery

Work Order #: 371873

Analyst: LATCOR

Lab Batch ID: 806338

Sample: 806338-1-BKS

Units: mg/kg

Project ID:

Date Analyzed: 05/12/2010

Date Prepared: 05/12/2010

Batch #: 1

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Anions by E300										
	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
	ND	10.0	9.94	99	10	9.82	98	1	75-125	20	
Chloride											

Analyst: LATCOR

Lab Batch ID: 806340

Sample: 806340-1-BKS

Units: mg/kg

Date Prepared: 05/12/2010

Batch #: 1

Date Analyzed: 05/12/2010

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Anions by E300										
	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
	ND	10.0	10.4	104	10	9.90	99	5	75-125	20	

Analyst: BEV

Lab Batch ID: 805736

Sample: 562786-1-BKS

Units: mg/kg

Date Prepared: 05/07/2010

Batch #: 1

Date Analyzed: 05/07/2010

Matrix: Solid

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Units: mg/kg	TPH By SW8015 Mod	Analytes	Blank Sample Result	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate Result	Blank Spike Dup. %R	RPD %	Control Limits	Control Limits	Flag
			[A]	[B]	[C]	[D]	[E]	[F]	[G]		%R	%RPD	
		C6-C12 Gasoline Range Hydrocarbons	ND	1000	1120	112	1000	1110	111	1	70-135	35	
		C12-C28 Diesel Range Hydrocarbons	ND	1000	724	72	1000	774	77	7	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



Project Name: LR Chamberlain Tank Battery

Work Order #: 371873

Analyst: BEV

Lab Batch ID: 805752

Sample: 562796-1-BKS

Units: mg/kg

Project ID:

Date Analyzed: 05/07/2010

Matrix: Solid

Date Prepared: 05/07/2010

Batch #: 1

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY													
Units: mg/kg	TPH By SW8015 Mod	Analytes	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
			ND	1000	1050	105	1000	1220	122	15	70-135	35	
	C6-C12 Gasoline Range Hydrocarbons		ND	1000	1050	105	1000	1220	122	15	70-135	35	
	C12-C28 Diesel Range Hydrocarbons		ND	1000	813	81	1000	891	89	9	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: LR Chamberlain Tank Battery



Work Order #: 371873

Lab Batch #: 806338

Date Analyzed: 05/12/2010

Date Prepared: 05/12/2010

Project ID:

Analyst: LATCOR

QC- Sample ID: 371873-001 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	1180	460	1680	109	75-125	

Lab Batch #: 806340

Date Analyzed: 05/12/2010

Date Prepared: 05/12/2010

Analyst: LATCOR

QC- Sample ID: 371873-021 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	497	225	687	84	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: LR Chamberlain Tank Battery



Work Order #: 371873

Lab Batch ID: 805828

Date Analyzed: 05/09/2010

Reporting Units: mg/kg

Project ID:

QC- Sample ID: 371873-020 S Batch #: 1 Matrix: Soil

Date Prepared: 05/08/2010 Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	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
BTEX by EPA 8021B Analytes											
	Benzene	ND	0.1213	0.0905	75	0.1208	0.0778	64	15	70-130	35 X
	Toluene	ND	0.1213	0.0875	72	0.1208	0.0763	63	14	70-130	35 X
	Ethylbenzene	ND	0.1213	0.0884	73	0.1208	0.0780	65	13	71-129	35 X
	m,p-Xylenes	ND	0.2426	0.1700	70	0.2416	0.1521	63	11	70-135	35 X
	o-Xylene	ND	0.1213	0.0830	68	0.1208	0.0734	61	12	71-133	35 X

Lab Batch ID: 805963

Date Analyzed: 05/10/2010

Reporting Units: mg/kg

QC- Sample ID: 371873-021 S Batch #: 1 Matrix: Soil

Date Prepared: 05/10/2010 Analyst: ASA

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
	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	
BTEX by EPA 8021B Analytes	Benzene	ND	0.1130	0.0752	67	0.1135	0.0732	64	3	70-130	35	X
	Toluene	ND	0.1130	0.0654	58	0.1135	0.0644	57	2	70-130	35	X
	Ethylbenzene	ND	0.1130	0.0765	68	0.1135	0.0678	60	12	71-129	35	X
	m,p-Xylenes	ND	0.2261	0.1703	75	0.2270	0.1470	65	15	70-135	35	X
	o-Xylene	ND	0.1130	0.1278	113	0.1135	0.0832	73	42	71-133	35	F

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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Form 3 - MS / MSD Recoveries

Project Name: LR Chamberlain Tank Battery



Work Order #: 371873

Lab Batch ID: 805736

Date Analyzed: 05/08/2010

Reporting Units: mg/kg

Project ID:

QC- Sample ID: 371873-020 S

Date Prepared: 05/07/2010

Batch #: 1

Analyst: BEV

Matrix: Soil

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	1210	1430	118	1200	1390	116	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1210	1130	93	1200	909	76	22	70-135	35	

Lab Batch ID: 805752

Date Analyzed: 05/08/2010

Reporting Units: mg/kg

QC- Sample ID: 371873-034 S

Date Prepared: 05/07/2010

Batch #: 1

Analyst: BEV

Matrix: Soil

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	1170	1160	99	1180	1260	107	8	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1170	895	76	1180	839	71	6	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, I = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: LR Chamberlain Tank Battery

Work Order #: 371873

Lab Batch #: 806338

Project ID:

Date Analyzed: 05/12/2010

Date Prepared: 05/12/2010

Analyst: LATCOR

QC- Sample ID: 371873-001 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	1180	1170	1	20	

Lab Batch #: 806340

Analyst: LATCOR

Date Analyzed: 05/12/2010

Date Prepared: 05/12/2010

QC- Sample ID: 371873-021 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	497	487	2	20	

Lab Batch #: 805744

Analyst: JLG

Date Analyzed: 05/07/2010

Date Prepared: 05/07/2010

QC- Sample ID: 371873-001 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	13.0	13.7	6	20	

Lab Batch #: 805751

Analyst: JLG

Date Analyzed: 05/07/2010

Date Prepared: 05/07/2010

QC- Sample ID: 371873-021 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	11.0	9.94	10	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

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

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

Project Name: LR Chamberlain Tank Battery

Project #:

Project Loc: Lea County, NM

PQ #: Please bill Basin Consulting

Fax No: (505) 396-1429

Report Format:

cibryant@basin-consulting.com

[illegible]

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client:

Basin Env.

