

District I  
1625 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  
Department  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.  
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

**Pit, Closed-Loop System, Below-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application**

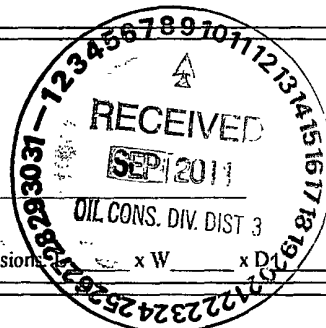
- Type of action: ☐ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☒ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method  
☐ Modification to an existing permit  
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

**Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request**

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1. Operator: Chevron Midcontinent, L.P. OGRID #: 241333  
Address: Post Office Box 36366 Houston, TX 77236  
Facility or well name: Redfern #1  
API Number: 30-045-29035 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr K Section 14 Township 29N Range 13W County: San Juan  
Center of Proposed Design: Latitude 36 723047° Longitude -108 179558° NAD: ☐ 1927 ☐ 1983  
Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2. ☐ **Pit:** Subsection F or G of 19.15.17.11 NMAC  
Temporary: ☐ Drilling ☐ Workover  
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
☐ String-Reinforced  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions: \_\_\_\_\_ x W \_\_\_\_\_ x D \_\_\_\_\_



3. ☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other \_\_\_\_\_  
☐ Lined ☐ Unlined Liner type: Thickness \_\_\_\_\_ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_  
Liner Seams: ☐ Welded ☐ Factory ☐ Other \_\_\_\_\_

4. ☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC  
Volume: 95 bbl Type of fluid: Produced Water  
Tank Construction material: Steel  
☒ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off  
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other \_\_\_\_\_  
Liner type: Thickness \_\_\_\_\_ mil ☐ HDPE ☐ PVC ☐ Other \_\_\_\_\_

5. ☐ **Alternative Method:**  
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

6.  
**Fencing:** Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☐ Alternate. Please specify \_\_\_\_\_

7.  
**Netting:** Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

☐ Screen ☐ Netting ☐ Other \_\_\_\_\_

☐ Monthly inspections (If netting or screening is not physically feasible)

8.  
**Signs:** Subsection C of 19.15.17.11 NMAC

☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☒ Signed in compliance with 19.15.3.103 NMAC

9.  
**Administrative Approvals and Exceptions:**  
Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.  
*Please check a box if one or more of the following is requested, if not leave blank:*

☐ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval.

☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.  
**Siting Criteria (regarding permitting):** 19.15.17.10 NMAC  
*Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.*

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. ( <i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i> ) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. ( <i>Applies to permanent pits</i> ) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> No

11.

**Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_ or Permit Number: \_\_\_\_\_

12.

**Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
- ☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

☐ Previously Approved Design (attach copy of design) API Number: \_\_\_\_\_

☐ Previously Approved Operating and Maintenance Plan API Number: \_\_\_\_\_ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13.

**Permanent Pits Permit Application Checklist:** Subsection B of 19.15.17.9 NMAC*Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- ☐ Climatological Factors Assessment
- ☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Quality Control/Quality Assurance Construction and Installation Plan
- ☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
- ☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
- ☐ Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.

**Proposed Closure:** 19.15.17.13 NMAC*Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.*

Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☐ Below-grade Tank ☐ Closed-loop System

☐ Alternative

Proposed Closure Method: ☐ Waste Excavation and Removal

☐ Waste Removal (Closed-loop systems only)

☐ On-site Closure Method (Only for temporary pits and closed-loop systems)

☐ In-place Burial ☐ On-site Trench Burial

☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.

**Waste Excavation and Removal Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection II of 19.15.17.13 NMAC
- ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16. **Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)  
*Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.*

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_  
Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?  
☐ Yes (If yes, please provide the information below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*

- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17. **Siting Criteria (regarding on-site closure methods only):** 19.15.17.10 NMAC

*Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.*

Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> No

18. **On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC  
☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC  
☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC  
☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC  
☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)  
☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC  
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC  
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.  
**Operator Application Certification:**  
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Jonathan D. Kelly Title: 9/12/2011

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

e-mail address: \_\_\_\_\_ Telephone: \_\_\_\_\_

20.  
**OCD Approval:** ☐ Permit Application (including closure plan) ☒ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: Jonathan D. Kelly Approval Date: 9/12/2011

Title: Compliance Officer OCD Permit Number: \_\_\_\_\_

21.  
**Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC  
*Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.*

☒ Closure Completion Date: July 12, 2011

22.  
**Closure Method:**  
☒ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)  
☐ If different from approved plan, please explain.

