Ocotillo
ENVIRONMENTAL
Dirt Work • On-Site Remediation • Soil Testing • Excavation

December 14, 2007

Mr. Larry Johnson
New Mexico Oil Conservation Division
1625 French Drive
Hobbs, New Mexico 88240

**Re: Spill Remediation Workplan, Lovington Deep State,**
**Unit Letter M (SW/4, SW/4), Section 5, Township 17 South, Range 36 East,**
**Lea County, New Mexico**
**1RP #1612**

Dear Mr. Johnson:

Attached please find the Spill Remediation Workplan for the Chevron MidContinent L.P., SBU, Lovington Deep State site.

If you have any questions or need additional information, please do not hesitate to call me at (505) 441-7244 or email me at Cindy.Crain@gmail.com.

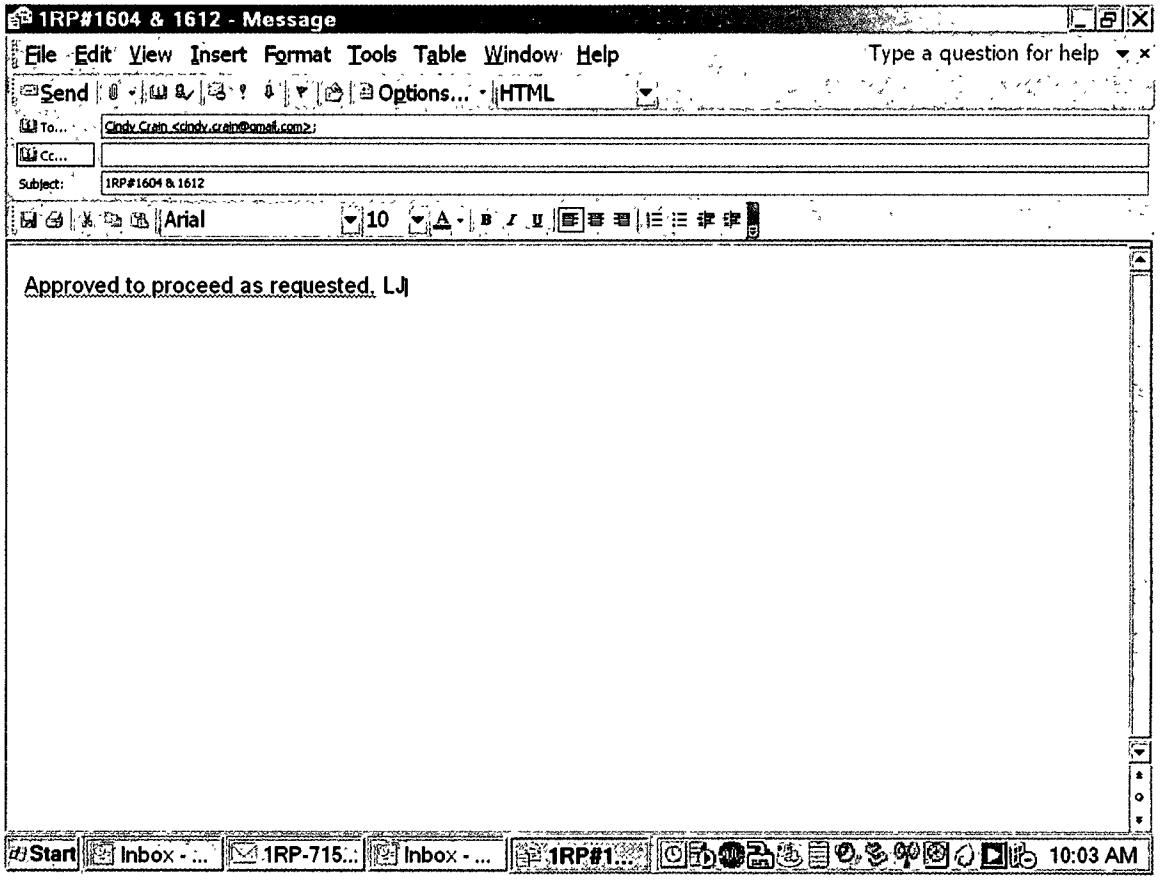
Sincerely,
***Ocotillo Environmental***

Cindy K. Crain

Cindy K. Crain, P.G.
Environmental Manager


cc: Larry Ridenour, Chevron

P.O. Box 1816 • Hobbs, NM 88241
Office (505) 393-6371 • Fax (505) 393-6374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Cindy Crain <cindy.crain@gmail.com>;
Cc...
Subject:
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Approved to proceed as requested. LJ
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Ocotillo
ENVIRONMENTAL
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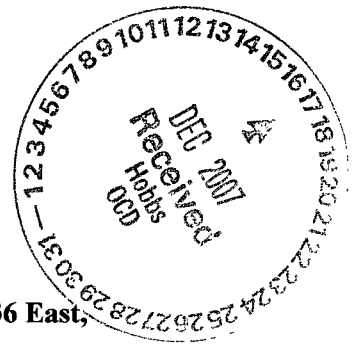
December 10, 2007




Mr. Larry Johnson
Environmental Engineer
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1625 N. French Drive
Hobbs, New Mexico 88240

**Re: Spill Remediation Workplan, Lovington Deep State,**
**Unit Letter M (SW/4, SW/4), Section 5, Township 17 South, Range 36 East,**
**Lea County, New Mexico**
**(Latitude: N 32 deg. 51 min. 47.53 sec. / Longitude: W 103 deg. 23 min. 8.11 sec.)**
**1RP #1612**

Dear Mr. Johnson:

Chevron MidContinent L.P. SBU (Chevron) has retained Ocotillo Environmental, LLC (Ocotillo) to remediate impacts to soil from a leak at a water transfer line located near the Lovington Deep State well. The leak occurred in the southeast quarter (SE/4) of the southwest quarter (SW/4), Section 5, Township 17 South, Range 36 East, Lea County, New Mexico (Site). Approximately 20 barrels of produced water and 2 barrels of oil were released from the transfer line on October 2, 2007, and approximately 14 barrels of fluid was recovered from the site. A C-141 was submitted to the New Mexico Oil Conservation Division (NMOCD) on October 4, 2007, and a Spill Investigation Workplan was submitted on October 4, 2007. Verbal approval was granted for the Spill Investigation Workplan on October 11, 2007. Figure 1 shows the site location.

Based on published literature (1961), well records of the New Mexico State Engineer, and well records of the United States Geological Survey, groundwater occurs at approximately 56 feet bgs in the well located nearest the Site. No domestic water wells are located within 1,000 feet of the site. The NMOCD has established RRALs for benzene, total BTEX and TPH resulting from spills of natural gas liquids ("Guidelines for Remediation of Leaks, Spills and Releases, August 13, 1993"). Remediation levels for benzene, total BTEX and TPH were calculated using the following NMOCD criteria:

| Criteria | Result | Ranking Score |
|---|---|---|
| Depth-to-Groundwater | 50 - 99 Feet | 10 |
| Wellhead Protection Area | No | 0 |
| Distance to Surface Water Body | >1000 Horizontal Feet | 0 |
| | | **Total: 10** |

The following RRALs have been assigned based on NMOCD criteria:

| | |
|---|---|
| **Benzene** | **10 mg/kg** |
| **Total BTEX** | **50 mg/kg** |
| **TPH** | **1,000 mg/kg** |

P.O. Box 1816 • Hobbs, NM 88241
Office (505) 393-6371 • Fax (505) 393-6374

**Initial Investigation**

On November 14 and 15, 2007, Ocotillo installed thirteen (13) soil borings (BH-1 through BH-13) at the site, using an air rotary drilling rig, in order to assess the horizontal and vertical limits of the spill. Surficially impacted soil had been previously removed from the surface and disposed at an NMOCD approved disposal facility.

Soil samples from the exploratory borings were collected in five foot intervals from the ground surface to a depth of approximately 32 feet below ground surface (bgs) in borings BH-1, BH-2, and BH-7, to a depth of approximately 27 feet bgs in borings BH-3 and BH-8, to a depth of approximately 22 feet bgs in borings BH-4, BH-5, BH-6, and BH-9, and to a depth of approximately 17 feet bgs in borings BH-10, BH-11, BH-12 and BH-13. All samples were collected using a split-spoon sampling device. The sampling equipment was thoroughly cleaned between soil boring locations with a solution of laboratory-grade detergent and potable water, and rinsed with distilled water. All soil borings were plugged with bentonite. Figure 2 shows the locations of the soil borings.

The soil samples from borings BH-1 through BH-13 were placed in clean glass sample jars, labeled, chilled in an ice chest, and delivered under chain-of-custody control to Environmental Lab of Texas (ELOT), located in Odessa, Texas. A duplicate of each sample was also placed in a clean glass sample jar for headspace analysis. The headspace jars were filled approximately ¾ full, and a layer of aluminum foil was placed over the opening of the jar before replacing the cap. The headspace samples were allowed to reach ambient temperature before a BW Technologies GasAlertMicro 5 photoionization detector (PID) was used to measure the concentration of organic vapors in the headspace of the sample jars. The PID probe was inserted into the headspace of the sample jars (through the aluminum foil) and the concentration of organic vapors was displayed by the instrument in parts per million (ppm). The PID readings are shown on the borings logs included in Appendix A.

All soil samples collected from borings BH-1 through BH-13 were analyzed for chlorides by EPA method 325.3. At a minimum, the uppermost two (2) samples from each boring were analyzed for total petroleum hydrocarbons (TPH) by EPA method SW8015 (extended) for gasoline range organics (GRO) and diesel range organics (DRO). If the PID reading for any particular sample was greater than 100 ppm, the sample was also analyzed for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX). Table 1 presents a summary of the laboratory analysis of soil samples. Laboratory analysis and chain of custody documentation are included in Appendix B.

Referring to Table 1, TPH concentrations in the following samples from borings BH-1, BH-2, BH-5, and BH-9, were reported above the RRAL of 1,000 mg/kg, or above the RRAL of 100 mg/kg if located deeper than six (6) feet bgs:

- BH-1 0-2' 13,350 mg/kg
- BH-1 5-7' 290.7 mg/kg
- BH-1 10-12' 1,129 mg/kg

- BH-2 0-2' 12,406 mg/kg

- BH-5 0-2' 13,870 mg/kg
- BH-5 5-7' 510.3 mg/kg

- BH-9 0-2' 1,240 mg/kg
- BH-9 5-7' 390.1 mg/kg.

Concentrations of BTEX exceeded the RRAL of 50 mg/kg in the following samples:

- BH-1 0-2' 192.544 mg/kg

- BH-2 0-2' 242.5141 mg/kg

- BH-5 0-2' 202.1216 mg/kg.

Chloride concentrations were below the RRAL of 250 mg/kg in all samples from borings BH-4, BH-10, BH-11, BH-12 and BH-13. Chloride concentrations were above the RRAL of 250 mg/kg until a depth of approximately 20-22 feet bgs in boring BH-1, 15-17 feet bgs in borings BH-2 and BH-7, and 10-12 feet bgs in borings BH-3, BH-5, BH-6, BH-8 and BH-9.

**Proposed Remediation**

Chevron proposes to conduct excavation of the impacted soil in the vicinity of boring BH-1 to a depth of approximately 18-19 feet bgs, in the vicinity of borings BH-2 and BH-7 to a depth of approximately 13-14 feet bgs, and in the vicinity of borings BH-3, BH-5, BH-6, BH-8 and BH-9 to a depth of approximately 8-9 feet bgs, until confirmations samples at all locations report chloride and TPH concentrations below the RRALs of 250 mg/kg and 100 mg/kg, respectively. Excavated soil will be removed to an NMOCD approved disposal facility. Analytical results from final confirmation samples will be reported to the NMOCD prior to backfilling of the excavation.

If you have any questions or need additional information, please call Mr. Larry Ridenour at (505) 396-4414 x102, or myself at (505) 441-7244. We may also be reached by email at Lridenour@chevron.com or Cindy.Crain@gmail.com.