Date/ Time:

5-6-10 17.00

Lab ID #:

371873

Initials:

AL

Sample Receipt Checklist

Client Initials

#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>4.0</u> °C	
#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

Analytical Report 379583

for

Basin Environmental Consulting, LLC

Project Manager: Camille Bryant

LR Chamberlain Tank Battery

02-JUL-10



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-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 (LAO00312), 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-TX)

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

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

Xenco-Boca Raton (EPA Lab Code: FL00449):

Florida(E86240),South Carolina(96031001), Louisiana(04154), Georgia(917)
North Carolina(444), Texas(T104704468-TX), Illinois(002295), Florida(E86349)



02-JUL-10

Project Manager: **Camille Bryant**
Basin Environmental Consulting, LLC
P.O. Box 381
Lovington, NM 88260

Reference: XENCO Report No: **379583**
LR Chamberlain Tank Battery
Project Address: Lea County, NM

Camille Bryant:

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 379583. 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. 379583 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

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**Sample Cross Reference 379583****Basin Environmental Consulting, LLC, Lovington, NM**

LR Chamberlain Tank Battery

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1 @ 5'	S	Jun-29-10 09:00		379583-001
SB-1 @ 10'	S	Jun-29-10 09:20		379583-002
SB-1 @ 15'	S	Jun-29-10 09:40		379583-003
SB-1 @ 20'	S	Jun-29-10 10:00		379583-004
SB-1 @ 25'	S	Jun-29-10 10:20		379583-005
SB-1 @ 30'	S	Jun-29-10 10:40		379583-006



CASE NARRATIVE

Client Name: Basin Environmental Consulting, LLC

Project Name: LR Chamberlain Tank Battery



Project ID:

Work Order Number: 379583

Report Date: 02-JUL-10

Date Received: 06/30/2010

Sample receipt non conformances and Comments:

None

Sample receipt Non Conformances and Comments per Sample:

None

Analytical Non Conformances and Comments:

Batch: LBA-812913 Percent Moisture

None

Batch: LBA-812925 Inorganic Anions by EPA 300

None

Batch: LBA-812933 BTEX by EPA 8021B

SW8021BM

Batch 812933, Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 379583-004, -001, -003, -005, -002, -006.

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

Batch: LBA-813037 TPH By SW8015 Mod

None



Certificate of Analysis Summary 379583
Basin Environmental Consulting, LLC, Lovington, NM
Project Name: LR Chamberlain Tank Battery

Received by OCD: 3/28/2025 2:09:37 PM



Project Id:
Contact: Camille Bryant
Project Location: Lea County, NM

Date Received in Lab: Wed Jun-30-10 11:44 am
Report Date: 02-JUL-10

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	379583-001	379583-002	379583-003	379583-004	379583-005	379583-006
	Field Id:	SB-1 @ 5'	SB-1 @ 10'	SB-1 @ 15'	SB-1 @ 20'	SB-1 @ 25'	SB-1 @ 30'
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-29-10 09:00	Jun-29-10 09:20	Jun-29-10 09:40	Jun-29-10 10:00	Jun-29-10 10:20	Jun-29-10 10:40
Anions by E300	Extracted:						
	Analyzed:	Jun-30-10 16:16	Jun-30-10 16:33	Jun-30-10 16:50	Jun-30-10 17:07	Jun-30-10 17:24	Jun-30-10 17:41
	Units/RL:	mg/kg RL 2170 48.1	mg/kg RL 1250 23.6	mg/kg RL 778 18.7	mg/kg RL 169 8.82	mg/kg RL 72.7 4.52	mg/kg RL 103 4.46
BTEX by EPA 8021B	Extracted:	Jun-30-10 13:45	Jun-30-10 13:45	Jun-30-10 13:45	Jun-30-10 13:45	Jun-30-10 13:45	Jun-30-10 13:45
	Analyzed:	Jun-30-10 17:02	Jun-30-10 18:31	Jun-30-10 18:53	Jun-30-10 19:16	Jun-30-10 19:38	Jun-30-10 20:01
	Units/RL:	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 0.0010	ND 0.0011	ND 0.0011
	Toluene	ND 0.0023	ND 0.0023	ND 0.0022	ND 0.0021	ND 0.0022	ND 0.0021
m,p-Xylenes	Ethylbenzene	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0011
	m,p-Xylenes	ND 0.0023	ND 0.0023	ND 0.0022	ND 0.0021	ND 0.0022	ND 0.0021
	o-Xylene	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0011
Total Xylenes	Total Xylenes	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0011
	Total BTEX	ND 0.0011	ND 0.0011	ND 0.0011	ND 0.0010	ND 0.0011	ND 0.0011
Percent Moisture	Extracted:						
	Analyzed:	Jul-01-10 08:34	Jul-01-10 08:34	Jul-01-10 08:34	Jul-01-10 08:34	Jul-01-10 08:34	Jul-01-10 08:34
	Units/RL:	% RL 12.7 1.00	% RL 11.1 1.00	% RL 9.96 1.00	% RL 4.72 1.00	% RL 7.16 1.00	% RL 5.73 1.00
TPH By SW8015 Mod	Extracted:	Jun-30-10 13:10	Jun-30-10 13:10	Jun-30-10 13:10	Jun-30-10 13:10	Jun-30-10 13:10	Jun-30-10 13:10
	Analyzed:	Jun-30-10 19:19	Jun-30-10 19:48	Jun-30-10 20:18	Jun-30-10 20:47	Jun-30-10 21:17	Jun-30-10 21:48
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
C6-C12 Gasoline Range Hydrocarbons		ND 17.2	ND 16.8	ND 16.7	ND 15.8	ND 16.1	ND 15.8
C12-C28 Diesel Range Hydrocarbons		51.9 17.2	ND 16.8	ND 16.7	ND 15.8	ND 16.1	26.3 15.8
C28-C35 Oil Range Hydrocarbons		ND 17.2	ND 16.8	ND 16.7	ND 15.8	ND 16.1	ND 15.8
Total TPH		51.9 17.2	ND 16.8	ND 16.7	ND 15.8	ND 16.1	26.3 15.8

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
- MDL** Method Detection Limit
- PQL** Practical Quantitation Limit
- * Outside XENCO's scope of NELAC Accreditation.