23.  
**Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**  
*Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.*

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Disposal Facility Name: \_\_\_\_\_ Disposal Facility Permit Number: \_\_\_\_\_

Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations?  
☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

*Required for impacted areas which will not be used for future service and operations:*  
☐ Site Reclamation (Photo Documentation)  
☐ Soil Backfilling and Cover Installation  
☐ Re-vegetation Application Rates and Seeding Technique

24.  
**Closure Report Attachment Checklist:** *Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.*

☒ Proof of Closure Notice (surface owner and division) **See Attached**  
☐ Proof of Deed Notice (required for on-site closure) **Not Required**  
☐ Plot Plan (for on-site closures and temporary pits) **Not Required**  
☒ Confirmation Sampling Analytical Results (if applicable) **See Attached**  
☐ Waste Material Sampling Analytical Results (required for on-site closure) **Not Required**  
☐ Disposal Facility Name and Permit Number **No disposal of material/not a closed loop system**  
☒ Soil Backfilling and Cover Installation **See Attached**  
☒ Re-vegetation Application Rates and Seeding Technique Pursuant to the BLM MOU and Approved Closure Plan  
☒ Site Reclamation (Photo Documentation) **See Attached**  
On-site Closure Location: Latitude 36°44.34082' Longitude -107°10.77348' NAD: ☐ 1927 ☒ 1983

25.  
**Operator Closure Certification:**  
I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Ms Laura Clenney Title: Facilities Engineer

Signature: [Signature] Date: 8/24/11

e-mail address: laura.clenney@chevron.com Telephone: (281) 881-0322



September 9, 2011

Project Number 92270-0771

Mr. Brandon Powell  
New Mexico Oil Conservation Division  
1000 Rio Brazos Rd.  
Aztec, NM 87410

Phone (505) 334-6178

**RE: BELOW-GRADE TANK CLOSURE DOCUMENTATION FOR THE REDFERN #1 WELL  
SITE, SAN JUAN COUNTY, NEW MEXICO**

Dear Mr. Powell:

On behalf of Chevron, North America, please find enclosed the Below Grade Tank (BGT) Closure Plan, Form C-141, Form C-144 and required documents BGT closure activities conducted at the Redfern #1 well site located in Section 14, Township 29 North, Range 13 West, San Juan County, New Mexico.

This report details results at or below the regulatory limits for all constituents analyzed, confirming a release had not occurred; see attached *Analytical Results*. Envirotech, Inc. recommends no further action in regards to this incident.

We appreciate the opportunity to be of service. If you have any questions, or require any additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,  
**ENVIROTECH, INC.**

  
Toni McKnight, EIT  
Environmental Project Manager  
[tmcknight@envirotech-inc.com](mailto:tmcknight@envirotech-inc.com)

Enclosures: Below Grade Tank Closure Plan  
Form C-141  
Form C-144 and required documents

Email Cc: Laura Clenney – Chevron NA  
Don Lindsey – Chevron NA





## **BELOW GRADE TANK (BGT) CLOSURE PLAN**

**SITE NAME:**

**REDFERN #1 WELL SITE  
UNIT LETTER K, SECTION 14, TOWNSHIP 29N, RANGE 13W  
SAN JUAN COUNTY, NEW MEXICO  
LATITUDE: N36.723047° LONGITUDE: W108.179558°**

**SUBMITTED TO:**

**MR. BRANDON POWELL  
NEW MEXICO OIL CONSERVATION DIVISION  
1000 RIO BRAZOS ROAD  
AZTEC, NEW MEXICO 87410  
(505) 334-6178 EXT 15**