Sincerely,
***Ocotillo Environmental, LLC***

Cindy K. Crain

Cindy K. Crain, P.G.
Environmental Manager

cc: Larry Ridenour, Chevron

# FIGURES

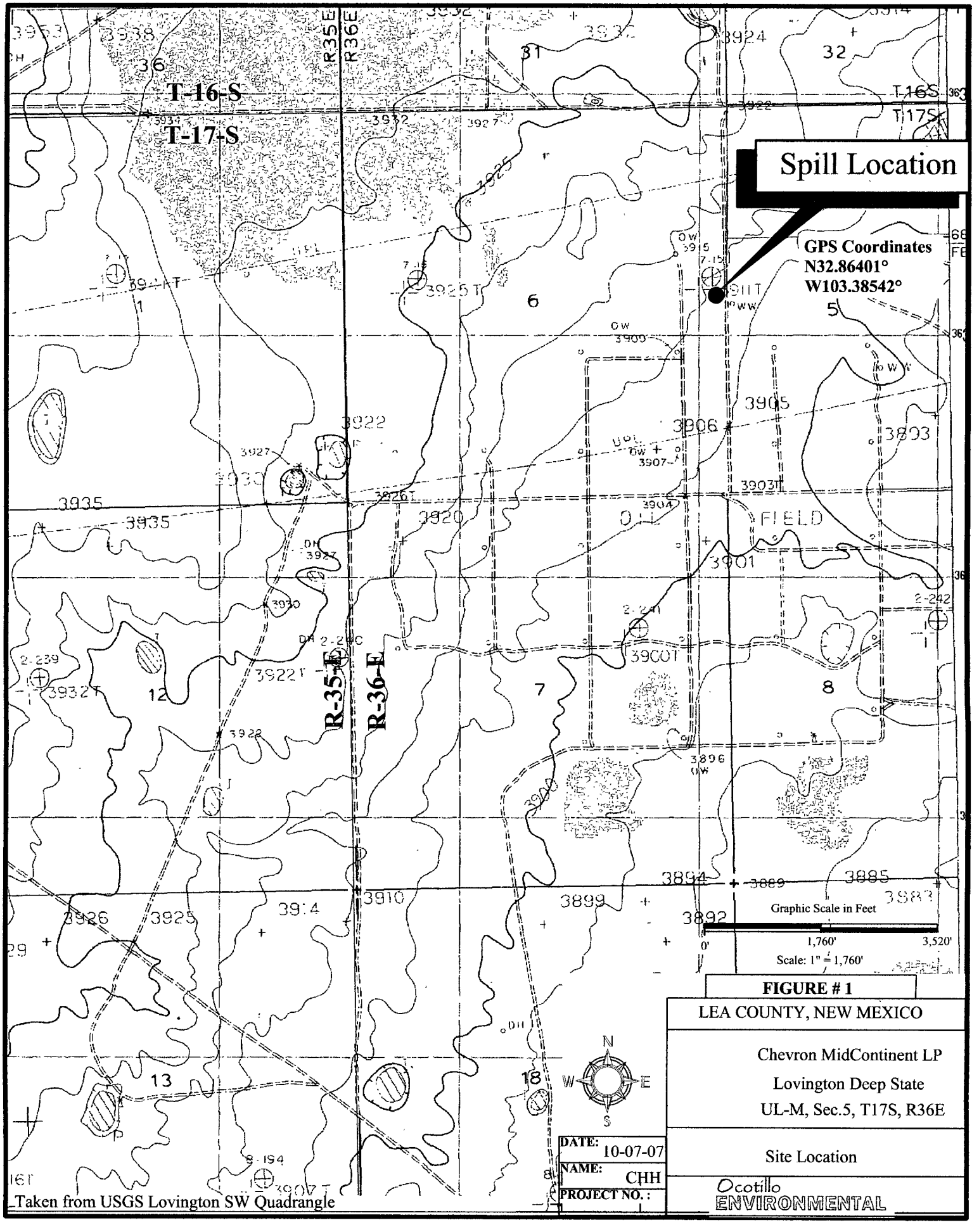



FIGURE # 1

LEA COUNTY, NEW MEXICO

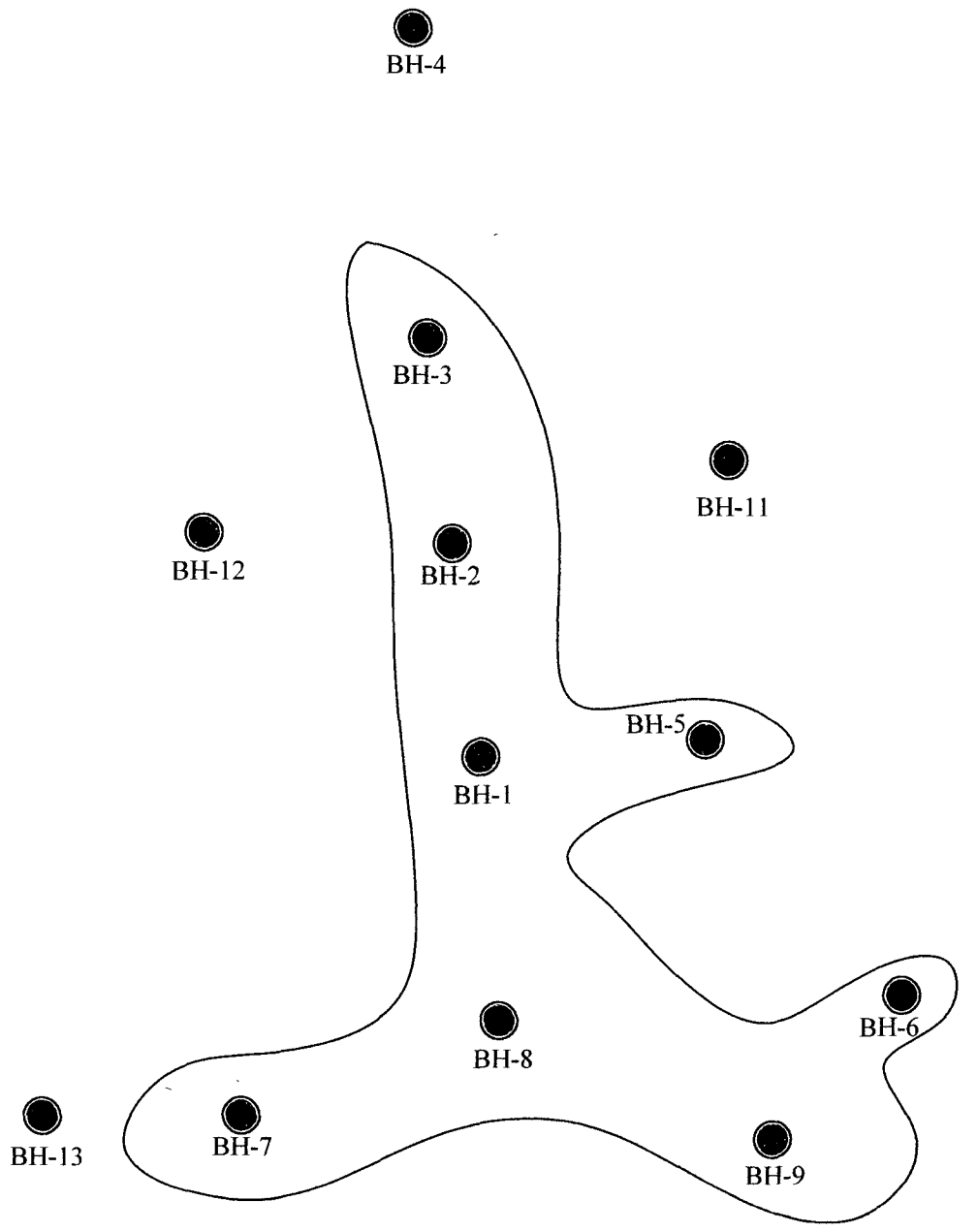
Chevron MidContinent LP
Lovington Deep State
UL-M, Sec.5, T17S, R36E

Site Location

DATE: 10-07-07
NAME: CHH
PROJECT NO. :

Ocotillo ENVIRONMENTAL

Taken from USGS Lovington SW Quadrangle




Graphic Scale in Feet

0' 35' 70'

Scale 1" = 35'

**FIGURE # 2**

LEA COUNTY, NEW MEXICO

## Legend

- Soil Boring Location
- Spill boundary

Chevron

Chevron MidContinent LP
Lovington Deep State
U.L.M, Sec.5, T17S, R36E

Site Drawing With
Soil Boring Locations

| | |
|---|---|
| DATE: | 12-9-07 |
| NAME: | MAC |
| PROJECT NO. : | 1007-023B |

Ocotillo ENVIRONMENTAL

# TABLE

**Table 1:**
**Summary of Laboratory Analysis of Soil Samples**
**Chevron MidContinent Alaska, Lovington Deep State**
**Section 5, Township 17 South, Range 36 East**
**Lea County, New Mexico**



| Sample Date | Soil Boring Number | Sample Depth (feet BGS) | TPH (GRO) C6 - C12 mg/kg | TPH (DRO) C12 - C28 mg/kg | TPH (ORO) C28 - C35 mg/kg | Total TPH C6 - C35 mg/kg | Benzene mg/kg | Total BTEX mg/kg | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|
| **RRAL** | | | | | | **100** | **10** | **50** | **250** |
| 11/14/07 | BH-1 | 0-2 | 2,690 | 9,520 | 1,140 | 13,350 | 1.724 | 192.544 | 25,300 |
| | | 5-7 | 51.3 | 201 | 38.4 | 290.7 | --- | --- | 6,420 |
| | | 10-12 | 138 | 879 | 112 | 1,129 | --- | --- | 1,850 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 936 |
| | | 20-22 | --- | --- | --- | --- | --- | --- | 128 |
| | | 25-27 | --- | --- | --- | --- | --- | --- | 85.1 |
| | | 30-32 | --- | --- | --- | --- | --- | --- | 63.8 |
| | | | | | | | | | |
| 11/14/07 | BH-2 | 0-2 | 3,530 | 7,950 | 926 | 12,406 | 0.9841 | 242.5141 | 13,400 |
| | | 5-7 | 18.2 | 45.4 | <16.7 | 63.6 | <0.0011 | 0.0096 | 10,900 |
| | | 10-12 | <15.6 | <15.6 | <15.6 | <46.8 | --- | --- | 1,290 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 85.1 |
| | | 20-22 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | 25-27 | --- | --- | --- | --- | --- | --- | 53.2 |
| | | 30-32 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | | | | | | | | |
| 11/14/07 | BH-3 | 0-2 | <17.2 | 30.5 | <17.2 | 30.5 | --- | --- | 17,100 |
| | | 5-7 | <15.9 | <15.9 | <15.9 | <47.7 | --- | --- | 6,080 |
| | | 10-12 | --- | --- | --- | --- | --- | --- | 191 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 117 |
| | | 20-22 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | 25-27 | --- | --- | --- | --- | --- | --- | 160 |
| | | | | | | | | | |

| Sample Date | Soil Boring Number | Sample Depth (feet BGS) | TPH (GRO) C6 - C12 mg/kg | TPH (DRO) C12 - C28 mg/kg | TPH (ORO) C28 - C35 mg/kg | Total TPH C6 - C35 mg/kg | Benzene mg/kg | Total BTEX mg/kg | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|
| **RRAL** | | | | | | **100** | **10** | **50** | **250** |
| 11/14/07 | BH-4 | 0-2 | <16 | 37.1 | <16 | 37.1 | --- | --- | 45.4 |
| | | 5-7 | <15.2 | 37.8 | <15.2 | 37.8 | --- | --- | 64.6 |
| | | 10-12 | --- | --- | --- | --- | --- | --- | 53.2 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 74.4 |
| | | 20-22 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | | | | | | | | |
| 11/14/07 | BH-5 | 0-2 | 2,590 | 10,100 | 1,180 | 13,870 | 0.0716 | 202.1216 | 15,200 |
| | | 5-7 | 34.9 | 409 | 66.4 | 510.3 | --- | --- | 1,880 |
| | | 10-12 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 106 |
| | | 20-22 | --- | --- | --- | --- | --- | --- | 74.4 |
| | | | | | | | | | |
| 11/14/07 | BH-6 | 0-2 | <16.9 | 86.6 | 17.2 | 103.8 | --- | --- | 12,600 |
| | | 5-7 | <15.6 | <15.6 | <15.6 | <46.8 | --- | --- | 1,130 |
| | | 10-12 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | 20-22 | --- | --- | --- | --- | --- | --- | 234 |
| | | | | | | | | | |
| 11/15/07 | BH-7 | 0-2 | <17 | <17 | <17 | <51 | --- | --- | 7,850 |
| | | 5-7 | <15.9 | <15.9 | <15.9 | <47.7 | --- | --- | 5,060 |
| | | 10-12 | --- | --- | --- | --- | --- | --- | 3,400 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 213 |
| | | 20-22 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | 25-27 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | 30-32 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | | | | | | | | |

| Sample Date | Soil Boring Number | Sample Depth (feet BGS) | TPH (GRO) C6 - C12 mg/kg | TPH (DRO) C12 - C28 mg/kg | TPH (ORO) C28 - C35 mg/kg | Total TPH C6 - C35 mg/kg | Benzene mg/kg | Total BTEX mg/kg | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|
| **RRAL** | | | | | | **100** | **10** | **50** | **250** |
| 11/15/07 | BH-8 | 0-2 | <17.2 | 22.2 | <17.2 | 22.2 | --- | --- | 3,770 |
| | | 5-7 | <15.3 | <15.3 | <15.3 | <45.9 | --- | --- | 304 |
| | | 10-12 | --- | --- | --- | --- | --- | --- | 85.1 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 85.1 |
| | | 20-22 | --- | --- | --- | --- | --- | --- | 63.8 |
| | | 25-27 | --- | --- | --- | --- | --- | --- | 106 |
| | | | | | | | | | |
| 11/15/07 | BH-9 | 0-2 | 162 | 893 | 185 | 1,240 | <0.0012 | <0.0082 | 30,000 |
| | | 5-7 | 73.7 | 285 | 31.4 | 390.1 | <0.0010 | 0.0291 | 2,010 |
| | | 10-12 | <15.5 | <15.5 | <15.5 | <46.5 | --- | --- | 176.0 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 74.4 |
| | | 20-22 | --- | --- | --- | --- | --- | --- | 74.4 |
| | | | | | | | | | |
| 11/15/07 | BH-10 | 0-2 | <15.9 | <15.9 | <15.9 | <47.7 | --- | --- | 45 |
| | | 5-7 | <15.5 | <15.5 | <15.5 | <46.5 | --- | --- | 44 |
| | | 10-12 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 31.9 |
| | | | | | | | | | |
| 11/15/07 | BH-11 | 0-2 | <16.8 | <16.8 | <16.8 | <50.4 | --- | --- | 48 |
| | | 5-7 | <15.5 | <15.5 | <15.5 | <46.5 | --- | --- | 33 |
| | | 10-12 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 31.9 |
| | | | | | | | | | |
| 11/15/07 | BH-12 | 0-2 | <15.9 | 48.9 | <15.9 | 48.9 | --- | --- | 34 |
| | | 5-7 | <16.1 | 32.7 | <16.1 | 32.7 | --- | --- | 46 |
| | | 10-12 | --- | --- | --- | --- | --- | --- | 63.8 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | | | | | | | | |

| Sample Date | Soil Boring Number | Sample Depth (feet BGS) | TPH (GRO) C6 - C12 mg/kg | TPH (DRO) C12 - C28 mg/kg | TPH (ORO) C28 - C35 mg/kg | Total TPH C6 - C35 mg/kg | Benzene mg/kg | Total BTEX mg/kg | Chloride (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|
| **RRAL** | | | | | | **100** | **10** | **50** | **250** |
| 11/15/07 | BH-13 | 0-2 | <15.5 | 38.5 | <15.5 | 38.5 | --- | --- | 33.1 |
| | | 5-7 | <15.2 | <15.2 | <15.2 | <45.6 | --- | --- | 86.2 |
| | | 10-12 | --- | --- | --- | --- | --- | --- | 42.5 |
| | | 15-17 | --- | --- | --- | --- | --- | --- | 53.2 |

Notes:

1. BGS: Depth in feet below ground surface
2. mg/kg: Milligrams per kilogram
3. GRO: Gasoline Range Organics
4. DRO: Diesel Range Organics
5. ORO: Oil Range Organics

# APPENDIX A
# SOIL BORING LOGS

**Client: Chevron MidContinent L.P., SBU**

**Project: Lovington Deep State**

**Project No.: 1007-023B**

**Location: Sec 5, T17S, R36E**

# Log: BH-1

**Page: 1 of 1**

**Geologist: C. Crain**

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| 0 | | Ground Surface | | | | | |
| | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand, fine grained,poorly sorted, damp. | 1 | SS | 2 | >2500 | 0-2' bgs<br>Total TPH= 242.5141 mg/kg<br>Chloride 13400 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non-indurated, dry. | 2 | SS | 2 | >2500 | 5-7' bgs<br>Total TPH= .0096 mg/kg<br>Chloride 10900 mg/kg |
| 10 | | | 3 | SS | 2 | >2500 | 10-12' bgs<br>Chloride 1290 mg/kg |
| 15 | | | 4 | SS | 2 | 1500 | 15-17' bgs<br>Chloride 85.1 mg/kg |
| 20 | | | 5 | SS | 2 | 600 | 20-22' bgs<br>Chloride 42.5 mg/kg |
| 25 | | **Sand** Light tan quartz sand, very fine grained, moderately well sorted, loose, dry. | 6 | SS | 2 | 400 | 25-27' bgs<br>Chloride 53.2 mg/kg |
| 30 | | | 7 | SS | 2 | 400 | 30-32' bgs<br>Chloride 42.5 mg/kg |
| 35 | | **TD at 32' bgs** | | | | | |
| 40 | | | | | | | |


**Ocotillo Environmental, LLC**
2125 French Drive
Hobbs, NM 88240
(505) 393-6371


**Drill Method: Air Rotary**

**Drill Date: 11/14/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

**Client: Chevron MidContinent L.P., SBU**

**Project: Lovington Deep State**

**Project No.: 1007-023B**

**Location: Sec 5, T17S, R36E**

# Log: BH-2

**Page: 1 of 1**

**Geologist: C. Crain**

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| 0 | | Ground Surface | | | | | |
| 0 | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand, fine grained,poorly sorted, damp. | 1 | SS | 2 | >2500 | 0-2' bgs<br>Total TPH= 12406 mg/kg<br>Chloride 13400 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non-indurated, dry. | 2 | SS | 2 | >2500 | 5-7' bgs<br>Total TPH= 63.6 mg/kg<br>Chloride 10900 mg/kg |
| 10 | | | 3 | SS | 2 | >2500 | 10-12' bgs<br>Total TPH = <46.8 mg/kg<br>Chloride 1290 mg/kg |
| 15 | | | 4 | SS | 2 | 1500 | 15-17' bgs<br>Chloride 85.1 mg/kg |
| 20 | | | 5 | SS | 2 | 600 | 20-22' bgs<br>Chloride 42.5 mg/kg |
| 25 | | **Sand** Light tan quartz sand, very fine grained, moderately well sorted, loose, dry. | 6 | SS | 2 | 0 | 25-27' bgs<br>Chloride 53.2 mg/kg |
| 30 | | | 7 | SS | 2 | 0 | 30-32' bgs<br>Chloride 42.5 mg/kg |
| 35 | | **TD at 32' bgs** | | | | | |
| 40 | | | | | | | |

**Ocotillo Environmental, LLC**
2125 French Drive
Hobbs, NM 88240
(505) 393-6371

**Drill Method: Air Rotary**

**Drill Date: 11/14/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

**Client: Chevron MidContinent L.P., SBU**

**Project: Lovington Deep State**

**Project No.: 1007-023B**

**Location: Sec 5, T17S, R36E**

# Log: BH-3

**Page: 1 of 1**

**Geologist: C. Crain**

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| | | Ground Surface | | | | | |
| 0 | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand, fine grained,poorly sorted, damp. | 1 | SS | 2 | >2500 | 0-2' bgs<br>Total TPH= 30.5 mg/kg<br>Chloride 17100 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non indurated, damp. | 2 | SS | 2 | >2500 | 5-7' bgs<br>Total TPH= <47.7<br>Chloride 6080 mg/kg |
| 10 | | | 3 | SS | 2 | 400 | 10-12' bgs<br>Chloride 191 mg/kg |
| 15 | | | 4 | SS | 2 | 1200 | 15-17' bgs<br>Chloride 117 mg/kg |
| 20 | | | 5 | SS | 2 | 0 | 20-22' bgs<br>Chloride 42.5 mg/kg |
| 25 | | | 6 | SS | 2 | 0 | 25-27' bgs<br>Chloride 160 mg/kg |
| 30 | | | | | | | |
| | | TD@32' | | | | | |
| 35 | | | | | | | |
| 40 | | | | | | | |