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9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
2505 North Falkenburg Rd, Tampa, FL 33619	(813) 620-2000	(813) 620-2033
5757 NW 158th St, Miami Lakes, FL 33014	(305) 823-8500	(305) 823-8555
12600 West I-20 East, Odessa, TX 79765	(432) 563-1800	(432) 563-1713
842 Cantwell Lane, Corpus Christi, TX 78408	(361) 884-0371	(361) 884-9116



Form 2 - Surrogate Recoveries

Project Name: LR Chamberlain Tank Battery

Work Orders : 379583,

Project ID:

Lab Batch #: 812933

Sample: 567101-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/30/10 15:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0287	0.0300	96	80-120	

Lab Batch #: 812933

Sample: 567101-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/30/10 15:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0309	0.0300	103	80-120	
4-Bromofluorobenzene	0.0295	0.0300	98	80-120	

Lab Batch #: 812933

Sample: 567101-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/30/10 16:39

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	0.0297	0.0300	99	80-120	

Lab Batch #: 812933

Sample: 379583-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 17:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 812933

Sample: 379583-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 17:23

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	80-120	
4-Bromofluorobenzene	0.0286	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 * A / B

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



Form 2 - Surrogate Recoveries

Project Name: LR Chamberlain Tank Battery

Work Orders : 379583,

Project ID:

Lab Batch #: 812933

Sample: 379583-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 17:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 812933

Sample: 379583-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 18:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 812933

Sample: 379583-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 18:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 812933

Sample: 379583-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 19:16

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	0.0294	0.0300	98	80-120	

Lab Batch #: 812933

Sample: 379583-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 19:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0257	0.0300	86	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	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: LR Chamberlain Tank Battery

Work Orders : 379583,

Project ID:

Lab Batch #: 812933

Sample: 379583-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 20:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0255	0.0300	85	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

Lab Batch #: 813037

Sample: 567144-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/30/10 17:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	120	99.9	120	70-135	
o-Terphenyl	63.2	50.0	126	70-135	

Lab Batch #: 813037

Sample: 567144-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/30/10 18:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	110	99.6	110	70-135	
o-Terphenyl	53.7	49.8	108	70-135	

Lab Batch #: 813037

Sample: 567144-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/30/10 18:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	98.4	99.8	99	70-135	
o-Terphenyl	57.4	49.9	115	70-135	

Lab Batch #: 813037

Sample: 379583-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 19:19

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	58.4	50.0	117	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: LR Chamberlain Tank Battery

Work Orders : 379583,

Project ID:

Lab Batch #: 813037

Sample: 379583-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 19:48

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.7	99.5	88	70-135	
o-Terphenyl	50.5	49.8	101	70-135	

Lab Batch #: 813037

Sample: 379583-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 20:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.7	101	90	70-135	
o-Terphenyl	52.2	50.3	104	70-135	

Lab Batch #: 813037

Sample: 379583-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 20:47

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.5	100	90	70-135	
o-Terphenyl	50.9	50.2	101	70-135	

Lab Batch #: 813037

Sample: 379583-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 21:17

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.2	99.5	100	70-135	
o-Terphenyl	57.3	49.8	115	70-135	

Lab Batch #: 813037

Sample: 379583-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/30/10 21:48

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.6	99.5	94	70-135	
o-Terphenyl	53.4	49.8	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: LR Chamberlain Tank Battery

Work Orders : 379583,

Project ID:

Lab Batch #: 813037

Sample: 379583-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/01/10 13:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	54.7	50.2	109	70-135	

Lab Batch #: 813037

Sample: 379583-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 07/01/10 14:09

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	112	100	112	70-135	
o-Terphenyl	53.4	50.2	106	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.



BS / BSD Recoveries



Project Name: LR Chamberlain Tank Battery

Work Order #: 379583

Analyst: ASA

Lab Batch ID: 812933

Sample: 567101-1-BKS

Date Prepared: 06/30/2010

Batch #: 1

Project ID:

Date Analyzed: 06/30/2010

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	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
	Benzene	ND	0.1000	0.1096	110	0.1	0.1150	115	5	70-130	35
	Toluene	ND	0.1000	0.1006	101	0.1	0.1058	106	5	70-130	35
	Ethylbenzene	ND	0.1000	0.1054	105	0.1	0.1113	111	5	71-129	35
	m,p-Xylenes	ND	0.2000	0.2136	107	0.2	0.2253	113	5	70-135	35
	o-Xylene	ND	0.1000	0.1042	104	0.1	0.1108	111	6	71-133	35

Analyst: LATCOR

Lab Batch ID: 812925

Sample: 812925-1-BKS

Date Prepared: 06/30/2010

Batch #: 1

Date Analyzed: 06/30/2010

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Units: mg/kg	Anions by E300	Analytes										
			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
												</

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



Project Name: LR Chamberlain Tank Battery

Work Order #: 379583

Analyst: BEV

Lab Batch ID: 813037

Sample: 567144-1-BKS

Project ID:

Date Analyzed: 06/30/2010

Date Prepared: 06/30/2010

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY														
Units: mg/kg	TPH By SW8015 Mod	Analytes	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	
	C6-C12 Gasoline Range Hydrocarbons		ND	999	1200	120	996	999	100	18	70-135	35		
	C12-C28 Diesel Range Hydrocarbons		ND	999	858	86	996	813	82	5	70-135	35		