**SUBMITTED BY:**

**MR. RODNEY BAILEY  
CHEVRON NORTH AMERICA  
P.O. Box 370  
AZTEC, NEW MEXICO 87410  
(432) 687-7123**

**MARCH 2010**

**BELOW GRADE TANK (BGT) CLOSURE PLAN  
CHEVRON NORTH AMERICA  
REDFERN #1 WELL SITE  
SAN JUAN COUNTY, NEW MEXICO**

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## **INTRODUCTION**

Chevron North America would like to submit a closure plan for the below grade tank (BGT) at the Redfern #1 Well Site located in the NE ¼ SW ¼ of Section 14, Township 29N, Range 13W, San Juan County, New Mexico. This closure plan has been prepared in conformance with New Mexico Oil Conservation Division (NMOCD) procedures.

## **SCOPE OF CLOSURE ACTIVITIES**

The purpose of this closure plan is to provide the details of activities involved in the closure of the BGT at the Redfern #1 Well Site. The following scope of closure activities has been designed to meet this objective:

- 1) Chevron North America shall submit a closure plan to the division's environmental bureau. Upon receipt of this plan the division shall review the current closure plan for adequacy and accordance with 19.15.17.9 Subsection C NMAC and 19.15.17.13 NMAC.
  - a. **Closure Plan was submitted on March 1, 2010, to the division's environmental bureau, in accordance with 19.15.17.9 Subsection C NMAC and 19.15.17.13 NMAC.**
- 2) No less than 72 hours and no greater than one (1) week prior to BGT removal Chevron North America will provide written notification to the appropriate division district office, as in accordance with 19.15.17.13 Subsection J Paragraph (2) NMAC.
  - a. **Please find attached the written notification to the district office sent on June 28, 2011.**
- 3) Chevron North America shall provide written notification to the surface owner no later than 24 hours prior to BGT removal. BLM will receive notification per a Sundry Notice, as in accordance with 19.15.17.13 Subsection J Paragraph (1) NMAC.
  - a. **Chevron North America is the landowner for this well site; therefore, no notification was required.**
- 4) Chevron North America or a contractor acting on behalf of Chevron will remove all liquids, and/or sludge, if applicable, prior to closure. Material will be disposed of at Envirotech's Landfarm, Permit # NM-01-0011, as in accordance with 19.15.17.13 Subsection E Paragraph (1) NMAC.
  - a. **All waste material was removed from the BGT by Riley Services and transported to Envirotech's NMOCD approved Landfarm #2 as listed above; see attached Bill of Lading.**
- 5) Chevron North America or a contractor acting on behalf of Chevron will remove the BGT and all on-site equipment associated with this BGT that cannot or will not be reused on-site, as in accordance with 19.15.17.13 Subsection E Paragraphs (2) and (3) NMAC.
  - a. **Chevron has removed the BGT and associated equipment that will not be reused on-site; see attached Site Photography.**

- 6) Once the BGT is removed a five (5) - point composite sample will be collected from directly below the tank or below the leak detection system if present. An additional discrete sample will be collected from any area that is wet, discolored, or showing other evidence of a release. All samples being collected will be analyzed for benzene and total BTEX via USEPA Method 8021, TPH via USEPA Method 418.1, and chlorides via USEPA 300.1, as in accordance with 19.15.17.13 Subsection E Paragraph (4) NMAC.

Sample ID	TPH (418.1)	Benzene	BTEX	Total Chlorides
5pt Composite	16 ppm	<0.0009 ppm	0.0144 ppm	250 ppm