**Ocotillo Environmental, LLC**
2125 French Drive
Hobbs, NM 88240
(505) 393-6371

**Drill Method: Air Rotary**

**Drill Date: 11/14/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

Client: Chevron MidContinent L.P., SBU

Project: Lovington Deep State

Project No.: 1007-023B

Location: Sec 5, T17S, R36E

# Log: BH-4

Page: 1 of 1

Geologist: C. Crain

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| | | Ground Surface | | | | | |
| 0 | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand, fine grained,poorly sorted, dry. | 1 | SS | 2 | 0 | 0-2' bgs<br>Total TPH= 37.1 mg/kg<br>Chloride 45.4 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand caliche, non indurated, dry. | 2 | SS | 2 | 0 | 5-7' bgs<br>Total TPH= 37.8 mg/kg<br>Chloride 64.6 mg/kg |
| 10 | | | 3 | SS | 2 | 0 | 10-12' bgs<br>Chloride 53.2 mg/kg |
| 15 | | | 4 | SS | 2 | 0 | 15-17' bgs<br>Chloride 74.4 mg/kg |
| 20 | | | 5 | SS | 2 | 0 | 20-22' bgs<br>Chloride 42.5 mg/kg |
| | | **TD@22'** | | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |
| 35 | | | | | | | |
| 40 | | | | | | | |


**Ocotillo Environmental, LLC**
2125 French Drive
Hobbs, NM 88240
(505) 393-6371


**Drill Method: Air Rotary**

**Drill Date: 11/14/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

**Client: Chevron MidContinent L.P., SBU**

**Project: Lovington Deep State**

**Project No.: 1007-023B**

**Location: Sec 5, T17S, R36E**

# Log: BH-5

**Page: 1 of 1**

**Geologist: C. Crain**

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| 0 | | Ground Surface | | | | | |
| 0 | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand, fine grained,poorly sorted, dry. | 1 | SS | 2 | >2500 | 0-2' bgs<br>Total TPH= 13870 mg/kg<br>Chloride 15200mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non indurated, dry. | 2 | SS | 2 | 2500 | 5-7' bgs<br>Total TPH= 510.3 mg/kg<br>Chloride 1880 mg/kg |
| 10 | | | 3 | SS | 2 | 0 | 10-12' bgs<br>Chloride 42.5 mg/kg |
| 15 | | | 4 | SS | 2 | 0 | 15-17' bgs<br>Chloride 106 mg/kg |
| 20 | | | 5 | SS | 2 | 0 | 20-22' bgs<br>Chloride 74.4 mg/kg |
| 22 | | **TD@22'** | | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |
| 35 | | | | | | | |
| 40 | | | | | | | |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(505) 393-6371


**Drill Method: Air Rotary**

**Drill Date: 11/14/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

**Client: Chevron MidContinent L.P., SBU**

**Project: Lovington Deep State**

**Project No.: 1007-023B**

**Location: Sec 5, T17S, R36E**

# Log: BH-6

**Page: 1 of 1**

**Geologist: C. Crain**

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| 0 | | Ground Surface | | | | | |
| | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand, fine grained, poorly sorted, dry. | 1 | SS | 2 | >2500 | 0-2' bgs<br>Total TPH= 103.8 mg/kg<br>Chloride 12,600 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non indurated, dry. | 2 | SS | 2 | 2500 | 5-7' bgs<br>Total TPH= <46.8 mg/kg<br>Chloride 1,130 mg/kg |
| 10 | | | 3 | SS | 2 | 0 | 10-12' bgs<br>Chloride 42.5 mg/kg |
| 15 | | | 4 | SS | 2 | 0 | 15-17' bgs<br>Chloride 42.5 mg/kg |
| 20 | | | 5 | SS | 2 | 0 | 20-22' bgs<br>Chloride 234 mg/kg |
| 22 | | **TD@22'** | | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |
| 35 | | | | | | | |
| 40 | | | | | | | |

**Ocotillo Environmental, LLC**
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Hobbs, NM 88240
(505) 393-6371

**Drill Method: Air Rotary**

**Drill Date: 11/14/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

**Client: Chevron MidContinent L.P., SBU**

**Project: Lovington Deep State**

**Project No.: 1007-023B**

**Location: Sec 5, T17S, R36E**

# Log: BH-7

**Page: 1 of 1**

**Geologist: C. Crain**

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| 0 | | Ground Surface | | | | | |
| 0 | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand, poorly sorted, damp. | 1 | SS | 2 | >2500 | 0-2' bgs<br>Total TPH= <51 mg/kg<br>Chloride 7850 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non indurated, dry. | 2 | SS | 2 | >2500 | 5-7' bgs<br>Total TPH= <47.7 mg/kg<br>Chloride 5060 mg/kg |
| 10 | | | 3 | SS | 2 | 2000 | 10-12' bgs<br>Chloride 3400 mg/kg |
| 15 | | | 4 | SS | 2 | 1800 | 15-17' bgs<br>Chloride 213 mg/kg |
| 20 | | | 5 | SS | 2 | >2500 | 20-22' bgs<br>Chloride 42.5 mg/kg |
| 25 | | **Silty Sand** Light brown silty quartz sand, moderately well sorted, moderately loose, dry. | 6 | SS | | 0 | 25-27' bgs<br>Chloride 42.5 mg/kg |
| 30 | | | 7 | SS | | 300 | 30-32'bgs<br>Chloridie 42.5 mg/kg |
| 35 | | **TD@32'** | | | | | |
| 40 | | | | | | | |


**Ocotillo Environmental, LLC**
2125 French Drive
Hobbs, NM 88240
(505) 393-6371


**Drill Method: Air Rotary**

**Drill Date: 11/15/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

**Client: Chevron MidContinent L.P., SBU**

**Project: Lovington Deep State**

**Project No.: 1007-023B**

**Location: Sec 5, T17S, R36E**

# Log: BH-8

**Page: 1 of 1**

**Geologist: C. Crain**

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| | | Ground Surface | | | | | |
| 0 | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand, fine grained, poorly sorted, dry. | 1 | SS | 2 | >2500 | 0-2' bgs<br>Total TPH= 22.2 mg/kg<br>Chloride 3770 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non indurated, dry. | 2 | SS | 2 | 400 | 5-7' bgs<br>Total TPH= <45.9 mg/kg<br>Chloride 304 mg/kg |
| 10 | | | 3 | SS | 2 | 0 | 10-12' bgs<br>Chloride 85.1 mg/kg |
| 15 | | | 4 | SS | 2 | 250 | 15-17' bgs<br>Chloride 85.1 mg/kg |
| 20 | | | 5 | SS | 2 | 100 | 20-22' bgs<br>Chlorides 63.8 mg/kg |
| 25 | | **Silty Sand** Light tan silty quartz sand, fine grained moderately well sorted, moderately loose, dry. | 6 | SS | | 500 | 25-27' bgs<br>Chlorides 106 mg/kg |
| 30 | | **TD@27'** | | | | | |
| 35 | | | | | | | |
| 40 | | | | | | | |


**Ocotillo Environmental, LLC**
2125 French Drive
Hobbs, NM 88240
(505) 393-6371


**Drill Method: Air Rotary**

**Drill Date: 11/15/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

Client: Chevron MidContinent L.P., SBU

Project: Lovington Deep State

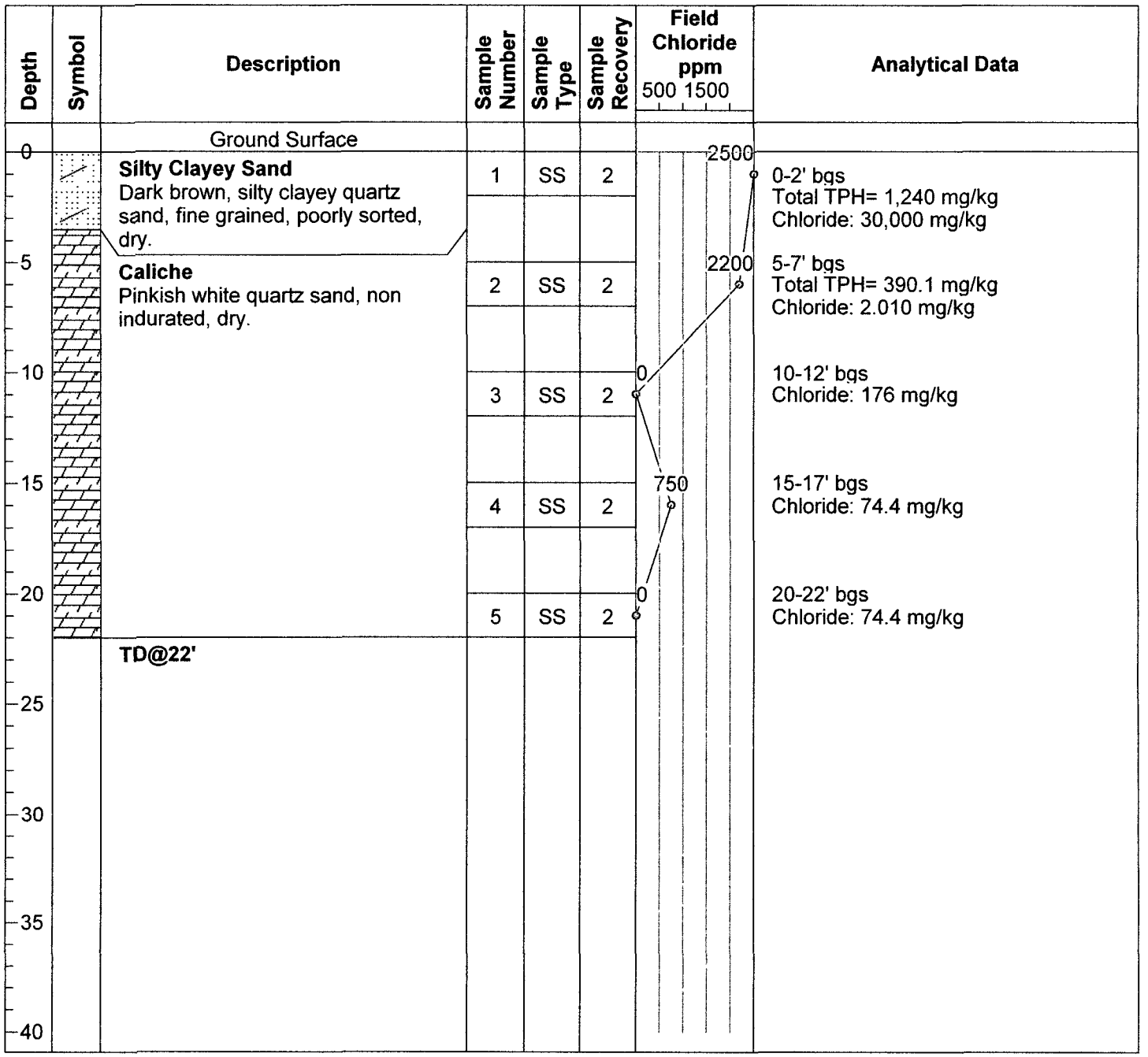
Project No.: 1007-023B

Location: Sec 5, T17S, R36E

# Log: BH-9

Page: 1 of 1

Geologist: C. Crain





**Ocotillo Environmental, LLC**
2125 French Drive
Hobbs, NM 88240
(505) 393-6371


Drill Method: Air Rotary

Drill Date: 11/15/07

Hole Size: 4"

Elevation: NA

Checked by: CKC

Drilled by: Scarborough Drilling

Client: Chevron MidContinent L.P., SBU

Project: Lovington Deep State

Project No.: 1007-023B

Location: Sec 5, T17S, R36E

# Log: BH-10

Page: 1 of 1

Geologist: C. Crain

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| 0 | | Ground Surface | | | | | |
| 0 | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand, fine grained, poorly sorted, dry. | 1 | SS | 2 | 0 | 0-2' bgs<br>Total TPH= <47.7 mg/kg<br>Chloride 45 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non indurated, dry. | 2 | SS | 2 | 0 | 5-7' bgs<br>Total TPH= <46.5 mg/kg<br>Chloride 44 mg/kg |
| 10 | | | 3 | SS | 2 | 0 | 10-12' bgs<br>Chloride 42.5 mg/kg |
| 15 | | | 4 | SS | 2 | 0 | 15-17' bgs<br>Chloride 31.9 mg/kg |
| 17 | | **TD@17'** | | | | | |
| 20 | | | | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |
| 35 | | | | | | | |
| 40 | | | | | | | |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Hobbs, NM 88240
(505) 393-6371


Drill Method: Air Rotary

Drill Date: 11/15/07

Hole Size: 4"

Elevation: NA

Checked by: CKC

Drilled by: Scarborough Drilling

Client: Chevron MidContinent L.P., SBU

Project: Lovington Deep State

Project No.: 1007-023B

Location: Sec 5, T17S, R36E

# Log: BH-11

Page: 1 of 1

Geologist: C. Crain

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| | | Ground Surface | | | | | |
| 0 | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand,poorly sorted, dry. | 1 | SS | 2 | 0 | 0-2' bgs<br>Total TPH= <50.4 mg/kg<br>Chloride 48 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non indurated, dry. | 2 | SS | 2 | 0 | 5-7' bgs<br>Total TPH= <46.5 mg/kg<br>Chloride 33 mg/kg |
| 10 | | | 3 | SS | 2 | 0 | 10-12' bgs<br>Chloride 42.5 mg/kg |
| 15 | | | 4 | SS | 2 | 0 | 15-17' bgs<br>Chloride 31.9 mg/kg |
| | | **TD@17'** | | | | | |
| 20 | | | | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |
| 35 | | | | | | | |
| 40 | | | | | | | |


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(505) 393-6371


**Drill Method: Air Rotary**

**Drill Date: 11/15/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

**Client: Chevron MidContinent L.P., SBU**

**Project: Lovington Deep State**

**Project No.: 1007-023B**

**Location: Sec 5, T17S, R36E**

# Log: BH-12

**Page: 1 of 1**

**Geologist: C. Crain**

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| 0 | | Ground Surface | | | | | |
| 0 | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand,poorly sorted, dry. | 1 | SS | 2 | 0 | 0-2' bgs<br>Total TPH= 48.9 mg/kg<br>Chloride 34 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non indurated, dry. | 2 | SS | 2 | 0 | 5-7' bgs<br>Total TPH= 32.7 mg/kg<br>Chloride 46 mg/kg |
| 10 | | | 3 | SS | 2 | 0 | 10-12' bgs<br>Chloride 63.8 mg/kg |
| 15 | | | 4 | SS | 2 | 0 | 15-17' bgs<br>Chloride 42.5 mg/kg |
| | | **TD@17'** | | | | | |
| 20 | | | | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |
| 35 | | | | | | | |
| 40 | | | | | | | |

**Ocotillo Environmental, LLC**
2125 French Drive
Hobbs, NM 88240
(505) 393-6371

**Drill Method: Air Rotary**

**Drill Date: 11/15/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

Client: Chevron MidContinent L.P., SBU

Project: Lovington Deep State

Project No.: 1007-023B

Location: Sec 5, T17S, R36E

# Log: BH-13

Page: 1 of 1

Geologist: C. Crain

| Depth | Symbol | Description | Sample Number | Sample Type | Sample Recovery | Field Chloride ppm (500 1500) | Analytical Data |
|---|---|---|---|---|---|---|---|
| 0 | | Ground Surface | | | | | |
| 0 | | **Silty Clayey Sand** Dark brown, silty clayey quartz sand,fine grained, poorly sorted, dry. | 1 | SS | 2 | 0 | 0-2' bgs<br>Total TPH= 38.5 mg/kg<br>Chloride 33.1 mg/kg |
| 5 | | **Caliche** Pinkish white quartz sand, non indurated, dry. | 2 | SS | 2 | 0 | 5-7' bgs<br>Total TPH= <45.6 mg/kg<br>Chloride 86.2 mg/kg |
| 10 | | | 3 | SS | 2 | 0 | 10-12' bgs<br>Chloride 42.5 mg/kg |
| 15 | | | 4 | SS | 2 | 0 | 15-17' bgs<br>Chloride 53.2 mg/kg |
| | | **TD@17'** | | | | | |
| 20 | | | | | | | |
| 25 | | | | | | | |
| 30 | | | | | | | |
| 35 | | | | | | | |
| 40 | | | | | | | |


**Ocotillo Environmental, LLC**
2125 French Drive
Hobbs, NM 88240
(505) 393-6371


**Drill Method: Air Rotary**

**Drill Date: 11/15/07**

**Hole Size: 4"**

**Elevation: NA**

**Checked by: CKC**

**Drilled by: Scarborough Drilling**

# APPENDIX B
# LABORATORY DATA AND CHAIN OF CUSTODY DOCUMENTATION

# Analytical Report 293282

## for

## Ocotillo Environmental, LLC

**Project Manager: Cindy Crain**

**Chevron Lovington Deep State**

**1007-023B**

**30-NOV-07**

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

**A Xenco Laboratories Company**

Texas certification numbers:
Houston, TX T104704215

Florida certification numbers:
Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