Analytes

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: LR Chamberlain Tank Battery

Work Order #: 379583

Lab Batch #: 812925

Date Analyzed: 06/30/2010

Date Prepared: 06/30/2010

Project ID:

Analyst: LATCOR

QC- Sample ID: 379564-001 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	6.53	116	122	100	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: LR Chamberlain Tank Battery



Work Order # : 379583

Lab Batch ID: 812933

Date Analyzed: 06/30/2010

Reporting Units: mg/kg

Project ID:

QC- Sample ID: 379583-001 S

Date Prepared: 06/30/2010

Batch #: 1

Analyst: ASA

Matrix: Soil

Reporting Units: mg/kg											
BTEX by EPA 8021B Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	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
	ND	0.1150	0.0468	41	0.1145	0.0588	51	23	70-130	35	X
	ND	0.1150	0.0382	33	0.1145	0.0440	38	14	70-130	35	X
	ND	0.1150	0.0325	28	0.1145	0.0335	29	3	71-129	35	X
	ND	0.2300	0.0660	29	0.2291	0.0670	29	2	70-135	35	X
	ND	0.1150	0.0299	26	0.1145	0.0304	27	2	71-133	35	X
	Benzene										
	Toluene										
	Ethylbenzene										
	m,p-Xylenes										
	o-Xylene										

Lab Batch ID: 813037

Date Analyzed: 07/01/2010

Reporting Units: mg/kg

QC- Sample ID: 379583-002 S

Date Prepared: 06/30/2010

Batch #: 1

Analyst: BEV

Matrix: Soil

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY												
Reporting Units: mg/kg	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	1130	1130	100	1130	1120	99	1	70-135	35	
	C12-C28 Diesel Range Hydrocarbons	ND	1130	1040	92	1130	964	85	8	70-135	35	

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

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

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



Sample Duplicate Recovery



Project Name: LR Chamberlain Tank Battery

Work Order #: 379583

Lab Batch #: 812925

Project ID:

Date Analyzed: 06/30/2010

Date Prepared: 06/30/2010

Analyst: LATCOR

QC- Sample ID: 379564-001 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	6.53	ND	NC	20	

Lab Batch #: 812913

Analyst: JLG

Date Analyzed: 07/01/2010

Date Prepared: 07/01/2010

QC- Sample ID: 379564-001 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	13.5	13.5	0	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

**XENCO Laboratories**

Atlanta, Boca Raton, Corpus Christi, Dallas
Houston, Miami, Odessa, Philadelphia
Phoenix, San Antonio, Tampa

Document Title: Sample Receipt Checklist

Document No.: SYS-SRC

Revision/Date: No. 01, 5/27/2010

Effective Date: 6/1/2010 Page 1 of 1

Prelogin / Nonconformance Report - Sample Log-In

Client: Basin Env.
Date/Time: 6-30-10 11:44
Lab ID #: 379583
Initials: AL

Sample Receipt Checklist

1. Samples on ice?	Blue	<u>Water</u>	No	
2. Shipping container in good condition?	<u>Yes</u>	No	None	
3. Custody seals intact on shipping container (cooler) and <u>bottles</u> ?	<u>Yes</u>	No	N/A	
4. Chain of Custody present?	<u>Yes</u>	No		
5. Sample instructions complete on chain of custody?	<u>Yes</u>	No		
6. Any missing / extra samples?	Yes	<u>No</u>		
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		
9. Container labels legible and intact?	<u>Yes</u>	No		
10. Sample matrix / properties agree with chain of custody?	<u>Yes</u>	No		
11. Samples in proper container / bottle?	<u>Yes</u>	No		
12. Samples properly preserved?	<u>Yes</u>	No	N/A	
13. Sample container intact?	<u>Yes</u>	No		
14. Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No		
15. All samples received within sufficient hold time?	<u>Yes</u>	No		
16. Subcontract of sample(s)?	Yes	No	<u>N/A</u>	
17. VOC sample have zero head space?	<u>Yes</u>	No	N/A	
18. Cooler 1 No.	Cooler 2 No.	Cooler 3 No.	Cooler 4 No.	Cooler 5 No.
lbs <u>2.6</u> °C	lbs °C	lbs °C	lbs °C	lbs °C

Nonconformance Documentation

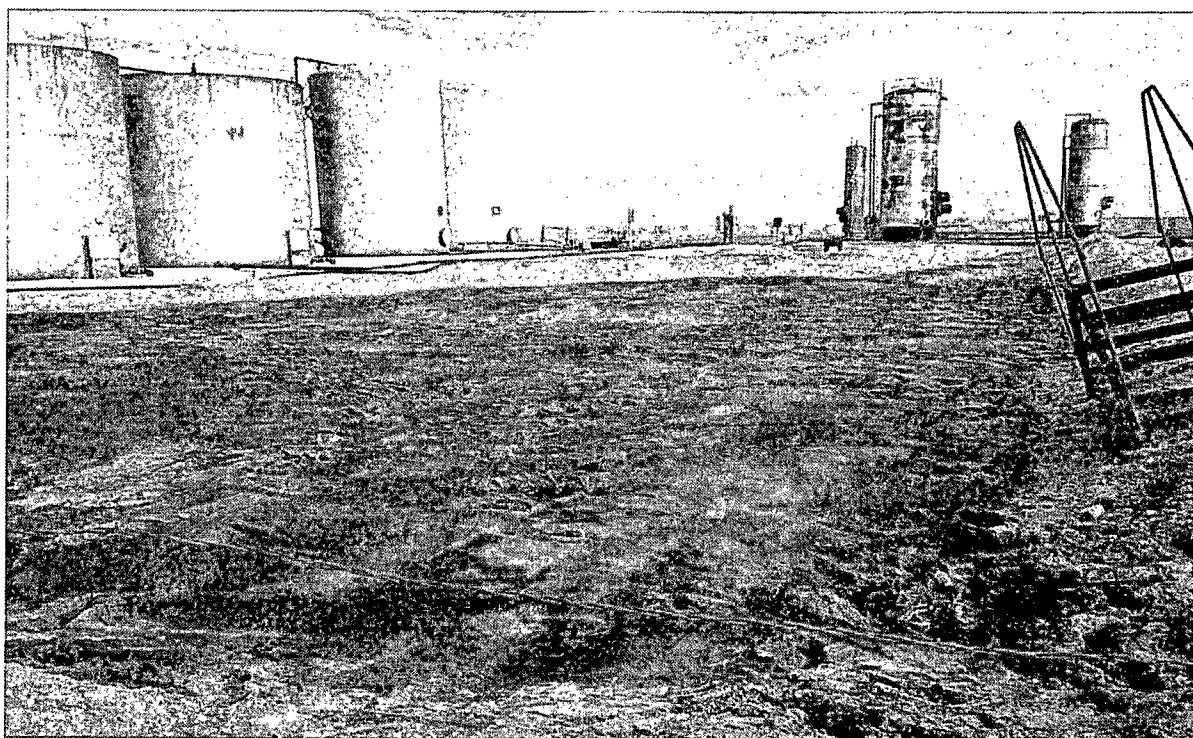
Contact: _____ Contacted by: _____ Date/Time: _____