- 7) Depending on soil sample results the area will be either backfilled or the area will be excavated.
- a. If soil samples pass the regulatory standards of 0.2 ppm benzene, 50 ppm BTEX, 100 ppm TPH, and 250 ppm or background concentration of chlorides, as in accordance with 19.15.17.13 Subsection E Paragraph (4) NMAC.
    - i. Chevron North America or a contractor acting on behalf of Chevron will backfill the excavation or impacted area with non-waste containing, earthen material, in accordance with 19.15.17.13 Subsection E Paragraph (6) NMAC.
      1. **BGT pit was backfilled with clean earthen material in accordance with 19.15.17.13 Subsection E Paragraph (6) NMAC.**
    - ii. Upon decommissioning of the well site Chevron North America or a contractor acting on behalf of Chevron will construct a divison-prescribed soil cover, substantially restore, recontour and re-vegetate the site, in accordance with 19.15.17.13 Subsections G, H, and I NMAC.
      1. **Well site is still in use – re-vegetation will occur upon the decommissioning of the well site.**
  - b. If soil samples exceed the regulatory standards stated above.
    - i. Chevron North America will submit a Release Notification by Form C-141 to the appropriate division district office, in accordance with 19.15.17.13 Subsection E Paragraph (4) NMAC.
    - ii. Activities beyond this point will be in accordance with 19.15.3.116 NMAC and 19.15.11.19 NMAC.
      1. **Samples collected returned results at or below the regulatory standards stated above, indicating that a release has not occurred at this site.**

## **REPORTING**

Reporting will occur within 60 days following the BGT closure and will consist of a form C-144 with all supporting data, and a form C-141 with all supporting data, if necessary. The supporting data will include analytical results, a site diagram, and other information related to the onsite activities.

We appreciate the opportunity to be of service. If you have any questions or require further information, please do not hesitate to contact our office at (505) 632-0615.

Respectfully Submitted:  
**Chevron North America**

---

Rodney Bailey  
Chevron North America  
Exploration & Production Company

District I  
1625 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**

☐ Initial Report ☒ Final Report

Name of Company: Chevron Midcontinent, L.P.	Contact: Ms. Laura Clenney
Address: Post Office Box 36366, Houston, TX 77236	Telephone No. (281) 881-0322
Facility Name: Redfern #1	Facility Type: Gas Well

Surface Owner: Private	Mineral Owner:	Lease No.: N/A
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**LOCATION OF RELEASE**

Unit Letter K	Section 14	Township 29N	Range 13W	Feet from the 1688	North/South Line South	Feet from the 1848	East/West Line West	County San Juan
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Latitude 36 723047° Longitude -108.179558°

**NATURE OF RELEASE**

Type of Release: Produced Water	Volume of Release: No Release	Volume Recovered: Not Applicable
Source of Release: Below Grade Tank	Date and Hour of Occurrence: Not Applicable	Date and Hour of Discovery: Not Applicable
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*  
No Release

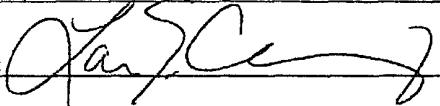
**Describe Cause of Problem and Remedial Action Taken.\***

Produced water from gas well at the above mentioned location formerly discharged into a Below Grade Tank (BGT) on location. The Below Grade Tank was removed on July 12, 2011. Soil sampling from directly beneath the tank in accordance with Subsection E of 19.15.17.13 NMAC performed on July 12, 2011, indicated that a release has not occurred.

**Describe Area Affected and Cleanup Action Taken.\***

A five (5) point composite sample was collected from directly beneath the former BGT immediately once it was removed. The sample was analyzed in the field for total petroleum hydrocarbons (TPH) using USEPA Method 418.1, and in Envirotech's Analytical Laboratory for benzene and total BTEX using USEPA Method 8021 and for total chlorides using USEPA Method 4500B. The sample returned results at or below the 'Pit Rule' standards of 100 mg/kg TPH, 0.2 mg/kg benzene, 50 mg/kg total BTEX and 250 mg/kg total chlorides, confirming that a release had not occurred. Analytical results are attached for your reference.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC 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 NMOC 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, NMOC 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: 		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Laura Clenney		Approved by District Supervisor:	
Title: Facilities Engineer		Approval Date:	Expiration Date:
E-mail Address: laura.clenney@chevron.com		Conditions of Approval:	
Date: <u>8/24/11</u> Phone: 281-881-0322		Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary