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

30-NOV-07

Project Manager: **Cindy Crain**
**Ocotillo Environmental, LLC**
P.O. Box 1816
Hobbs, NM 88241

Reference: XENCO Report No: **293282**
**Chevron Lovington Deep State**
Project Address: Sec. 5, T17S, R36E, Lea Co., NM

**Cindy Crain**:

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 293282. 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. 293282 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

# Sample Cross Reference 293282

## Ocotillo Environmental, LLC, Hobbs, NM

Chevron Lovington Deep State

| Sample Id | Matrix | Date Collected | Sample Depth | Lab Sample Id |
|---|---|---|---|---|
| BH-1 (0-2') | S | Nov-14-07 09:30 | 0 - 2 ft | 293282-001 |
| BH-1 (5-7') | S | Nov-14-07 09:42 | 5 - 7 ft | 293282-002 |
| BH-1 (10-12') | S | Nov-14-07 09:50 | 10 - 12 ft | 293282-003 |
| BH-1 (15-17') | S | Nov-14-07 09:58 | 15 - 17 ft | 293282-004 |
| BH-1 (20-22) | S | Nov-14-07 10:05 | 20 - 22 ft | 293282-005 |
| BH-1 (25-27') | S | Nov-14-07 10:13 | 25 - 27 ft | 293282-006 |
| BH-1 (30-32') | S | Nov-14-07 10:20 | 30 - 32 ft | 293282-007 |
| BH-2 (0-2') | S | Nov-14-07 10:38 | 0 - 2 ft | 293282-008 |
| BH-2 (5-7') | S | Nov-14-07 10:42 | 5 - 7 ft | 293282-009 |
| BH-2 (10-12') | S | Nov-14-07 10:50 | 10 - 12 ft | 293282-010 |
| BH-2 (15-17') | S | Nov-14-07 10:58 | 15 - 17 ft | 293282-011 |
| BH-2 (20-22') | S | Nov-14-07 11:02 | 20 - 22 ft | 293282-012 |
| BH-2 (25-27') | S | Nov-14-07 12:59 | 25 - 27 ft | 293282-013 |
| BH-2 (30-32') | S | Nov-14-07 13:04 | 30 - 32 ft | 293282-014 |
| BH-3 (0-2') | S | Nov-14-07 12:16 | 0 - 2 ft | 293282-015 |
| BH-3 (5-7') | S | Nov-14-07 12:21 | 5 - 7 ft | 293282-016 |
| BH-3 (10-12') | S | Nov-14-07 12:23 | 10 - 12 ft | 293282-017 |
| BH-3 (15-17') | S | Nov-14-07 12:31 | 15 - 17 ft | 293282-018 |
| BH-3 (20-22') | S | Nov-14-07 12:36 | 20 - 22 ft | 293282-019 |
| BH-3 (25-27') | S | Nov-14-07 12:46 | 25 - 27 ft | 293282-020 |
| BH-4 (0-2') | S | Nov-14-07 13:10 | 0 - 2 ft | 293282-021 |
| BH-4 (5-7') | S | Nov-14-07 13:21 | 5 - 7 ft | 293282-022 |
| BH-4 (10-12') | S | Nov-14-07 13:23 | 10 - 12 ft | 293282-023 |
| BH-4 (15-17') | S | Nov-14-07 13:25 | 15 - 17 ft | 293282-024 |
| BH-4 (20-22') | S | Nov-14-07 13:31 | 20 - 22 ft | 293282-025 |
| BH-5 (0-2') | S | Nov-14-07 13:42 | 0 - 2 ft | 293282-026 |
| BH-5 (5-7') | S | Nov-14-07 13:49 | 5 - 7 ft | 293282-027 |
| BH-5 (10-12') | S | Nov-14-07 14:01 | 10 - 12 ft | 293282-028 |
| BH-5 (15-17') | S | Nov-14-07 14:07 | 15 - 17 ft | 293282-029 |
| BH-5 (20-22') | S | Nov-14-07 14:11 | 20 - 22 ft | 293282-030 |
| BH-6 (0-2') | S | Nov-14-07 14:28 | 0 - 2 ft | 293282-031 |
| BH-6 (5-7') | S | Nov-14-07 14:31 | 5 - 7 ft | 293282-032 |
| BH-6 (10-12') | S | Nov-14-07 14:40 | 10 - 12 ft | 293282-033 |
| BH-6 (15-17') | S | Nov-14-07 14:44 | 15 - 17 ft | 293282-034 |
| BH-6 (20-22') | S | Nov-14-07 14:50 | 20 - 22 ft | 293282-035 |
| BH-7 (0-2') | S | Nov-15-07 09:25 | 0 - 2 ft | 293282-036 |
| BH-7 (5-7') | S | Nov-15-07 09:31 | 5 - 7 ft | 293282-037 |
| BH-7 (10-12') | S | Nov-15-07 09:37 | 10 - 12 ft | 293282-038 |
| BH-7 (15-17') | S | Nov-15-07 09:47 | 15 - 17 ft | 293282-039 |
| BH-7 (20-22') | S | Nov-15-07 09:53 | 20 - 22 ft | 293282-040 |
| BH-7 (25-27') | S | Nov-15-07 10:02 | 25 - 27 ft | 293282-041 |
| BH-7 (30-32') | S | Nov-15-07 10:10 | 30 - 32 ft | 293282-042 |
| BH-8 (0-2') | S | Nov-15-07 10:20 | 0 - 2 ft | 293282-043 |

# Sample Cross Reference 293282

## Ocotillo Environmental, LLC, Hobbs, NM

Chevron Lovington Deep State

| | | | | |
|---|---|---|---|---|
| BH-8 (5-7') | S | Nov-15-07 10:29 | 5 - 7 ft | 293282-044 |
| BH-8 (10-12') | S | Nov-15-07 10:32 | 10 - 12 ft | 293282-045 |
| BH-8 (15-17') | S | Nov-15-07 10:36 | 15 - 17 ft | 293282-046 |
| BH-8 (20-22') | S | Nov-15-07 10:40 | 20 - 22 ft | 293282-047 |
| BH-8 (25-27') | S | Nov-15-07 10:47 | 25 - 27 ft | 293282-048 |
| BH-9 (0-2') | S | Nov-15-07 11:00 | 0 - 2 ft | 293282-049 |
| BH-9 (5-7') | S | Nov-15-07 11:06 | 5 - 7 ft | 293282-050 |
| BH-9 (10-12') | S | Nov-15-07 11:15 | 10 - 12 ft | 293282-051 |
| BH-9 (15-17') | S | Nov-15-07 11:20 | 15 - 17 ft | 293282-052 |
| BH-9 (20-22') | S | Nov-15-07 11:25 | 20 - 22 ft | 293282-053 |
| BH-10 (0-2') | S | Nov-15-07 12:04 | 0 - 2 ft | 293282-054 |
| BH-10 (5-7') | S | Nov-15-07 12:12 | 5 - 7 ft | 293282-055 |
| BH-10 (10-12') | S | Nov-15-07 12:19 | 10 - 12 ft | 293282-056 |
| BH-10 (15-17') | S | Nov-15-07 12:24 | 15 - 17 ft | 293282-057 |
| BH-11 (0-2') | S | Nov-15-07 12:31 | 0 - 2 ft | 293282-058 |
| BH-11 (5-7') | S | Nov-15-07 12:35 | 5 - 7 ft | 293282-059 |
| BH-11 (10-12') | S | Nov-15-07 12:40 | 10 - 12 ft | 293282-060 |
| BH-11 (15-17') | S | Nov-15-07 12:46 | 15 - 17 ft | 293282-061 |
| BH-12 (0-2') | S | Nov-15-07 12:56 | 0 - 2 ft | 293282-062 |
| BH-12 (5-7') | S | Nov-15-07 13:00 | 5 - 7 ft | 293282-063 |
| BH-12 (10-12') | S | Nov-15-07 13:10 | 10 - 12 ft | 293282-064 |
| BH-12 (15-17') | S | Nov-15-07 13:14 | 15 - 17 ft | 293282-065 |
| BH-13 (0-2') | S | Nov-15-07 13:18 | 0 - 2 ft | 293282-066 |
| BH-13 (5-7') | S | Nov-15-07 13:22 | 5 - 7 ft | 293282-067 |
| BH-13 (10-12') | S | Nov-15-07 13:28 | 10 - 12 ft | 293282-068 |
| BH-13 (15-17') | S | Nov-15-07 13:35 | 15 - 17 ft | 293282-069 |

# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

## Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11:27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| *Analysis Requested* | *Lab Id:* | 293282-001 | | 293282-002 | | 293282-003 | | 293282-004 | | 293282-005 | | 293282-006 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Field Id:* | BH-1 (0-2') | | BH-1 (5-7') | | BH-1 (10-12') | | BH-1 (15-17') | | BH-1 (20-22) | | BH-1 (25-27') | |
| | *Depth:* | 0-2 ft | | 5-7 ft | | 10-12 ft | | 15-17 ft | | 20-22 ft | | 25-27 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-14-07 09 30 | | Nov-14-07 09 42 | | Nov-14-07 09 50 | | Nov-14-07 09.58 | | Nov-14-07 10:05 | | Nov-14-07 10·13 | |
| **BTEX by EPA 8021B** | *Extracted:* | Nov-28-07 12 27 | | | | | | | | | | | |
| | *Analyzed:* | Nov-29-07 13·36 | | | | | | | | | | | |
| | *Units/RL:* | mg/kg | RL | | | | | | | | | | |
| Benzene | | 1 724 | 0 1190 | | | | | | | | | | |
| Toluene | | 43.48 | 0.2380 | | | | | | | | | | |
| Ethylbenzene | | 34 43 | 0 1190 | | | | | | | | | | |
| m,p-Xylenes | | 81.51 | 0.2380 | | | | | | | | | | |
| o-Xylene | | 31 40 | 0 1190 | | | | | | | | | | |
| Xylenes, Total | | 112.91 | | | | | | | | | | | |
| Total BTEX | | 192.544 | | | | | | | | | | | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-19-07 15·00 | | Nov-19-07 15.00 | | Nov-19-07 15·00 | | | | | | | |
| | *Units/RL:* | % | RL | % | RL | % | RL | | | | | | |
| Percent Moisture | | 16 0 | 1.00 | 7.24 | 1 00 | 8 21 | 1 00 | | | | | | |
| **TPH by SW8015 Mod** | *Extracted:* | Nov-20-07 14.20 | | Nov-20-07 14 20 | | Nov-20-07 14.20 | | | | | | | |
| | *Analyzed:* | Nov-25-07 17.56 | | Nov-25-07 18:23 | | Nov-25-07 18:50 | | | | | | | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | | | |
| C6-C12 Gasoline Range Hydrocarbons | | 2690 | 89.3 | 51.3 | 16.2 | 138 | 16 3 | | | | | | |
| C12-C28 Diesel Range Hydrocarbons | | 9520 | 89.3 | 201 | 16 2 | 879 | 16 3 | | | | | | |
| C28-C35 Oil Range Hydrocarbons | | 1140 | 89 3 | 38.4 | 16.2 | 112 | 16.3 | | | | | | |
| Total TPH | | 13350 | | 290.7 | | 1129 | | | | | | | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 08:30 | | Nov-20-07 08·30 | | Nov-20-07 08·30 | | Nov-20-07 08:30 | | Nov-20-07 08:30 | | Nov-20-07 08·30 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 25300 | 5.95 | 6420 | 5 39 | 1850 | 5.45 | 936 | 5.00 | 128 | 5.00 | 85.1 | 5.00 |



Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

## Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11:27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| Analysis Requested | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 293282-007 | | 293282-008 | | 293282-009 | | 293282-010 | | 293282-011 | | 293282-012 | |
| | *Field Id:* | BH-1 (30-32') | | BH-2 (0-2') | | BH-2 (5-7') | | BH-2 (10-12') | | BH-2 (15-17') | | BH-2 (20-22') | |
| | *Depth:* | 30-32 ft | | 0-2 ft | | 5-7 ft | | 10-12 ft | | 15-17 ft | | 20-22 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-14-07 10:20 | | Nov-14-07 10:38 | | Nov-14-07 10:42 | | Nov-14-07 10:50 | | Nov-14-07 10.58 | | Nov-14-07 11:02 | |
| **BTEX by EPA 8021B** | *Extracted:* | | | Nov-28-07 12.27 | | Nov-28-07 13.51 | | | | | | | |
| | *Analyzed:* | | | Nov-29-07 16:06 | | Nov-28-07 19:51 | | | | | | | |
| | *Units/RL:* | | | mg/kg | RL | mg/kg | RL | | | | | | |
| Benzene | | | | 0 9841 | 0 2326 | ND | 0 0011 | | | | | | |
| Toluene | | | | 44.11 | 0.4653 | ND | 0.0022 | | | | | | |
| Ethylbenzene | | | | 49.95 | 0 2326 | 0 0019 | 0 0011 | | | | | | |
| m,p-Xylenes | | | | 102 0 | 0.4653 | 0.0077 | 0.0022 | | | | | | |
| o-Xylene | | | | 45 47 | 0.2326 | ND | 0 0011 | | | | | | |
| Xylenes, Total | | | | 147.47 | | 0.0077 | | | | | | | |
| Total BTEX | | | | 242 5141 | | 0 0096 | | | | | | | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | | | Nov-19-07 15:00 | | Nov-19-07 15 00 | | Nov-19-07 15.00 | | | | | |
| | *Units/RL:* | | | % | RL | % | RL | % | RL | | | | |
| Percent Moisture | | | | 14.0 | 1.00 | 10.1 | 1 00 | 4.01 | 1.00 | | | | |
| **TPH by SW8015 Mod** | *Extracted:* | | | Nov-20-07 14 20 | | Nov-20-07 14:20 | | Nov-20-07 14:20 | | | | | |
| | *Analyzed:* | | | Nov-25-07 19:16 | | Nov-25-07 19:43 | | Nov-25-07 20:09 | | | | | |
| | *Units/RL:* | | | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| C6-C12 Gasoline Range Hydrocarbons | | | | 3530 | 87 2 | 18 2 | 16.7 | ND | 15 6 | | | | |
| C12-C28 Diesel Range Hydrocarbons | | | | 7950 | 87.2 | 45.4 | 16 7 | ND | 15 6 | | | | |
| C28-C35 Oil Range Hydrocarbons | | | | 926 | 87.2 | ND | 16.7 | ND | 15.6 | | | | |
| Total TPH | | | | 12406 | | 63.6 | | ND | | | | | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 08.30 | | Nov-20-07 08:30 | | Nov-20-07 08:30 | | Nov-20-07 00:00 | | Nov-20-07 00.00 | | Nov-20-07 00.00 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 63.8 | 5.00 | 13400 | 5 82 | 10900 | 5.56 | 1290 | 5.21 | 85.1 | 5.00 | 42.5 | 5.00 |





Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

### Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11:27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| Analysis Requested | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 293282-013 | | 293282-014 | | 293282-015 | | 293282-016 | | 293282-017 | | 293282-018 | |
| | *Field Id:* | BH-2 (25-27') | | BH-2 (30-32') | | BH-3 (0-2') | | BH-3 (5-7') | | BH-3 (10-12') | | BH-3 (15-17') | |
| | *Depth:* | 25-27 ft | | 30-32 ft | | 0-2 ft | | 5-7 ft | | 10-12 ft | | 15-17 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-14-07 12:59 | | Nov-14-07 13:04 | | Nov-14-07 12 16 | | Nov-14-07 12.21 | | Nov-14-07 12:23 | | Nov-14-07 12:31 | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | | | | | Nov-19-07 15:00 | | Nov-19-07 15:00 | | | | | |
| | *Units/RL:* | | | | | % | RL | % | RL | | | | |
| Percent Moisture | | | | | | 13.0 | 1 00 | 5.48 | 1.00 | | | | |
| **TPH by SW8015 Mod** | *Extracted:* | | | | | Nov-20-07 14 20 | | Nov-20-07 14 20 | | | | | |
| | *Analyzed:* | | | | | Nov-25-07 20:35 | | Nov-25-07 21.01 | | | | | |
| | *Units/RL:* | | | | | mg/kg | RL | mg/kg | RL | | | | |
| C6-C12 Gasoline Range Hydrocarbons | | | | | | ND | 17 2 | ND | 15.9 | | | | |
| C12-C28 Diesel Range Hydrocarbons | | | | | | 30 5 | 17.2 | ND | 15 9 | | | | |
| C28-C35 Oil Range Hydrocarbons | | | | | | ND | 17 2 | ND | 15.9 | | | | |
| Total TPH | | | | | | 30 5 | | ND | | | | | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 00.00 | | Nov-20-07 00:00 | | Nov-20-07 00.00 | | Nov-20-07 00 00 | | Nov-20-07 00:00 | | Nov-20-07 00.00 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 53.2 | 5.00 | 42.5 | 5.00 | 17100 | 5.75 | 6080 | 5.29 | 191 | 5.00 | 117 | 5.00 |