Regarding: _____

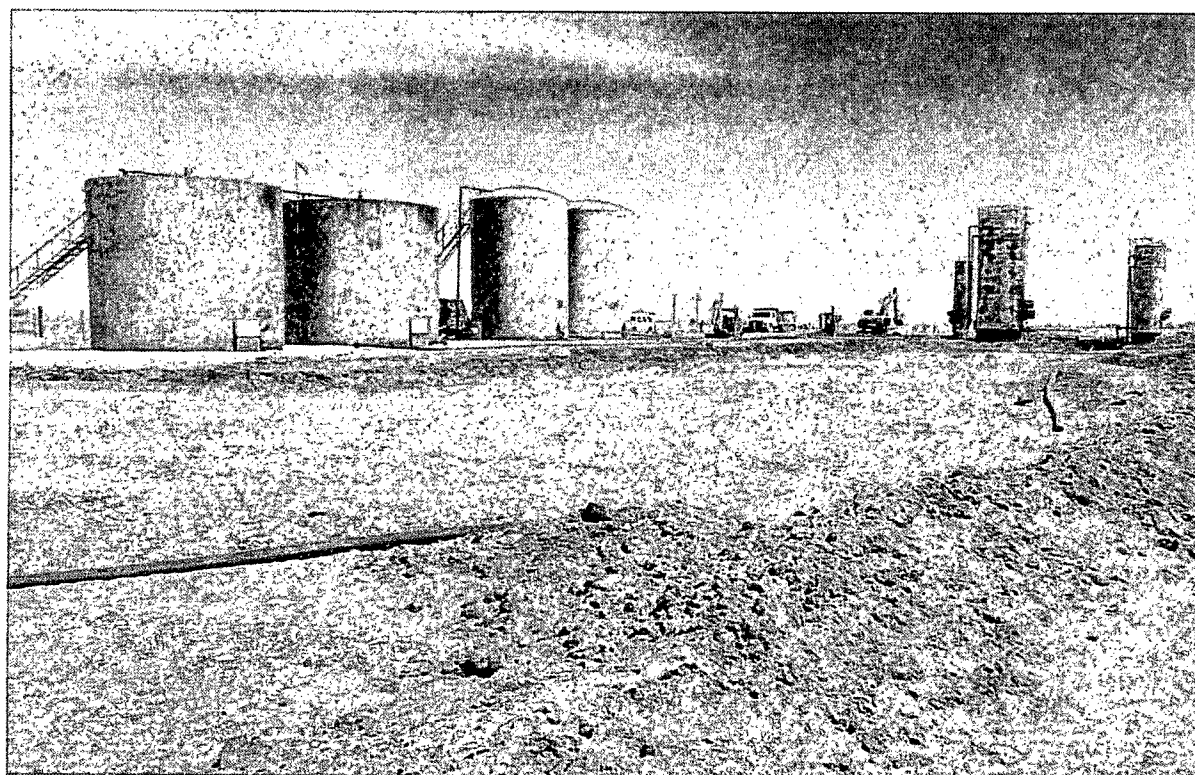
Corrective Action Taken: _____

Check all that apply: ☐ Cooling process has begun shortly after sampling event and out of temperature condition acceptable by NELAC 5.5.8.3.1.a.1.
☐ Initial and Backup Temperature confirm out of temperature conditions
☐ Client understands and would like to proceed with analysis