## **Toni McKnight**

---

**From:** Clenney, Laura E [Laura.Clenney@chevron.com]  
**Sent:** Tuesday, June 28, 2011 1:47 PM  
**To:** Powell, Brandon, EMNRD  
**Cc:** Lindsey, Don (LLIN); Toni McKnight; Reneau, Mark [Cenergy]  
**Subject:** OCD Notification: Chevron Redfern #1 , Below Ground Tank Removal Planned Starting 7/5

Brandon,

I am sending this note to satisfy our OCD notification requirement, regarding our planned removal beginning 7/5, of a Below Ground Pit Tank at this location. The pit tank will be removed and replaced with a buried double wall tank. The tank is being replaced in order to meet NMOCD regulations, because it was identified as a single wall below grade tank.

We will have Envirotech on site next week during the removal for sampling & remediation identification (if needed), and data gathering for the Final Report.

Location specifics:  
Redfern #1  
API 30-045-29035  
Section 14, T29N, R13W  
San Juan County, NM

Please let me know if you have any questions.

Thanks,

**Laura Clenney**

Facilities Engineer  
Chevron North America Exploration and Production  
MidContinent/Alaska Business Unit  
332 ROAD 3100  
Aztec, NM 87410  
Cell: 281.881.0322



# Bill of Lading

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

MANIFEST # 39051

DATE 7-11-11 JOB# 9227C-0806

[illegible]

"I certify the material hauled from the above location has not been added to or mixed with, and is the same material received from the above mentioned Generator, and that no additional materials have been added."

TRANSPORTER CO. Riley Ind. NAME IGNACIO TOCEDO SIGNATURE [Signature]

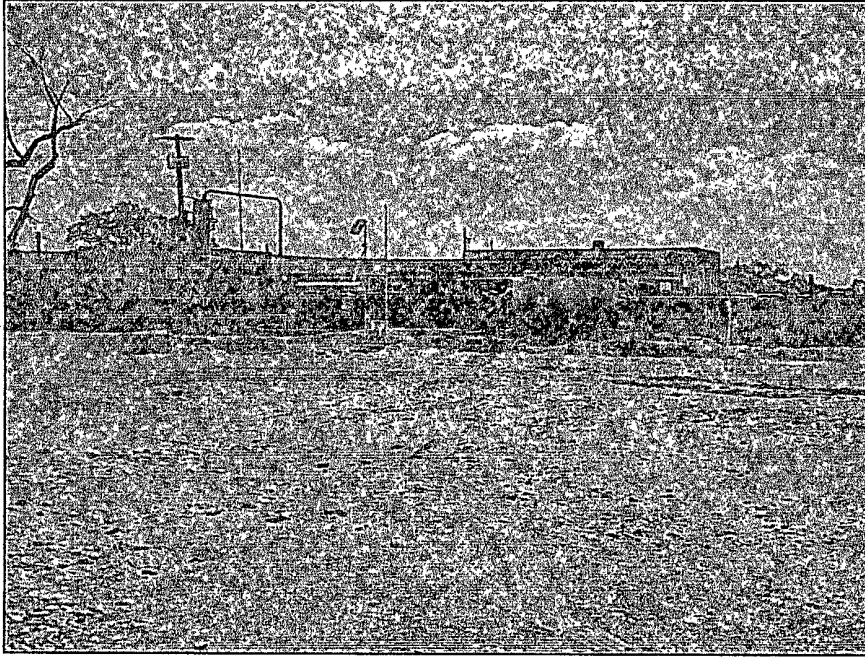
COMPANY CONTACT LAURA CLENNY PHONE \_\_\_\_\_ DATE 6-7-11

***Signatures required prior to distribution of this legal document.***

White - Company Records, Yellow - Billing, Pink - Customer

ACCENT Printing • Form 28-1212

Site Photography  
Chevron North America  
Redfern #1 Well Site  
Below Grade Tank Closure  
Project No. 92270-0771  
July 12, 2011