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# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

### Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11:27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| *Analysis Requested* | *Lab Id:* | 293282-019 | | 293282-020 | | 293282-021 | | 293282-022 | | 293282-023 | | 293282-024 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Field Id:* | BH-3 (20-22') | | BH-3 (25-27') | | BH-4 (0-2') | | BH-4 (5-7') | | BH-4 (10-12') | | BH-4 (15-17') | |
| | *Depth:* | 20-22 ft | | 25-27 ft | | 0-2 ft | | 5-7 ft | | 10-12 ft | | 15-17 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-14-07 12.36 | | Nov-14-07 12.46 | | Nov-14-07 13 10 | | Nov-14-07 13 21 | | Nov-14-07 13·23 | | Nov-14-07 13·25 | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | | | | | Nov-19-07 15.00 | | Nov-19-07 15:00 | | | | | |
| | *Units/RL:* | | | | | % | RL | % | RL | | | | |
| Percent Moisture | | | | | | 6 34 | 1 00 | 1.20 | 1 00 | | | | |
| **TPH by SW8015 Mod** | *Extracted:* | | | | | Nov-20-07 14.20 | | Nov-20-07 14 20 | | | | | |
| | *Analyzed:* | | | | | Nov-25-07 21.27 | | Nov-25-07 21.53 | | | | | |
| | *Units/RL:* | | | | | mg/kg | RL | mg/kg | RL | | | | |
| C6-C12 Gasoline Range Hydrocarbons | | | | | | ND | 16 0 | ND | 15.2 | | | | |
| C12-C28 Diesel Range Hydrocarbons | | | | | | 37.1 | 16 0 | 37 8 | 15 2 | | | | |
| C28-C35 Oil Range Hydrocarbons | | | | | | ND | 16 0 | ND | 15.2 | | | | |
| Total TPH | | | | | | 37.1 | | 37 8 | | | | | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 00:00 | | Nov-20-07 00.00 | | Nov-20-07 00 00 | | Nov-20-07 00.00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 42 5 | 5 00 | 160 | 5.00 | 45.4 | 5.34 | 64.6 | 5.06 | 53.2 | 5.00 | 74 4 | 5.00 |



Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

## Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11:27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 293282-025 | | 293282-026 | | 293282-027 | | 293282-028 | | 293282-029 | | 293282-030 | |
| | *Field Id:* | BH-4 (20-22') | | BH-5 (0-2') | | BH-5 (5-7') | | BH-5 (10-12') | | BH-5 (15-17') | | BH-5 (20-22') | |
| | *Depth:* | 20-22 ft | | 0-2 ft | | 5-7 ft | | 10-12 ft | | 15-17 ft | | 20-22 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-14-07 13.31 | | Nov-14-07 13.42 | | Nov-14-07 13:49 | | Nov-14-07 14:01 | | Nov-14-07 14:07 | | Nov-14-07 14:11 | |
| **BTEX by EPA 8021B** | *Extracted:* | | | Nov-28-07 12:27 | | | | | | | | | |
| | *Analyzed:* | | | Nov-29-07 16:23 | | | | | | | | | |
| | *Units/RL:* | | | mg/kg | RL | | | | | | | | |
| Benzene | | | | 0 0716 | 0.0577 | | | | | | | | |
| Toluene | | | | 20.43 | 0.2308 | | | | | | | | |
| Ethylbenzene | | | | 43 65 | 0 1154 | | | | | | | | |
| m,p-Xylenes | | | | 97.00 | 0.2308 | | | | | | | | |
| o-Xylene | | | | 40.97 | 0 1154 | | | | | | | | |
| Xylenes, Total | | | | 137.97 | | | | | | | | | |
| Total BTEX | | | | 202.1216 | | | | | | | | | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | | | Nov-19-07 15:00 | | Nov-19-07 15 00 | | | | | | | |
| | *Units/RL:* | | | % | RL | % | RL | | | | | | |
| Percent Moisture | | | | 13 3 | 1 00 | 3.93 | 1.00 | | | | | | |
| **TPH by SW8015 Mod** | *Extracted:* | | | Nov-20-07 14 13 | | Nov-20-07 14:13 | | | | | | | |
| | *Analyzed:* | | | Nov-26-07 02:37 | | Nov-26-07 03.03 | | | | | | | |
| | *Units/RL:* | | | mg/kg | RL | mg/kg | RL | | | | | | |
| C6-C12 Gasoline Range Hydrocarbons | | | | 2590 | 86.6 | 34.9 | 15 6 | | | | | | |
| C12-C28 Diesel Range Hydrocarbons | | | | 10100 | 86.6 | 409 | 15.6 | | | | | | |
| C28-C35 Oil Range Hydrocarbons | | | | 1180 | 86.6 | 66.4 | 15 6 | | | | | | |
| Total TPH | | | | 13870 | | 510.3 | | | | | | | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 00:00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 42.5 | 5.00 | 15200 | 5.77 | 1880 | 5.20 | 42.5 | 5 00 | 106 | 5.00 | 74.4 | 5.00 |



Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

### Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11:27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| Analysis Requested | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 293282-031 | | 293282-032 | | 293282-033 | | 293282-034 | | 293282-035 | | 293282-036 | |
| | *Field Id:* | BH-6 (0-2') | | BH-6 (5-7') | | BH-6 (10-12') | | BH-6 (15-17') | | BH-6 (20-22') | | BH-7 (0-2') | |
| | *Depth:* | 0-2 ft | | 5-7 ft | | 10-12 ft | | 15-17 ft | | 20-22 ft | | 0-2 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-14-07 14:28 | | Nov-14-07 14.31 | | Nov-14-07 14 40 | | Nov-14-07 14 44 | | Nov-14-07 14:50 | | Nov-15-07 09 25 | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-19-07 15:00 | | Nov-19-07 15:00 | | | | | | | | Nov-19-07 15:00 | |
| | *Units/RL:* | % | RL | % | RL | | | | | | | % | RL |
| Percent Moisture | | 11.5 | 1.00 | 4.00 | 1 00 | | | | | | | 11.9 | 1 00 |
| **TPH by SW8015 Mod** | *Extracted:* | Nov-20-07 14 13 | | Nov-20-07 14:13 | | | | | | | | Nov-20-07 14 13 | |
| | *Analyzed:* | Nov-26-07 03.28 | | Nov-26-07 03:54 | | | | | | | | Nov-26-07 04:20 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | | | | | | | mg/kg | RL |
| C6-C12 Gasoline Range Hydrocarbons | | ND | 16 9 | ND | 15.6 | | | | | | | ND | 17.0 |
| C12-C28 Diesel Range Hydrocarbons | | 86 6 | 16 9 | ND | 15.6 | | | | | | | ND | 17.0 |
| C28-C35 Oil Range Hydrocarbons | | 17 2 | 16.9 | ND | 15 6 | | | | | | | ND | 17.0 |
| Total TPH | | 103 8 | | ND | | | | | | | | ND | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 00:00 | | Nov-20-07 00.00 | | Nov-20-07 00:00 | | Nov-20-07 00 00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 12600 | 5.65 | 1130 | 5.21 | 42.5 | 5.00 | 42.5 | 5.00 | 234 | 5.00 | 7850 | 5.68 |



Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

### Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11.27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 293282-037 | | 293282-038 | | 293282-039 | | 293282-040 | | 293282-041 | | 293282-042 | |
| | *Field Id:* | BH-7 (5-7') | | BH-7 (10-12') | | BH-7 (15-17') | | BH-7 (20-22') | | BH-7 (25-27') | | BH-7 (30-32') | |
| | *Depth:* | 5-7 ft | | 10-12 ft | | 15-17 ft | | 20-22 ft | | 25-27 ft | | 30-32 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-15-07 09:31 | | Nov-15-07 09:37 | | Nov-15-07 09:47 | | Nov-15-07 09.53 | | Nov-15-07 10:02 | | Nov-15-07 10:10 | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-19-07 16:00 | | | | | | | | | | | |
| | *Units/RL:* | % | RL | | | | | | | | | | |
| Percent Moisture | | 5 47 | 1.00 | | | | | | | | | | |
| **TPH by SW8015 Mod** | *Extracted:* | Nov-20-07 14:13 | | | | | | | | | | | |
| | *Analyzed:* | Nov-26-07 04:45 | | | | | | | | | | | |
| | *Units/RL:* | mg/kg | RL | | | | | | | | | | |
| C6-C12 Gasoline Range Hydrocarbons | | ND | 15.9 | | | | | | | | | | |
| C12-C28 Diesel Range Hydrocarbons | | ND | 15 9 | | | | | | | | | | |
| C28-C35 Oil Range Hydrocarbons | | ND | 15.9 | | | | | | | | | | |
| Total TPH | | ND | | | | | | | | | | | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 00.00 | | Nov-20-07 00.00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | | Nov-20-07 00 00 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 5060 | 5.29 | 3400 | 5.00 | 213 | 5.00 | 42.5 | 5.00 | 42.5 | 5.00 | 42 5 | 5.00 |



Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

### Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11:27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 293282-043 | | 293282-044 | | 293282-045 | | 293282-046 | | 293282-047 | | 293282-048 | |
| | *Field Id:* | BH-8 (0-2') | | BH-8 (5-7') | | BH-8 (10-12') | | BH-8 (15-17') | | BH-8 (20-22') | | BH-8 (25-27') | |
| | *Depth:* | 0-2 ft | | 5-7 ft | | 10-12 ft | | 15-17 ft | | 20-22 ft | | 25-27 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-15-07 10:20 | | Nov-15-07 10:29 | | Nov-15-07 10:32 | | Nov-15-07 10.36 | | Nov-15-07 10:40 | | Nov-15-07 10:47 | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-19-07 16:00 | | Nov-19-07 16:00 | | | | | | | | | |
| | *Units/RL:* | % | RL | % | RL | | | | | | | | |
| Percent Moisture | | 12 6 | 1.00 | 1.91 | 1.00 | | | | | | | | |
| **TPH by SW8015 Mod** | *Extracted:* | Nov-20-07 14:13 | | Nov-20-07 14 13 | | | | | | | | | |
| | *Analyzed:* | Nov-26-07 05:11 | | Nov-26-07 05:36 | | | | | | | | | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | | | | | | | | |
| C6-C12 Gasoline Range Hydrocarbons | | ND | 17.2 | ND | 15.3 | | | | | | | | |
| C12-C28 Diesel Range Hydrocarbons | | 22.2 | 17.2 | ND | 15.3 | | | | | | | | |
| C28-C35 Oil Range Hydrocarbons | | ND | 17.2 | ND | 15.3 | | | | | | | | |
| Total TPH | | 22.2 | | ND | | | | | | | | | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 00.00 | | Nov-20-07 00 00 | | Nov-20-07 00:00 | | Nov-20-07 00.00 | | Nov-20-07 00:00 | | Nov-20-07 00.00 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 3770 | 5.72 | 304 | 5.10 | 85.1 | 5.00 | 85.1 | 5.00 | 63.8 | 5.00 | 106 | 5.00 |



Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

### Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11 27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| Analysis Requested | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 293282-049 | | 293282-050 | | 293282-051 | | 293282-052 | | 293282-053 | | 293282-054 | |
| | *Field Id:* | BH-9 (0-2') | | BH-9 (5-7') | | BH-9 (10-12') | | BH-9 (15-17') | | BH-9 (20-22') | | BH-10 (0-2') | |
| | *Depth:* | 0-2 ft | | 5-7 ft | | 10-12 ft | | 15-17 ft | | 20-22 ft | | 0-2 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-15-07 11:00 | | Nov-15-07 11.06 | | Nov-15-07 11:15 | | Nov-15-07 11:20 | | Nov-15-07 11:25 | | Nov-15-07 12 04 | |
| **BTEX by EPA 8021B** | *Extracted:* | Nov-28-07 12 27 | | Nov-28-07 13:51 | | | | | | | | | |
| | *Analyzed:* | Nov-29-07 15 33 | | Nov-28-07 20 24 | | | | | | | | | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | | | | | | | | |
| Benzene | | ND | 0 0012 | ND | 0.0010 | | | | | | | | |
| Toluene | | ND | 0 0023 | ND | 0.0021 | | | | | | | | |
| Ethylbenzene | | ND | 0 0012 | 0 0042 | 0 0010 | | | | | | | | |
| m,p-Xylenes | | ND | 0 0023 | 0.0058 | 0 0021 | | | | | | | | |
| o-Xylene | | ND | 0.0012 | 0 0191 | 0.0010 | | | | | | | | |
| Xylenes, Total | | ND | | 0.0249 | | | | | | | | | |
| Total BTEX | | ND | | 0.0291 | | | | | | | | | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-19-07 16:00 | | Nov-19-07 16:00 | | Nov-19-07 16 00 | | | | | | Nov-19-07 16:00 | |
| | *Units/RL:* | % | RL | % | RL | % | RL | | | | | % | RL |
| Percent Moisture | | 14.2 | 1 00 | 4.67 | 1.00 | 3.49 | 1 00 | | | | | 5 54 | 1.00 |
| **TPH by SW8015 Mod** | *Extracted:* | Nov-20-07 14.13 | | Nov-20-07 14 13 | | Nov-20-07 14 13 | | | | | | Nov-20-07 14.13 | |
| | *Analyzed:* | Nov-26-07 06:02 | | Nov-26-07 06:53 | | Nov-26-07 07:18 | | | | | | Nov-26-07 07:43 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | | mg/kg | RL |
| C6-C12 Gasoline Range Hydrocarbons | | 162 | 87 4 | 73.7 | 15 7 | ND | 15.5 | | | | | ND | 15 9 |
| C12-C28 Diesel Range Hydrocarbons | | 893 | 87 4 | 285 | 15 7 | ND | 15 5 | | | | | ND | 15 9 |
| C28-C35 Oil Range Hydrocarbons | | 185 | 87.4 | 31.4 | 15.7 | ND | 15.5 | | | | | ND | 15.9 |
| Total TPH | | 1240 | | 390.1 | | ND | | | | | | ND | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 00.00 | | Nov-20-07 00 00 | | Nov-20-07 00.00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 30000 | 5.83 | 2010 | 5.24 | 176 | 5.18 | 74.4 | 5.00 | 74.4 | 5.00 | 45.0 | 5.29 |



Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

### Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11:27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| *Analysis Requested* | *Lab Id:* | 293282-055 | | 293282-056 | | 293282-057 | | 293282-058 | | 293282-059 | | 293282-060 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Field Id:* | BH-10 (5-7') | | BH-10 (10-12') | | BH-10 (15-17') | | BH-11 (0-2') | | BH-11 (5-7') | | BH-11 (10-12') | |
| | *Depth:* | 5-7 ft | | 10-12 ft | | 15-17 ft | | 0-2 ft | | 5-7 ft | | 10-12 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-15-07 12.12 | | Nov-15-07 12.19 | | Nov-15-07 12:24 | | Nov-15-07 12.31 | | Nov-15-07 12.35 | | Nov-15-07 12 40 | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-19-07 16:00 | | | | | | Nov-19-07 16:00 | | Nov-19-07 16.00 | | | |
| | *Units/RL:* | % | RL | | | | | % | RL | % | RL | | |
| Percent Moisture | | 3 39 | 1.00 | | | | | 11 0 | 1.00 | 2 98 | 1.00 | | |
| **TPH by SW8015 Mod** | *Extracted:* | Nov-20-07 14:13 | | | | | | Nov-20-07 14 13 | | Nov-20-07 14 13 | | | |
| | *Analyzed:* | Nov-26-07 08:09 | | | | | | Nov-26-07 08.36 | | Nov-26-07 09:02 | | | |
| | *Units/RL:* | mg/kg | RL | | | | | mg/kg | RL | mg/kg | RL | | |
| C6-C12 Gasoline Range Hydrocarbons | | ND | 15.5 | | | | | ND | 16.8 | ND | 15.5 | | |
| C12-C28 Diesel Range Hydrocarbons | | ND | 15 5 | | | | | ND | 16 8 | ND | 15 5 | | |
| C28-C35 Oil Range Hydrocarbons | | ND | 15.5 | | | | | ND | 16.8 | ND | 15.5 | | |
| Total TPH | | ND | | | | | | ND | | ND | | | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 00 00 | | Nov-20-07 00:00 | | Nov-20-07 00 00 | | Nov-20-07 00.00 | | Nov-20-07 00.00 | | Nov-20-07 00.00 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 44.0 | 5.18 | 42.5 | 5.00 | 31.9 | 5.00 | 47.7 | 5 62 | 32 9 | 5 15 | 42.5 | 5.00 |