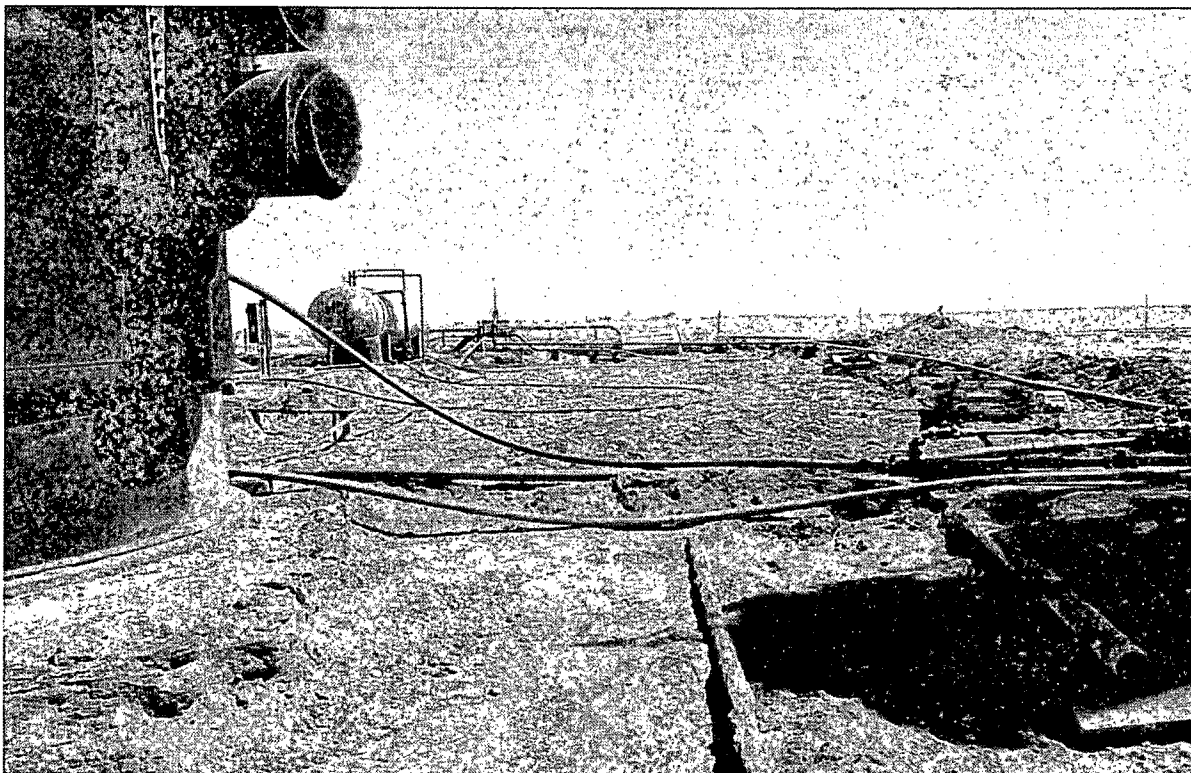
Appendix C Photographs



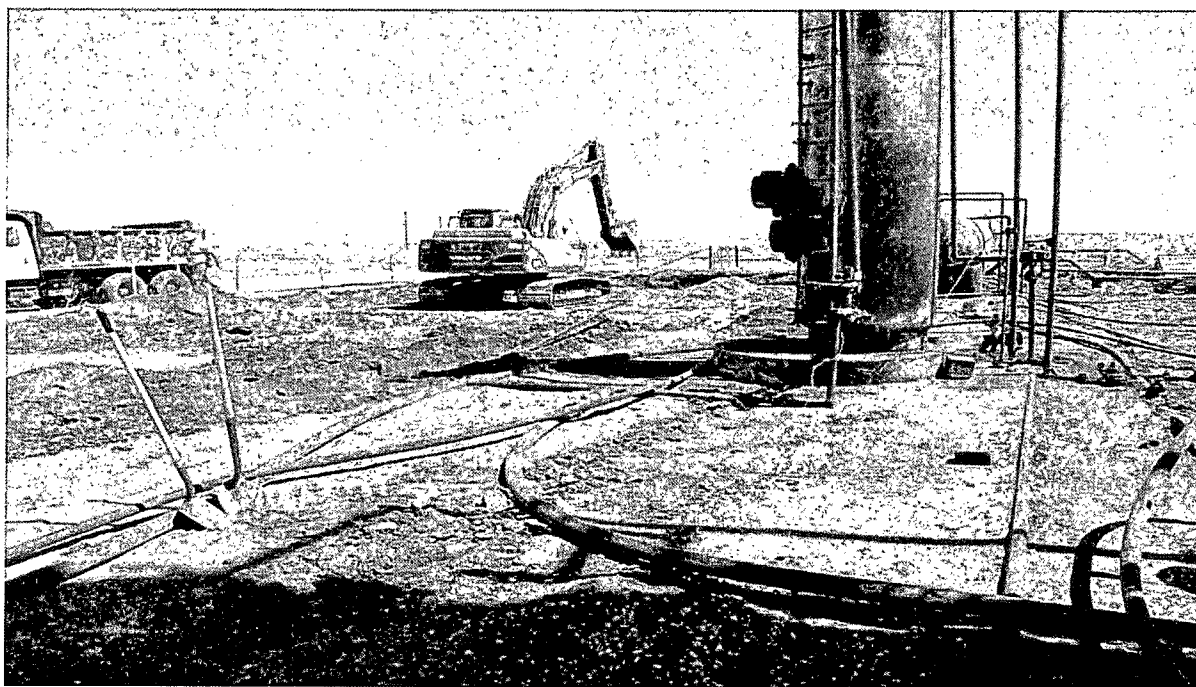
Initial Release at the LR Chamberlain Tank Battery



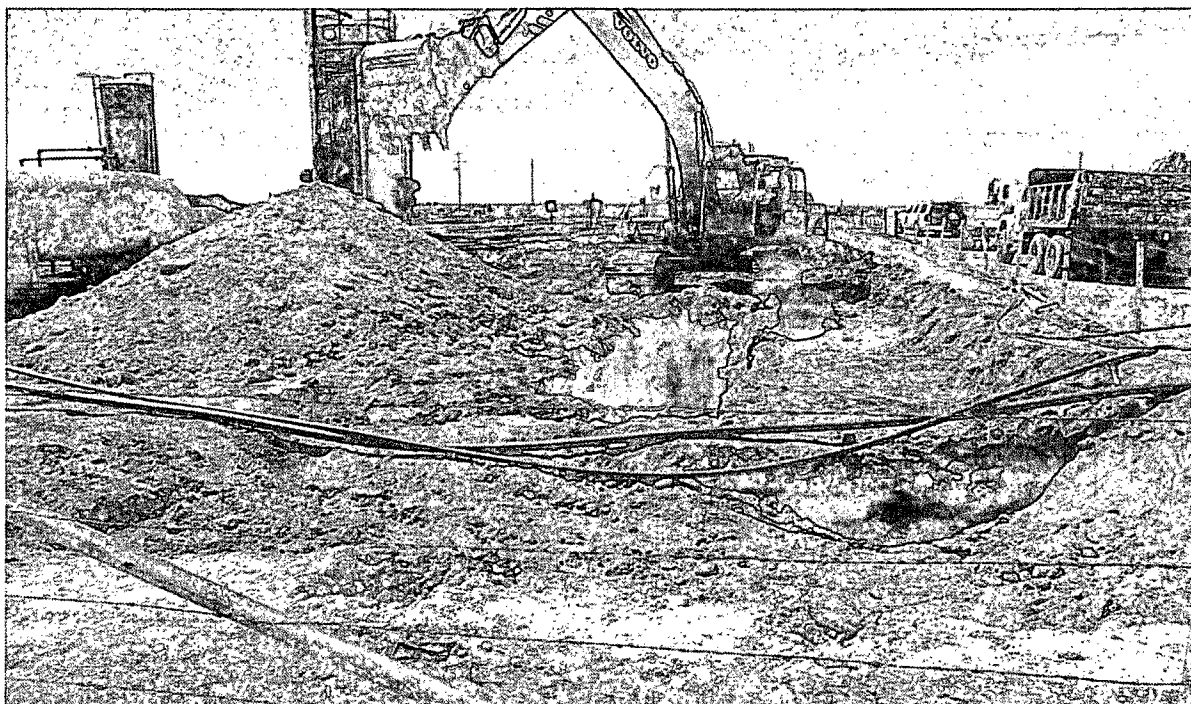
Excavation Activities at the LR Chamberlain Tank Battery Release Site