Picture 1: Former Below Grade Tank



Picture 2: Backfilled Below Grade Tank Pit



EPA METHOD 418.1  
TOTAL PETROLEUM  
HYDROCARBONS

Client:	Chevron North America	Project #:	92270-0771
Sample No.:	1	Date Reported:	7/26/2011
Sample ID:	Five-point Composite	Date Sampled:	7/12/2011
Sample Matrix:	Soil	Date Analyzed:	7/12/2011
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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Total Petroleum Hydrocarbons	16	5.0
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ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

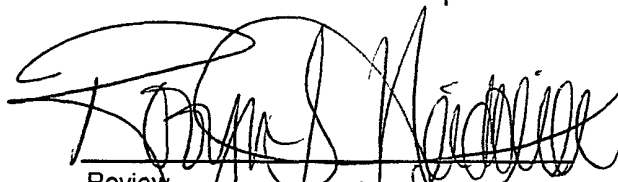
Comments: **Redfern #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

  
Analyst

Toni McKnight, EIT

Printed

  
Review

Robyn Heidbrier, EIT

Printed



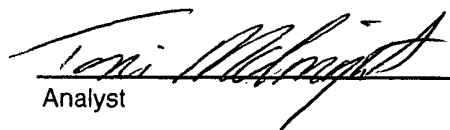


CONTINUOUS CALIBRATION  
EPA METHOD 418.1  
TOTAL PETROLEUM  
HYDROCARBONS

Cal. Date: 12-Jul-11

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	
	200	198
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.

  
Analyst

7/25/2011  
Date

Toni McKnight, EIT

Print Name

  
Review

7/25/2011  
Date

Robyn Heidbrier, EIT

Print Name



## Field Chloride

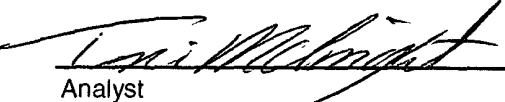
Client:	Chevron North America	Project #:	92270-0771
Sample No.:	1	Date Reported:	7/26/2011
Sample ID:	Five-point Composite	Date Sampled:	7/12/2011
Sample Matrix:	Soil	Date Analyzed:	7/12/2011
Preservative:	Cool	Analysis Needed:	Chloride
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Field Chloride	303	33.0

ND = Parameter not detected at the stated detection limit.

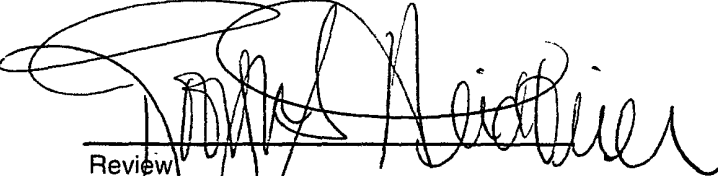
References: "Standard Methods for the Examination of Water and Wastewater", 18th ed., 1992  
Hach Company Quantab Titrators for Chloride

Comments: **Redfern #1**

  
Analyst

Toni McKnight, EIT

Printed

  
Review

Robyn Heidbrier, EIT

Printed



## Field Chloride

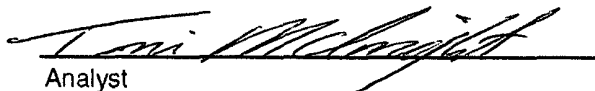
Client:	Chevron North America	Project #:	92270-0771
Sample No.:	2	Date Reported:	7/25/2011
Sample ID:	Background	Date Sampled:	7/12/2011
Sample Matrix:	Soil	Date Analyzed:	7/12/2011
Preservative:	Cool	Analysis Needed:	Chloride
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Field Chloride	176	33.0

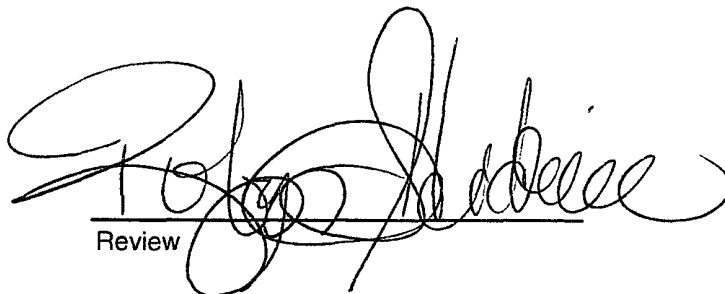
ND = Parameter not detected at the stated detection limit.