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# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

### Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co., NM

**Date Received in Lab:** Sat Nov-17-07 11:27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| *Analysis Requested* | *Lab Id:* | 293282-061 | | 293282-062 | | 293282-063 | | 293282-064 | | 293282-065 | | 293282-066 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Field Id:* | BH-11 (15-17') | | BH-12 (0-2') | | BH-12 (5-7') | | BH-12 (10-12') | | BH-12 (15-17') | | BH-13 (0-2') | |
| | *Depth:* | 15-17 ft | | 0-2 ft | | 5-7 ft | | 10-12 ft | | 15-17 ft | | 0-2 ft | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | | SOIL | |
| | *Sampled:* | Nov-15-07 12.46 | | Nov-15-07 12:56 | | Nov-15-07 13:00 | | Nov-15-07 13:10 | | Nov-15-07 13:14 | | Nov-15-07 13:18 | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | | | Nov-19-07 16:00 | | Nov-19-07 16:00 | | | | | | Nov-19-07 16:00 | |
| | *Units/RL:* | | | % | RL | % | RL | | | | | % | RL |
| Percent Moisture | | | | 5.44 | 1.00 | 6.92 | 1.00 | | | | | 3.52 | 1.00 |
| **TPH by SW8015 Mod** | *Extracted:* | | | Nov-20-07 14:13 | | Nov-20-07 14 13 | | | | | | Nov-20-07 14:13 | |
| | *Analyzed:* | | | Nov-26-07 09:30 | | Nov-26-07 09:58 | | | | | | Nov-26-07 10:29 | |
| | *Units/RL:* | | | mg/kg | RL | mg/kg | RL | | | | | mg/kg | RL |
| C6-C12 Gasoline Range Hydrocarbons | | | | ND | 15.9 | ND | 16 1 | | | | | ND | 15.5 |
| C12-C28 Diesel Range Hydrocarbons | | | | 48.9 | 15.9 | 32.7 | 16.1 | | | | | 38.5 | 15.5 |
| C28-C35 Oil Range Hydrocarbons | | | | ND | 15.9 | ND | 16.1 | | | | | ND | 15 5 |
| Total TPH | | | | 48.9 | | 32.7 | | | | | | 38.5 | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 00:00 | | Nov-20-07 00 00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | | Nov-20-07 00:00 | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL | mg/kg | RL |
| Chloride | | 31 9 | 5.00 | 33.7 | 5.29 | 45.7 | 5.37 | 63.8 | 5.00 | 42.5 | 5.00 | 33.1 | 5.18 |



Brent Barron
Odessa Laboratory Director

# Certificate of Analysis Summary 293282

## Ocotillo Environmental, LLC, Hobbs, NM

### Project Name: Chevron Lovington Deep State

**Project Id:** 1007-023B
**Contact:** Cindy Crain
**Project Location:** Sec. 5, T17S, R36E, Lea Co , NM

**Date Received in Lab:** Sat Nov-17-07 11:27 am
**Report Date:** 30-NOV-07
**Project Manager:** Brent Barron, II

| *Analysis Requested* | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Lab Id:* | 293282-067 | | 293282-068 | | 293282-069 | | | | | |
| | *Field Id:* | BH-13 (5-7') | | BH-13 (10-12') | | BH-13 (15-17') | | | | | |
| | *Depth:* | 5-7 ft | | 10-12 ft | | 15-17 ft | | | | | |
| | *Matrix:* | SOIL | | SOIL | | SOIL | | | | | |
| | *Sampled:* | Nov-15-07 13.22 | | Nov-15-07 13:28 | | Nov-15-07 13:35 | | | | | |
| **Percent Moisture** | *Extracted:* | | | | | | | | | | |
| | *Analyzed:* | Nov-19-07 16:00 | | | | | | | | | |
| | *Units/RL:* | % | RL | | | | | | | | |
| Percent Moisture | | 1.32 | 1 00 | | | | | | | | |
| **TPH by SW8015 Mod** | *Extracted:* | Nov-20-07 14:13 | | | | | | | | | |
| | *Analyzed:* | Nov-26-07 10.59 | | | | | | | | | |
| | *Units/RL:* | mg/kg | RL | | | | | | | | |
| C6-C12 Gasoline Range Hydrocarbons | | ND | 15 2 | | | | | | | | |
| C12-C28 Diesel Range Hydrocarbons | | ND | 15.2 | | | | | | | | |
| C28-C35 Oil Range Hydrocarbons | | ND | 15 2 | | | | | | | | |
| Total TPH | | ND | | | | | | | | | |
| **Total Chloride by EPA 325.3** | *Extracted:* | | | | | | | | | | |
| | *Analyzed:* | Nov-20-07 00:00 | | Nov-20-07 00.00 | | Nov-20-07 00.00 | | | | | |
| | *Units/RL:* | mg/kg | RL | mg/kg | RL | mg/kg | RL | | | | |
| Chloride | | 86 2 | 5.07 | 42.5 | 5.00 | 53.2 | 5.00 | | | | |



Brent Barron
Odessa Laboratory Director

# 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.

* Outside XENCO'S scope of NELAC Accreditation

# Form 2 - Surrogate Recoveries

## Project Name: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709436 **Sample:** 293282-009 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0325 | 0.0300 | 108 | 80-120 | |
| 4-Bromofluorobenzene | 0.0355 | 0.0300 | 118 | 80-120 | |

**Lab Batch #:** 709436 **Sample:** 293282-050 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0355 | 0.0300 | 118 | 80-120 | |
| 4-Bromofluorobenzene | 0.0327 | 0.0300 | 109 | 80-120 | |

**Lab Batch #:** 709436 **Sample:** 501986-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0329 | 0.0300 | 110 | 80-120 | |
| 4-Bromofluorobenzene | 0.0310 | 0.0300 | 103 | 80-120 | |

**Lab Batch #:** 709436 **Sample:** 501986-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0352 | 0.0300 | 117 | 80-120 | |
| 4-Bromofluorobenzene | 0.0291 | 0.0300 | 97 | 80-120 | |

**Lab Batch #:** 709436 **Sample:** 501986-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0327 | 0.0300 | 109 | 80-120 | |
| 4-Bromofluorobenzene | 0.0316 | 0.0300 | 105 | 80-120 | |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709491 **Sample:** 293282-001 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| BTEX by EPA 8021B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | 0.3434 | 0.0300 | 1145 | 80-120 | ** |
| 4-Bromofluorobenzene | 0.0383 | 0.0300 | 128 | 80-120 | ** |

**Lab Batch #:** 709491 **Sample:** 293282-008 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| BTEX by EPA 8021B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | 0.2682 | 0.0300 | 894 | 80-120 | ** |
| 4-Bromofluorobenzene | 0.0399 | 0.0300 | 133 | 80-120 | ** |

**Lab Batch #:** 709491 **Sample:** 293282-026 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| BTEX by EPA 8021B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | 0.0396 | 0.0300 | 132 | 80-120 | ** |
| 4-Bromofluorobenzene | 0.0664 | 0.0300 | 221 | 80-120 | ** |

**Lab Batch #:** 709491 **Sample:** 293282-049 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| BTEX by EPA 8021B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | 0.0356 | 0.0300 | 119 | 80-120 | |
| 4-Bromofluorobenzene | 0.0336 | 0.0300 | 112 | 80-120 | |

**Lab Batch #:** 709491 **Sample:** 502014-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| BTEX by EPA 8021B | SURROGATE RECOVERY STUDY | | | | |
|---|---|---|---|---|---|
| Analytes | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
| 1,4-Difluorobenzene | 0.0324 | 0.0300 | 108 | 80-120 | |
| 4-Bromofluorobenzene | 0.0413 | 0.0300 | 138 | 80-120 | * |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709491 **Sample:** 502014-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0350 | 0.0300 | 117 | 80-120 | |
| 4-Bromofluorobenzene | 0.0283 | 0.0300 | 94 | 80-120 | |

**Lab Batch #:** 709491 **Sample:** 502014-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| BTEX by EPA 8021B<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1,4-Difluorobenzene | 0.0326 | 0.0300 | 109 | 80-120 | |
| 4-Bromofluorobenzene | 0.0335 | 0.0300 | 112 | 80-120 | |

**Lab Batch #:** 709244 **Sample:** 293280-001 S / MS **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 119 | 100 | 119 | 70-135 | |
| o-Terphenyl | 53.8 | 50.0 | 108 | 70-135 | |

**Lab Batch #:** 709244 **Sample:** 293280-001 SD / MSD **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 116 | 100 | 116 | 70-135 | |
| o-Terphenyl | 55.2 | 50.0 | 110 | 70-135 | |

**Lab Batch #:** 709244 **Sample:** 293282-001 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 148 | 100 | 148 | 70-135 | ** |
| o-Terphenyl | 123 | 50.0 | 246 | 70-135 | ** |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709244 **Sample:** 293282-002 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 99.0 | 100 | 99 | 70-135 | |
| o-Terphenyl | 51.3 | 50.0 | 103 | 70-135 | |

**Lab Batch #:** 709244 **Sample:** 293282-003 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 125 | 100 | 125 | 70-135 | |
| o-Terphenyl | 64.8 | 50.0 | 130 | 70-135 | |

**Lab Batch #:** 709244 **Sample:** 293282-008 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 166 | 100 | 166 | 70-135 | ** |
| o-Terphenyl | 105 | 50.0 | 210 | 70-135 | ** |

**Lab Batch #:** 709244 **Sample:** 293282-009 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 101 | 100 | 101 | 70-135 | |
| o-Terphenyl | 51.5 | 50.0 | 103 | 70-135 | |

**Lab Batch #:** 709244 **Sample:** 293282-010 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 97.2 | 100 | 97 | 70-135 | |
| o-Terphenyl | 49.8 | 50.0 | 100 | 70-135 | |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709244 **Sample:** 293282-015 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 104 | 100 | 104 | 70-135 | |
| o-Terphenyl | 52.6 | 50.0 | 105 | 70-135 | |

**Lab Batch #:** 709244 **Sample:** 293282-016 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 103 | 100 | 103 | 70-135 | |
| o-Terphenyl | 52.2 | 50.0 | 104 | 70-135 | |

**Lab Batch #:** 709244 **Sample:** 293282-021 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 98.0 | 100 | 98 | 70-135 | |
| o-Terphenyl | 50.1 | 50.0 | 100 | 70-135 | |

**Lab Batch #:** 709244 **Sample:** 293282-022 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 96.6 | 100 | 97 | 70-135 | |
| o-Terphenyl | 47.6 | 50.0 | 95 | 70-135 | |

**Lab Batch #:** 709244 **Sample:** 501860-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 107 | 100 | 107 | 70-135 | |
| o-Terphenyl | 52.2 | 50.0 | 104 | 70-135 | |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709244 **Sample:** 501860-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 101 | 100 | 101 | 70-135 | |
| o-Terphenyl | 51.0 | 50.0 | 102 | 70-135 | |

**Lab Batch #:** 709244 **Sample:** 501860-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 113 | 100 | 113 | 70-135 | |
| o-Terphenyl | 49.8 | 50.0 | 100 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-026 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 159 | 100 | 159 | 70-135 | ** |
| o-Terphenyl | 114 | 50.0 | 228 | 70-135 | ** |

**Lab Batch #:** 709250 **Sample:** 293282-027 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 101 | 100 | 101 | 70-135 | |
| o-Terphenyl | 53.9 | 50.0 | 108 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-031 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 100 | 100 | 100 | 70-135 | |
| o-Terphenyl | 51.6 | 50.0 | 103 | 70-135 | |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709250 **Sample:** 293282-031 S / MS **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 99.2 | 100 | 99 | 70-135 | |
| o-Terphenyl | 48.1 | 50.0 | 96 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-031 SD / MSD **Batch:** 1 **Matrix:** Sludge

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 102 | 100 | 102 | 70-135 | |
| o-Terphenyl | 49.6 | 50.0 | 99 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-032 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 101 | 100 | 101 | 70-135 | |
| o-Terphenyl | 51.9 | 50.0 | 104 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-036 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 102 | 100 | 102 | 70-135 | |
| o-Terphenyl | 52.7 | 50.0 | 105 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-037 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 96.7 | 100 | 97 | 70-135 | |
| o-Terphenyl | 49.4 | 50.0 | 99 | 70-135 | |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709250 **Sample:** 293282-043 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 96.4 | 100 | 96 | 70-135 | |
| o-Terphenyl | 49.7 | 50.0 | 99 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-044 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 88.9 | 100 | 89 | 70-135 | |
| o-Terphenyl | 45.8 | 50.0 | 92 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-049 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 94.8 | 100 | 95 | 70-135 | |
| o-Terphenyl | 57.4 | 50.0 | 115 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-050 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 94.3 | 100 | 94 | 70-135 | |
| o-Terphenyl | 48.8 | 50.0 | 98 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-051 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 95.6 | 100 | 96 | 70-135 | |
| o-Terphenyl | 48.5 | 50.0 | 97 | 70-135 | |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709250 **Sample:** 293282-054 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 97.1 | 100 | 97 | 70-135 | |
| o-Terphenyl | 49.5 | 50.0 | 99 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-055 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 89.8 | 100 | 90 | 70-135 | |
| o-Terphenyl | 45.7 | 50.0 | 91 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-058 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 85.8 | 100 | 86 | 70-135 | |
| o-Terphenyl | 44.7 | 50.0 | 89 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-059 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 89.5 | 100 | 90 | 70-135 | |
| o-Terphenyl | 45.5 | 50.0 | 91 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-062 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 92.6 | 100 | 93 | 70-135 | |
| o-Terphenyl | 47.0 | 50.0 | 94 | 70-135 | |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709250 **Sample:** 293282-063 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 88.6 | 100 | 89 | 70-135 | |
| o-Terphenyl | 45.7 | 50.0 | 91 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-066 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 85.4 | 100 | 85 | 70-135 | |
| o-Terphenyl | 43.1 | 50.0 | 86 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 293282-067 / SMP **Batch:** 1 **Matrix:** Soil

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 82.5 | 100 | 83 | 70-135 | |
| o-Terphenyl | 40.6 | 50.0 | 81 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 501858-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 119 | 100 | 119 | 70-135 | |
| o-Terphenyl | 54.5 | 50.0 | 109 | 70-135 | |

**Lab Batch #:** 709250 **Sample:** 501858-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 103 | 100 | 103 | 70-135 | |
| o-Terphenyl | 53.2 | 50.0 | 106 | 70-135 | |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 709250 **Sample:** 501858-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH by SW8015 Mod<br>Analytes | SURROGATE RECOVERY STUDY<br>Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|
| 1-Chlorooctane | 106 | 100 | 106 | 70-135 | |
| o-Terphenyl | 51.7 | 50.0 | 103 | 70-135 | |

** 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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Lab Batch #:** 708892 **Sample:** 708892-1-BKS **Matrix:** Solid
**Date Analyzed:** 11/20/2007 **Date Prepared:** 11/20/2007 **Analyst:** IRO
**Reporting Units:** mg/kg **Batch #:** 1

**BLANK /BLANK SPIKE RECOVERY STUDY**

| Total Chloride by EPA 325.3 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| Chloride | ND | 100 | 93.6 | 94 | 75-125 | |

**Lab Batch #:** 708894 **Sample:** 708894-1-BKS **Matrix:** Solid
**Date Analyzed:** 11/20/2007 **Date Prepared:** 11/20/2007 **Analyst:** LATCOR
**Reporting Units:** mg/kg **Batch #:** 1

**BLANK /BLANK SPIKE RECOVERY STUDY**

| Total Chloride by EPA 325.3 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| Chloride | ND | 100 | 95.7 | 96 | 75-125 | |

**Lab Batch #:** 708897 **Sample:** 708897-1-BKS **Matrix:** Solid
**Date Analyzed:** 11/20/2007 **Date Prepared:** 11/20/2007 **Analyst:** LATCOR
**Reporting Units:** mg/kg **Batch #:** 1

**BLANK /BLANK SPIKE RECOVERY STUDY**

| Total Chloride by EPA 325.3 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| Chloride | ND | 100 | 93.6 | 94 | 75-125 | |

**Lab Batch #:** 708898 **Sample:** 708898-1-BKS **Matrix:** Solid
**Date Analyzed:** 11/20/2007 **Date Prepared:** 11/20/2007 **Analyst:** LATCOR
**Reporting Units:** mg/kg **Batch #:** 1

**BLANK /BLANK SPIKE RECOVERY STUDY**

| Total Chloride by EPA 325.3 Analytes | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|---|---|---|---|---|---|---|
| Chloride | ND | 100 | 93.6 | 94 | 75-125 | |