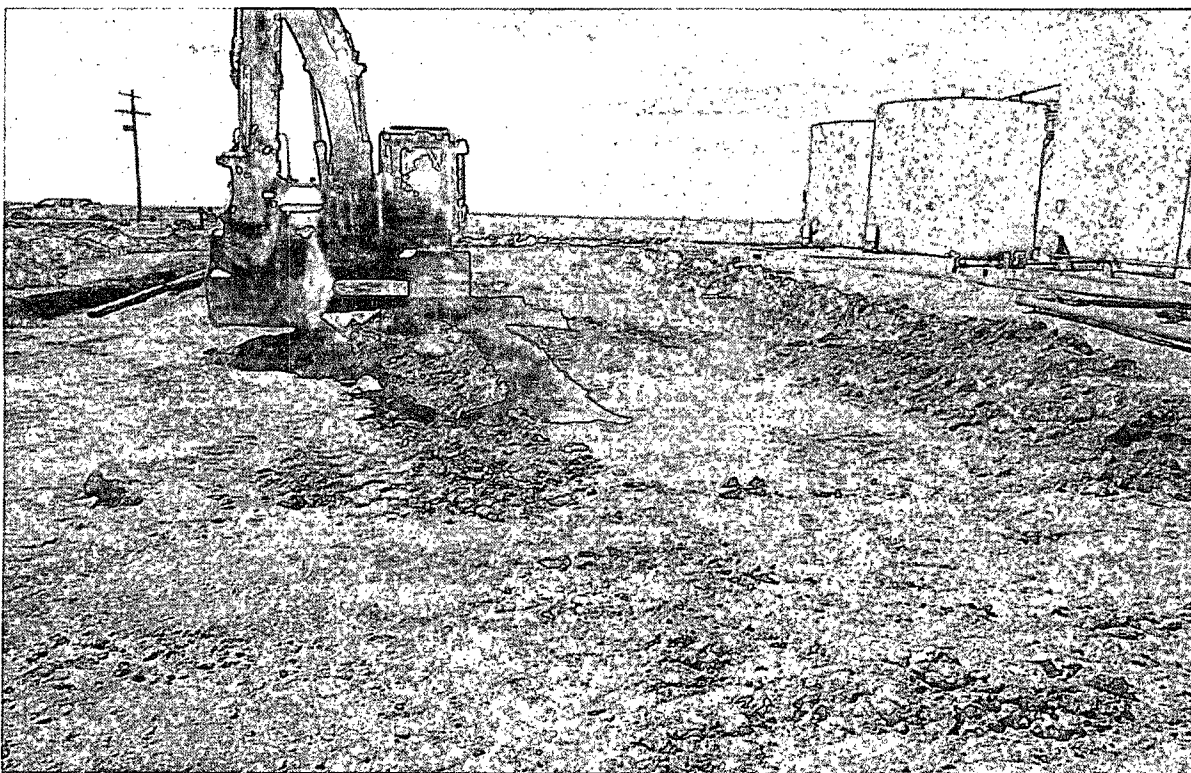
Excavation Activities at the LR Chamberlain Tank Battery Release Site