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

# BS / BSD Recoveries

## Project Name: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Analyst:** SHE **Date Prepared:** 11/28/2007 **Date Analyzed:** 11/28/2007

**Lab Batch ID:** 709436 **Sample:** 501986-1-BKS **Batch #:** 1 **Matrix:** Solid

**Units:** mg/kg

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| BTEX by EPA 8021B<br>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 | 0.1094 | 109 | 0.1 | 0.1088 | 109 | 1 | 70-130 | 35 | |
| Toluene | ND | 0.1000 | 0.1083 | 108 | 0.1 | 0.1090 | 109 | 1 | 70-130 | 35 | |
| Ethylbenzene | ND | 0.1000 | 0.1094 | 109 | 0.1 | 0.1125 | 113 | 3 | 71-129 | 35 | |
| m,p-Xylenes | ND | 0.2000 | 0.2144 | 107 | 0.2 | 0 2208 | 110 | 3 | 70-135 | 35 | |
| o-Xylene | ND | 0.1000 | 0.1084 | 108 | 0.1 | 0.1122 | 112 | 3 | 71-133 | 35 | |

**Analyst:** SHE **Date Prepared:** 11/28/2007 **Date Analyzed:** 11/29/2007

**Lab Batch ID:** 709491 **Sample:** 502014-1-BKS **Batch #:** 1 **Matrix:** Solid

**Units:** mg/kg

**BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY**

| BTEX by EPA 8021B<br>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 | 0.1039 | 104 | 0.1 | 0.1056 | 106 | 2 | 70-130 | 35 | |
| Toluene | ND | 0.1000 | 0.1056 | 106 | 0.1 | 0.1079 | 108 | 2 | 70-130 | 35 | |
| Ethylbenzene | ND | 0.1000 | 0.1165 | 117 | 0.1 | 0.1172 | 117 | 1 | 71-129 | 35 | |
| m,p-Xylenes | ND | 0.2000 | 0.2323 | 116 | 0.2 | 0.2312 | 116 | 0 | 70-135 | 35 | |
| o-Xylene | ND | 0.1000 | 0.1178 | 118 | 0.1 | 0.1166 | 117 | 1 | 71-133 | 35 | |

Relative Percent Difference RPD = 200*|(D-F)/(D+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: Chevron Lovington Deep State

**Work Order #:** 293282 **Project ID:** 1007-023B

**Analyst:** SHE **Date Prepared:** 11/20/2007 **Date Analyzed:** 11/26/2007

**Lab Batch ID:** 709250 **Sample:** 501858-1-BKS **Batch #:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH by SW8015 Mod<br>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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | | |
| C6-C12 Gasoline Range Hydrocarbons | ND | 1000 | 927 | 93 | 1000 | 950 | 95 | 2 | 70-135 | 35 | |
| C12-C28 Diesel Range Hydrocarbons | ND | 1000 | 876 | 88 | 1000 | 879 | 88 | 0 | 70-135 | 35 | |

**Analyst:** SHE **Date Prepared:** 11/20/2007 **Date Analyzed:** 11/25/2007

**Lab Batch ID:** 709244 **Sample:** 501860-1-BKS **Batch #:** 1 **Matrix:** Solid

**Units:** mg/kg

| TPH by SW8015 Mod<br>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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY | | | | | | | | | | | |
| C6-C12 Gasoline Range Hydrocarbons | ND | 1000 | 929 | 93 | 1000 | 911 | 91 | 2 | 70-135 | 35 | |
| C12-C28 Diesel Range Hydrocarbons | ND | 1000 | 814 | 81 | 1000 | 827 | 83 | 2 | 70-135 | 35 | |

Relative Percent Difference RPD = 200*|(D-F)/(D+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 / MSD Recoveries

## Project Name: Chevron Lovington Deep State

**Work Order # :** 293282 **Project ID:** 1007-023B

**Lab Batch ID:** 709244 **QC- Sample ID:** 293280-001 S **Batch #:** 1 **Matrix:** Soil

**Date Analyzed:** 11/25/2007 **Date Prepared:** 11/20/2007 **Analyst:** SHE

**Reporting Units:** mg/kg

| TPH by SW8015 Mod<br>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 |
| C6-C12 Gasoline Range Hydrocarbons | ND | 1110 | 1070 | 96 | 1110 | 1140 | 103 | 7 | 70-135 | 35 | |
| C12-C28 Diesel Range Hydrocarbons | ND | 1110 | 1010 | 91 | 1110 | 1080 | 97 | 6 | 70-135 | 35 | |

**Lab Batch ID:** 709250 **QC- Sample ID:** 293282-031 S **Batch #:** 1 **Matrix:** Soil

**Date Analyzed:** 11/26/2007 **Date Prepared:** 11/20/2007 **Analyst:** SHE

**Reporting Units:** mg/kg

| TPH by SW8015 Mod<br>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 |
| C6-C12 Gasoline Range Hydrocarbons | ND | 1130 | 1000 | 88 | 1130 | 1040 | 92 | 4 | 70-135 | 35 | |
| C12-C28 Diesel Range Hydrocarbons | 86.6 | 1130 | 949 | 76 | 1130 | 963 | 78 | 3 | 70-135 | 35 | |

**Lab Batch ID:** 708892 **QC- Sample ID:** 293280-017 S **Batch #:** 1 **Matrix:** Soil

**Date Analyzed:** 11/20/2007 **Date Prepared:** 11/20/2007 **Analyst:** IRO

**Reporting Units:** mg/kg

| Total Chloride by EPA 325.3<br>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 |
| Chloride | 128 | 1000 | 1060 | 93 | 1000 | 1110 | 98 | 5 | 75-125 | 30 | |

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

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 ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

# Form 3 - MS / MSD Recoveries

## Project Name: Chevron Lovington Deep State

**Work Order # :** 293282 **Project ID:** 1007-023B

**Lab Batch ID:** 708894 **QC- Sample ID:** 293282-016 S **Batch #:** 1 **Matrix:** Soil
**Date Analyzed:** 11/20/2007 **Date Prepared:** 11/20/2007 **Analyst:** LATCOR
**Reporting Units:** mg/kg

| Total Chloride by EPA 325.3 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 |
| Chloride | 6080 | 10600 | 16000 | 94 | 10600 | 15300 | 87 | 8 | 75-125 | 30 | |

**Lab Batch ID:** 708897 **QC- Sample ID:** 293282-037 S **Batch #:** 1 **Matrix:** Soil
**Date Analyzed:** 11/20/2007 **Date Prepared:** 11/20/2007 **Analyst:** LATCOR
**Reporting Units:** mg/kg

| Total Chloride by EPA 325.3 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 |
| Chloride | 5060 | 10600 | 16200 | 105 | 10600 | 15600 | 99 | 6 | 75-125 | 30 | |

**Lab Batch ID:** 708898 **QC- Sample ID:** 293282-059 S **Batch #:** 1 **Matrix:** Soil
**Date Analyzed:** 11/20/2007 **Date Prepared:** 11/20/2007 **Analyst:** LATCOR
**Reporting Units:** mg/kg

| Total Chloride by EPA 325.3 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 |
| Chloride | 32.9 | 1030 | 1040 | 98 | 1030 | 1060 | 100 | 2 | 75-125 | 30 | |

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

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 ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

# Sample Duplicate Recovery

## Project Name: Chevron Lovington Deep State

**Work Order #:** 293282

**Lab Batch #:** 708848 **Project ID:** 1007-023B

**Date Analyzed:** 11/19/2007 **Date Prepared:** 11/19/2007 **Analyst:** RBA

**QC- Sample ID:** 293280-022 D **Batch #:** 1 **Matrix:** Soil

**Reporting Units:** %

| Percent Moisture<br>Analyte | SAMPLE / SAMPLE DUPLICATE RECOVERY | | | | |
|---|---|---|---|---|---|
| | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Percent Moisture | 2.62 | 2.99 | 13 | 20 | |

**Lab Batch #:** 708850

**Date Analyzed:** 11/19/2007 **Date Prepared:** 11/19/2007 **Analyst:** RBA

**QC- Sample ID:** 293282-037 D **Batch #:** 1 **Matrix:** Soil

**Reporting Units:** %

| Percent Moisture<br>Analyte | SAMPLE / SAMPLE DUPLICATE RECOVERY | | | | |
|---|---|---|---|---|---|
| | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Percent Moisture | 5.47 | 5.79 | 6 | 20 | |

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

# Environmental Lab of Texas

*CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST*

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Cindy Crain
Company Name: Ocotillo Environmental, LLC
Company Address: PO Box 1816
City/State/Zip: Hobbs, NM 88241
Telephone No: (505) 441-7244 Fax No: (432) 272-0304
Sampler Signature: Cindy Crain e-mail: cindy.crain@gmail.com

Project Name: Chevron Lovington Deep State
Project #: 1007-023B
Project Loc: Sec 5, T17S, R36E, Lea Co. NM
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 293282

| LAB # (lab use only) | FIELD CODE | Beginning Depth | Ending Depth | Date Sampled | Time Sampled | Field Filtered | Total # of Containers | Preservation & # of Containers: Ice | HNO3 | HCl | H2SO4 | NaOH | Na2S2O3 | None | Other (Specify) | Matrix: Drinking Water | Sludge | Soil/Solid | Specify Other | Analyze For: TPH 418.1 / 8015M | TPH 1X 1005 | TX 1006 | Cations (Ca, Mg, Na, K) | Anions (Cl, SO4, Alkalinity) | SAR / ESP / CEC | Metals As Ag Ba Cd Cr Pb Hg Se (TCLP) | Volatiles | Semivolatiles | BTEX 8021B/5030 or BTEX 8260 | RCI | NORM | RUSH TAT (Pre-Schedule) 24, 48, 72 hrs | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 001 | BH-1 (0-2') | 0 | 2 | 11/14/07 | 0930 | | | | | | | | | | | | | | | X | | | | | | | | | X | | | | |
| 002 | " (5-7') | 5 | 7 | " | 0942 | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 003 | " (10-12') | 10 | 12 | " | 0950 | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 004 | " (15-17') | 15 | 17 | " | 0958 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 005 | " (20-22') | 20 | 22 | " | 1005 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 006 | " (25-27') | 25 | 27 | " | 1013 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 007 | " (30-32') | 30 | 32 | " | 1020 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 008 | BH-2 (0-2') | 0 | 2 | " | 1038 | | | | | | | | | | | | | | | X | | | | | | | | | X | | | | |
| 009 | " (5-7') | 5 | 7 | " | 1042 | | | | | | | | | | | | | | | X | | | | | | | | | X | | | | |
| 010 | " (10-12') | 10 | 12 | " | 1050 | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |

Special Instructions

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| Cindy Crain | 11/17/07 | 11:27 | | | |
| Relinquished by | Date | Time | Received by | Date | Time |
| Relinquished by | Date | Time | Received by ELOT: Jesse Garcia | Date: 11/17/07 | Time: 11:39 |

Laboratory Comments:
Sample Containers Intact? (Y) N
VOCs Free of Headspace? (Y) N
Labels on container(s)
Custody seals on container(s)
Custody seals on cooler(s)
Sample Hand Delivered by Sampler/Client Rep ? (Y) N
Sample Received by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt 4 °C

# Environmental Lab of Texas

**CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST**

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax: 432-563-1713

Project Manager: Cindy Crain
Company Name: Ocotillo Environmental, LLC
Company Address: PO Box 1616
City/State/Zip: Hobbs, NM 88241
Telephone No: (505) 441-7244 Fax No: (432) 272-0304
Sampler Signature: Cindy Crain e-mail: cindy.crain@gmail.com

Project Name: Chevron Lovington Deep State
Project #: 1007-023B
Project Loc.: Sec 5, T17S, R36E, Lea Co., NM
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #: 293282

| LAB # (lab use only) | FIELD CODE | Beginning Depth | Ending Depth | Date Sampled | Time Sampled | Field Filtered | Total # of Containers | Preservation & # of Containers: Ice | HNO3 | HCl | H2SO4 | NaOH | Na2S2O3 | None | Other (Specify) | Matrix: Drinking Water | GW = Groundwater | NP = Non-Potable | Specify Other | Analyze For: TPH 418.1 (8015B) | TPH TX 1005 | TPH TX 1005 | Cations (Ca, Mg, Na, K) | Anions (Cl, SO4, Alkalinity) | SAR / ESP / CEC | Metals: As Ag Ba Cd Cr Pb Hg Se | Volatiles | Semivolatiles | BTEX 8021B/5030 or BTEX 8260 | RCI | NORM | RUSH TAT (Pre-Schedule) 24, 48, 72 hrs | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 011 | BH-2 (15-17') | 15 | 17 | 11/14/07 | 1058 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 012 | " (20-22') | 20 | 22 | " | 1102 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 013 | " (25-27') | 25 | 27 | " | 1259 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 014 | " (30-32') | 30 | 32 | " | 1304 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 015 | BH-3 (0-2') | 0 | 2 | " | 1216 | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 016 | " (5-7') | 5 | 7 | " | 1221 | | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 017 | " (10-12') | 10 | 12 | " | 1223 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 018 | " (15-17') | 15 | 17 | " | 1231 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 019 | " (20-22') | 20 | 22 | " | 1236 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 020 | " (25-27') | 25 | 27 | " | 1246 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Special Instructions:**

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| Relinquished by: Cindy Crain | 11/17/07 | 1127 | Received by: | | |
| Relinquished by: | | | Received by: | | |
| Relinquished by: | | | Received by ELOT: | | |

**Laboratory Comments:**

| | | |
|---|---|---|
| Sample Containers Intact? | Y | N |
| VOCs Free of Headspace? | Y | N |
| Labels on container(s) | Y | N |
| Custody seals on container(s) | Y | N |
| Custody seals on cooler(s) | Y | N |
| Sample Hand Delivered by Sampler/Client Rep ? | Y | N |

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt: 4.0 °C

# Environmental Lab of Texas

*CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST*

12600 West I-20 East
Odessa, Texas 79765
Phone: 432-563-1800
Fax. 432-563-1713

Project Manager: Cindy Crain
Company Name: Ocotillo Environmental LLC
Company Address: PO Box 1816
City/State/Zip: Hobbs, NM 88241
Telephone No.: (505) 441-7244 Fax No: (432) 272-0304
Sampler Signature: Cindy Crain e-mail: cindy.crain@gmail.com

Project Name: Chevron Lovington Deep State
Project #.: 1007-023B
Project Loc: Sec 5, T17S, R36E Lea Co., NM
PO #.:
Report Format: Standard TRRP NPDES

(lab use only)
ORDER #: 293282

| LAB # (lab use only) | FIELD CODE | Beginning Depth | Ending Depth | Date Sampled | Time Sampled | Field Filtered | Total # of Containers | Preservation & # of Containers: Ice | HNO3 | HCl | H2SO4 | NaOH | Na2S2O3 | None | Other (Specify) | Matrix: DW=Drinking Water SL=Sludge GW=Groundwater S=Soil/Solid NP=Non-Potable Specify Other | Analyze For: TCLP / TOTAL: TPH 418.1 (8015M) | TPH TX 1005 | TPH TX 1006 | Cations (Ca Mg Na, K) | Anions (Cl SO4 Alkalinity) | SAR / ESP / CEC | Metals: As Ag Ba Cd Cr Pb Hg Se | Volatiles | Semivolatiles | BTEX (8021B/5030 or BTEX 8260) | RCI | N O R M | RUSH TAT (Pre-Scheduled) 24, 48, 72 hrs | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 021 | BH-4 (0-2') | 0 | 2 | 11/14/07 | 1310 | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 022 | " (5-7') | 5 | 7 | " | 1321 | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 023 | " (10-12') | 10 | 12 | " | 1323 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 024 | " (15-17') | 15 | 17 | " | 1325 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 025 | " (20-22') | 20 | 22 | " | 1331 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 026 | BH-5 (0-2') | 0 | 2 | " | 1342 | | | | | | | | | | | | X | | | | | | | | | X | | | | |
| 027 | " (5-7') | 5 | 7 | " | 1349 | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 028 | " (10-12') | 10 | 12 | " | 1401 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 029 | " (15-17') | 15 | 17 | " | 1407 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 030 | " (20-22') | 20 | 22 | " | 1411 | | | | | | | | | | | | | | | | | | | | | | | | | |

**Special Instructions**

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| Cindy Crain | 11/17/07 | 1127 | | | |
| Relinquished by | Date | Time | Received by | Date | Time |
| Relinquished by | Date | Time | Received by ELOT | Date | Time |

**Laboratory Comments:**
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered by Sample/Client Rep ? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 4.0 °C

# Environmental Lab of Texas

**CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST**

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Cindy Crain
Company Name: Ocotillo Environmental, LLC
Company Address: PO Box 1816
City/State/Zip: Hobbs NM 88241
Telephone No: (505) 441-7244 Fax No: (432) 272-0304
Sampler Signature: Cindy Crain e-mail: cindy.crain@gmail.com

Project Name: Chevron Lovington Deep State
Project #: 1007-023B
Project Loc.: Sec. 5, T17S R36E, Lea Co., NM
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 293282

| LAB # (lab use only) | FIELD CODE | Beginning Depth | Ending Depth | Date Sampled | Time Sampled | Field Filtered | Total # of Containers | Preservation & # of Containers: Ice | HNO3 | HCl | H2SO4 | NaOH | Na2S2O3 | None | Other (Specify) | Matrix: Dw=Drinking Water SL=Sludge | GW=Groundwater S=Soil/Solid | NP=Non-Potable Sp=Sp Other | Analyze For: TPH 418.1 | TPH 8015M | TPH TX 1005 | TPH TX 1006 | TCLP: Cations (Ca, Mg, Na, K) | TCLP: Anions (Cl, SO4, Alkalinity) | TCLP: SAR / ESP / CEC | TCLP: Metals: As Ag Ba Cd Cr Pb Hg Se | TCLP: Volatiles | TCLP: Semivolatiles | TOTAL: BTEX 8021B/5030 or BTEX 8260 | TOTAL: RCI | TOTAL: N O R M | RUSH TAT (Pre-Schedule) 24, 48, 72 hrs | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 031 | BH-6 (0-2') | 0 | 2 | 11/14/07 | 1428 | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 032 | " (5-7') | 5 | 7 | " | 1431 | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 033 | " (10-12') | 10 | 12 | " | 1440 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 034 | " (15-17') | 15 | 17 | " | 1444 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 035 | " (20-22') | 20 | 22 | " | 1450 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 036 | BH-7 (0-2') | 0 | 2 | 11/15/07 | 0925 | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 037 | " (5-7') | 5 | 7 | " | 0931 | | | | | | | | | | | | | | X | | | | | | | | | | | | | |
| 038 | " (10-12') | 10 | 12 | " | 0937 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 039 | " (15-17') | 15 | 17 | " | 0947 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 040 | " (20-22') | 20 | 22 | " | 0953 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions.