NE Corner Delineation Trench at the LR Chamberlain Tank Battery Release Site



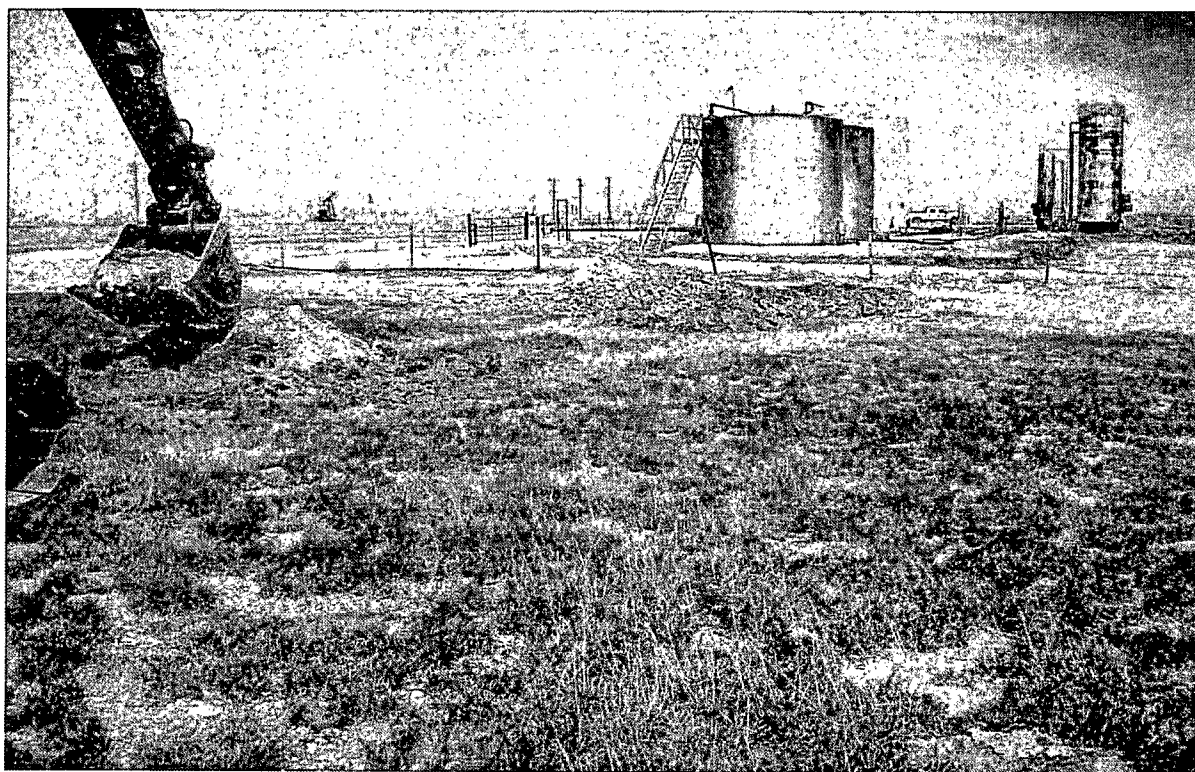
NE Corner Delineation Trench at the LR Chamberlain Tank Battery Release Site



S. Middle Delineation Trench at the LR Chamberlain Tank Battery Release Site



Delineation Trench #1 on the north side of the LR Chamberlain Tank Battery Release Site



Delineation Trench #4 on the west side of the LR Chamberlain Tank Battery Release Site

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

District I
625 N. French Dr., Hobbs, NM 88240
District II
301 W. Grand Avenue, Artesia, NM 88210
District III
600 Rio Brazos Road, Aztec, NM 87410
District IV
220 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		<input checked="" type="checkbox"/> Initial Report	Final Report
Name of Company	Legacy Reserves, LP	Contact	Kevin Bracey
Address	P. O. Box 10848, Midland, Texas 79702	Telephone No.	432-238-2856
Facility Name	LR Chamberlain Tank Battery	Facility Type	Tank Battery
Surface Owner	Darr Angell	Mineral Owner	
		Lease No.	

LOCATION OF RELEASE							
Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line
C	14	15S	37E				
				County	Lea		

Latitude 33° 0' 20.3" North Longitude 103° 10' 16.6" West

NATURE OF RELEASE		
Type of Release	Produced Water and crude oil	Volume of Release
		630 bbls
Source of Release	Tank	Volume Recovered
		600 bbls
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	Date and Hour of Occurrence
		1/6/2010 @ 0800
By Whom?	Camille Bryant	Date and Hour of Discovery
		1/6/2010 @ 1000
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, To Whom?
		Geoff LeKing
		Date and Hour
		1/7/2010 @ 1344
		If YES, Volume Impacting the Watercourse.

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken: The transfer line on a 500 barrel tank became obstructed resulting in a release of produced water and crude oil. The site will be remediated to NMOCD guidelines.

Describe Area Affected and Cleanup Action Taken: Release impacted approximately 27,000 square feet inside the tank battery.

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.

OIL CONSERVATION DIVISION	
Signature: <i>Kevin Bracey</i>	Approved by District Supervisor: <i>Geoffrey LeKing</i>
Printed Name: Kevin Bracey	
Title: Production Foreman	Approval Date: 01/14/10 Expiration Date: 03/11/10
E-mail Address: kbracey@legacylp.com	Conditions of Approval: DELIVER TO COURT, SUBMIT FINAL BY
Date: 1/7/2010 Phone: 432-238-2856	IRP-10-01-2390

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JAN 14 2010

HOBBS, NM

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Aztec, 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-14
Revised October 10, 2000

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	Legacy Reserves, LP	Contact	Kevin Bracey
Address	P. O. Box 10848, Midland, Texas 79702	Telephone No.	432-238-2856
Facility Name	LR Chamberlain Tank Battery Sec. 14	Facility Type	Tank Battery
Surface Owner	Darr Angell	Mineral Owner	
		Lease No.	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	14	15S	37E					Lea

Latitude 33° 01' 20.3" North

Longitude 103° 10' 16.6" West

NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	80 bbls	Volume Recovered	60 bbls
Source of Release	Transfer pump	Date and Hour of Occurrence	5/1/10 @ 0800	Date and Hour of Discovery	5/1/10 @ 0830
Was Immediate Notice Given?	X Yes No Not Required	If YES, To Whom?	Geoff Leking		
By Whom?	Camille Bryant	Date and Hour	5/6/10 @ 0900		
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: Equipment failure of a 3:1 swedge on discharge side of transfer pump resulted in a release of produced water. The site will be remediated to NMOCID guidelines.

Describe Area Affected and Cleanup Action Taken: Release impacted approximately 8,470 square feet inside the tank battery.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCID 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 NMOCID 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, NMOCID 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: <i>Kevin Bracey</i>	OIL CONSERVATION DIVISION ENV. ENGINEERING; Approved by District Supervisor: <i>Geoffrey Leking</i>	
Printed Name: Kevin Bracey	Approval Date: 05/10/10	Expiration Date: 07/10/10
Title: Production Foreman	Conditions of Approval:	
E-mail Address: kbracey@legacyp.com		
Date: 5/7/10	Phone: 432-238-2856	RF-10-5-2503

2513

RECEIVED

HOBBSDALE

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/contact-us>

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

CONDITIONS

Action 446742

CONDITIONS

Operator: TEAM OPERATING, L.L.C. PO Box 835 Pinehurst, TX 77362	OGRID: 332148
	Action Number: 446742
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
scwells	None	3/28/2025