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| Cindy Crain | 11/17/07 | 1127 | | | |
| Relinquished by | Date | Time | Received by | Date | Time |
| Relinquished by | Date | Time | Received by ELOT | Date | Time |

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) Id on lid Y N
Custody seals on container(s) Y N
Custody seals on cooler(s) Y N
Sample Hand Delivered Y N
by Sampler/Client Rep ?
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt 4.0 °C

# Environmental Lab of Texas

**CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST**

12600 West I-20 East
Odessa, Texas 79765
Phone. 432-563-1800
Fax: 432-563-1713

Project Manager: Cindy Crain
Company Name: Ocotillo Environmental, LLC
Company Address: PO Box 1816
City/State/Zip: Hobbs, NM 88241
Telephone No: (505) 441-7244 Fax No: (432) 272-0304
Sampler Signature: Cindy Crain e-mail: cindy.crain@gmail.com

Project Name: Chevron Lovington Deep State
Project #: 1007-023B
Project Loc: Sec 5, T17S, R36E, Lea Co., NM
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only)
ORDER #. 293282

| LAB # (lab use only) | FIELD CODE | Beginning Depth | Ending Depth | Date Sampled | Time Sampled | Field Filtered | Total # of Containers | Preservation & # of Containers: Ice | HNO3 | HCl | H2SO4 | NaOH | Na2S2O3 | None | Other (Specify) | Matrix: DW=Drinking Water GW=Groundwater WW=Non-Potable SL=Sludge S=Soil/Solid Specify Other | Analyze For: TCLP/TOTAL: 8015M | TPH: 418.1 | TPH: TX 1005 | TX 1006 | Cations (Ca Mg Na K) | Anions (Cl SO4 Alkalinity) | SAR / ESP / CEC | Metals: As Ag Ba Cd Cr Pb Hg Se | Volatiles | Semivolatiles | BTEX 8021B/5030 or BTEX 8260 | RCI | N O R M. | RUSH TAT (Pre-Schedule) 24 48 72 hrs | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 041 | BH-7 (25-27') | 25 | 27 | 11/15/07 | 1002 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 042 | " (30-32') | 30 | 32 | " | 1010 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 043 | BH-8 (0-2') | 0 | 2 | " | 1020 | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| 044 | " (5-7') | 5 | 7 | " | 1029 | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| 045 | " (10-12') | 10 | 12 | " | 1032 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 046 | " (15-17') | 15 | 17 | " | 1036 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 047 | " (20-22') | 20 | 22 | " | 1040 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 048 | " (25-27') | 25 | 27 | " | 1047 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 049 | BH-9 (0-2') | 0 | 2 | " | 1100 | | | | | | | | | | | | X | | | | | | | | | | X | | | | |
| 050 | " (5-7') | 5 | 7 | " | 1106 | | | | | | | | | | | | X | | | | | | | | | | X | | | | |

Special Instructions:

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| Cindy Crain | 11/17/07 | 1127 | | | |
| Relinquished by | Date | Time | Received by | Date | Time |
| Relinquished by | Date | Time | Received by ELOT | Date | Time |

Laboratory Comments:
Sample Containers Intact? Y N
VOCs Free of Headspace? Y N
Labels on container(s) id. and Custody seals on container(s)? Y N
Custody seals on cooler(s)? Y N
Sample Hand Delivered by Sampler/Client Rep ? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt 4.0 °C

# nvironmental Lab of Texas

**CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST**

12600 West I-20 East
Odessa, Texas 79765

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

Project Manager: Cindy Crain
Company Name: Ocotillo Environmental, LLC
Company Address: PO Box 1816
City/State/Zip: Hobbs, NM 88241
Telephone No: (505) 441-7244 Fax No: (432) 272-0304
Sampler Signature: Cindy Crain e-mail: cindy.crain@gmail.com

Project Name: Chevron Lovington Deep State
Project #: 1007-023B
Project Loc: Sec. 5, T17S, R36E, Lea Co., NM
PO #:
Report Format: Standard TRRP NPDES

(lab use only)
ORDER #: 293282

| LAB # (lab use only) | FIELD CODE | Beginning Depth | Ending Depth | Date Sampled | Time Sampled | Field Filtered | Total # of Containers | Preservation & # of Containers: Ice | HNO3 | HCl | H2SO4 | NaOH | Na2S2O3 | None | Other (Specify) | Matrix: GW=Drinking Water GW=Groundwater WW=Non Potable SL=Sludge S=Soil/Solid Specify Other | Analyze For: 8015M | TPH 418.1 | TPH TX 1005 | Cations (Ca, Mg, Na, K) | Anions (Cl, SO4, Alkalinity) | SAR / ESP / CEC | Metals: As Ag Ba Cd Cr Pb Hg Se | Volatiles | Semivolatiles | BTEX 8021B/5030 or BTEX 8260 | RCI | NORM | RUSH TAT (Pre-Schedule) 24, 48, 72 hrs | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52 | BH-9 (10-12') | 10 | 12 | 11/15/07 | 1115 | | | | | | | | | | | | | X | | | | | | | | | | | | |
| 53 | " (15-17') | 15 | 17 | " | 1120 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 54 | " (20-22') | 20 | 22 | " | 1125 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55 | BH-10 (0-2') | 0 | 2 | " | 1204 | | | | | | | | | | | | | X | | | | | | | | | | | | |
| 56 | " (5-7') | 5 | 7 | " | 1212 | | | | | | | | | | | | | X | | | | | | | | | | | | |
| 57 | " (10-12') | 10 | 12 | " | 1219 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 58 | " (15-17') | 15 | 17 | " | 1224 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 59 | BH-11 (0-2') | 0 | 2 | " | 1231 | | | | | | | | | | | | | X | | | | | | | | | | | | |
| 60 | " (5-7') | 5 | 7 | " | 1235 | | | | | | | | | | | | | X | | | | | | | | | | | | |
| | " (10-12') | 10 | 12 | " | 1240 | | | | | | | | | | | | | | | | | | | | | | | | | |

Special Instructions.

| | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| Relinquished by: Cindy Crain | 11/17/07 | 1127 | | | |
| Relinquished by: | | | Received by | | |
| Relinquished by | | | Received by ELOT | | |

Laboratory Comments.
Sample Containers Intact? (Y) N
VOCs Free of Headspace? (Y) N
Labels on container(s) (Y) N
Custody seals on container(s) Y N (N/A)
Custody seals on cooler(s) Y N (N/A)
Sample Hand Delivered (Y) N
by Sample/Client Rep ? Y N
by Courier? UPS DHL FedEx Lone Star
Temperature Upon Receipt: 4.0 °C

# Environmental Lab of Texas

**CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST**

12600 West I-20 East
Odessa, Texas 79765
Phone. 432-563-1800
Fax 432-563-1713

Project Manager: Cindy Crain
Company Name: Ocotillo Environmental, LLC
Company Address: PO Box 1818
City/State/Zip: Hobbs NM 88241
Telephone No: (505) 441-7244 Fax No: (432) 272-0304
Sampler Signature: Cindy Crain e-mail: cindy.crain@gmail.com

Project Name: Chevron Lovington Deep State
Project #: 1007-023B
Project Loc: Sec 5, T17S, R36E Lea Co., NM
PO #:
Report Format: [X] Standard [ ] TRRP [ ] NPDES

(lab use only) ORDER #: 293282

| LAB # (lab use only) | FIELD CODE | Beginning Depth | Ending Depth | Date Sampled | Time Sampled | Field Filtered | Total # of Containers: 4 glass | Preservation & # of Containers: Ice | HNO3 | HCl | H2SO4 | NaOH | Na2S2O3 | None | Other (Specify) | Matrix: DW=Drinking Water SL=Sludge | GW = Groundwater S=Soil/Solid | NP=Non-Potable Specify Other | Analyze For: TCLP: 8015M | TOTAL: TPH 418.1 | TPH TX 1005 | Cations (Ca, Mg, Na, K) | Anions (Cl, SO4 Alkalinity) | SAR / ESP / CEC | Metals: As Ag Ba Cd Cr Pb Hg Se | Volatiles | Semivolatiles | BTEX 8021B/5030 or BTEX 8260 | RCI | N.O.R.M | RUSH TAT (Pre-Schedule) 24, 48, 72 hrs | Standard TAT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 061 | BH-11 (15-17') | 15 | 17 | 11/16/07 | 1246 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 062 | BH-12 (0-2') | 0 | 2 | " | 1256 | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| 063 | " (5-7') | 5 | 7 | " | 1300 | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| 064 | " (10-12') | 10 | 12 | " | 1310 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 065 | " (15-17') | 15 | 17 | " | 1314 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 066 | BH-13 (0-2') | 0 | 2 | " | 1318 | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| 067 | " (5-7') | 5 | 7 | " | 1322 | | | | | | | | | | | | | | X | | | | | | | | | | | | |
| 068 | " (10-12') | 10 | 12 | " | 1328 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 069 | " (15-17') | 15 | 17 | " | 1335 | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Special Instructions:**

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| Cindy Crain | 11/17/07 | 1127 | | | |
| Relinquished by | Date | Time | Received by | Date | Time |
| Relinquished by | Date | Time | Received by ELOT | Date | Time |

**Laboratory Comments:**

| | | |
|---|---|---|
| Sample Containers Intact? | Y | N |
| VOCs Free of Headspace? | Y | N |
| Labels on container(s) | Y | N |
| Custody seals on container(s) | Y | N |
| Custody seals on cooler(s) | Y | N |
| Sample Hand Delivered by Sampler/Client Rep ? | Y | N |

by Courier? UPS DHL FedEx Lone Star

Temperature Upon Receipt 4.0°C

# Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Ocotillo

Date/ Time: 11-17-07 @ 1127

Lab ID #: 293282

Initials: JMF

## Sample Receipt Checklist

| | | | | | Client Initials |
|---|---|---|---|---|---|
| #1 | Temperature of container/ cooler? | (Yes) | No | 4.0 °C | |
| #2 | Shipping container in good condition? | (Yes) | No | | |
| #3 | Custody Seals intact on shipping container/ cooler? | Yes | No | (Not Present) | |
| #4 | Custody Seals intact on sample bottles/ container? | Yes | No | (Not Present) | |
| #5 | Chain of Custody present? | (Yes) | No | | |
| #6 | Sample instructions complete of Chain of Custody? | (Yes) | No | | |
| #7 | Chain of Custody signed when relinquished/ received? | (Yes) | No | | |
| #8 | Chain of Custody agrees with sample label(s)? | Yes | No | (ID written on Cont / Lid) | |
| #9 | Container label(s) legible and intact? | Yes | No | (Not Applicable) | |
| #10 | Sample matrix/ properties agree with Chain of Custody? | (Yes) | No | | |
| #11 | Containers supplied by ELOT? | (Yes) | No | | |
| #12 | Samples in proper container/ bottle? | (Yes) | No | See Below | |
| #13 | Samples properly preserved? | (Yes) | No | See Below | |
| #14 | Sample bottles intact? | (Yes) | No | | |
| #15 | Preservations documented on Chain of Custody? | (Yes) | No | | |
| #16 | Containers documented on Chain of Custody? | (Yes) | No | | |
| #17 | Sufficient sample amount for indicated test(s)? | (Yes) | No | See Below | |
| #18 | All samples received within sufficient hold time? | (Yes) | No | See Below | |
| #19 | Subcontract of sample(s)? | Yes | No | (Not Applicable) | |
| #20 | VOC samples have zero headspace? | (Yes) | 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

# C141 DOCUMENTATION

District I
625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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

# Release Notification and Corrective Action

## OPERATOR

X Initial Report  Final Report

| | |
|---|---|
| Name of Company Chevron Midcontinent LP | Contact Larry Ridenour |
| Address HCR 60 Box 423 Lovington, N.M. 88260 | Telephone No. 505-396-4414 X 102 |
| Facility Name Lovington Deep State | Facility Type Water transfer line |

| | | |
|---|---|---|
| Surface Owner State | Mineral Owner State of NM | Lease No. B-4704 |

## LOCATION OF RELEASE

| Unit Letter | Section | Township | Range | Feet from the | | Feet from the | | County |
|---|---|---|---|---|---|---|---|---|
| M | 5 | 17S | 36E | 1305 | South Line | 115 | East Line | Lea |

Latitude N 32 deg 51 min 47.53 sec  Longitude W 103 deg 23 min 8.11 sec

## NATURE OF RELEASE

API #3002531451

| | | |
|---|---|---|
| Type of Release Produced water with some oil | Volume of Release 20 BW - 2BO | Volume Recovered 13 BW – 1 BO |
| Source of Release water transfer line | Date and Hour of Occurrence 10/2/07 ?? | Date and Hour of Discovery 10/2/07 9:00 am |
| Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required | If YES, To Whom? Maxey Brown | |
| By Whom? Larry Ridenour | Date and Hour 10/2/2007 4:30 P.M. | |
| Was a Watercourse Reached? ☐ Yes ☒ No | If YES, Volume Impacting the Watercourse. | |

If a Watercourse was Impacted, Describe Fully.*

OCT 2007 Received Hobbs OCD

Describe Cause of Problem and Remedial Action Taken.*
The location and API # given are for West Lovington Unit #86 which is the nearest well. The GPS coordinates are for the actual location of the spill. The spill is located approximately 2/10 mile north of WLU 86. The leak was from a water transfer line that conducts fluid from the Lovington Deep State tank battery to the West Lovington Unit injection station.

Chlorides 35,000

Describe Area Affected and Cleanup Action Taken.*
Fluid soaked in ground. 60' x 60' area around spill and then 8' x 150' area and 8' x 50' area where fluid traveled down ruts in road. Standing fluid was picked up with a vacuum truck. Area fenced to keep cattle out. Turned site over to Ocotillo Environmental for remediation. They performed emergency one call and have removed top approximately one foot of soil. They will do a survey of the contamination and submit a plan to the OCD for approval.

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

| | |
|---|---|
| Signature: Larry D Ridenour | OIL CONSERVATION DIVISION |
| Printed Name: Larry Ridenour | Approved by District Supervisor: ENVIRONMENTAL ENGINEER |
| Title: Operations Representative | Approval Date: 10.9.07  Expiration Date: 12.10.07 |
| E-mail AddressLRidenour@chevron.com | Conditions of Approval: SUBMIT PLAN OR FINAL BY  Attached ☐ |
| Date: 10/4/07  Phone: 396-4414 X 102 | |

RP# 1662