References: "Standard Methods for the Examination of Water and Wastewater", 18th ed., 1992  
Hach Company Quantab Titrators for Chloride

Comments: **Redfern #1**

  
Analyst

Toni McKnight, EIT  
Printed

  
Review

Robyn Heidbrier, EIT  
Printed

**EPA METHOD 8021  
 AROMATIC VOLATILE ORGANICS**

Client:	Chevron North America	Project #:	92270-0771
Sample ID:	5 Pt Composite	Date Reported:	07-13-11
Laboratory Number:	58904	Date Sampled:	07-12-11
Chain of Custody:	12167	Date Received:	07-12-11
Sample Matrix:	Soil	Date Analyzed:	07-13-11
Preservative:	Cool	Date Extracted:	07-12-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	14.4	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	ND	1.2
o-Xylene	ND	0.9
<b>Total BTEX</b>	<b>14.4</b>	

ND - Parameter not detected at the stated detection limit.

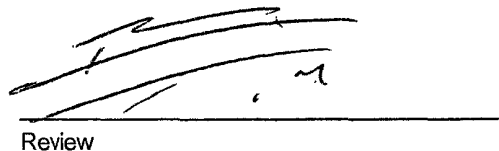
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	91.5 %
	1,4-difluorobenzene	103 %
	Bromochlorobenzene	109 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Redfern #1


  
 Analyst


  
 Review

Client:	N/A	Project #:	N/A
Sample ID:	0713BBLK QA/QC	Date Reported:	07-13-11
Laboratory Number:	58904	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	07-13-11
Condition:	N/A	Analysis:	BTEX
		Dilution:	10

Calibration and Detection Limits (ug/L)	I-Cal RF	C-Cal RF	%Diff	Blank Conc	Detect Limit
		Accept Range 0 - 15%			
Benzene	2.5886E+006	2.5938E+006	0.2%	ND	0.1
Toluene	9.2663E+005	9.2848E+005	0.2%	ND	0.1
Ethylbenzene	6.1066E+005	6.1189E+005	0.2%	ND	0.1
p,m-Xylene	1.2966E+006	1.2992E+006	0.2%	ND	0.1
o-Xylene	4.9828E+005	4.9928E+005	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff	Accept Range	Detect Limit
Benzene	ND	ND	0.0%	0 - 30%	0.9
Toluene	14.4	15.8	9.7%	0 - 30%	1.0
Ethylbenzene	ND	ND	0.0%	0 - 30%	1.0
p,m-Xylene	ND	ND	0.0%	0 - 30%	1.2
o-Xylene	ND	ND	0.0%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	500	490	97.9%	39 - 150
Toluene	14.4	500	502	97.5%	46 - 148
Ethylbenzene	ND	500	541	108%	32 - 160
p,m-Xylene	ND	1000	1,090	109%	46 - 148
o-Xylene	ND	500	544	109%	46 - 148

ND - Parameter not detected at the stated detection limit.

Dilution: Spike and spiked sample concentration represent a dilution proportional to sample dilution.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.  
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

**Comments:** QA/QC for Samples 58904, 58919-58920

Analyst

Review

**Chloride**

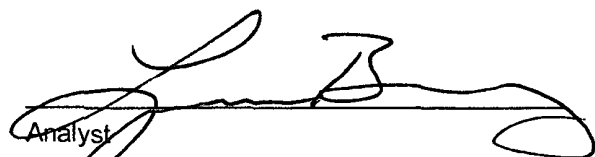
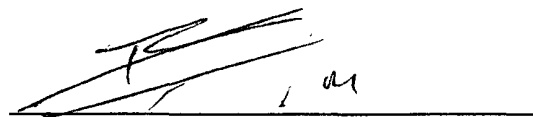
Client:	Chevron North America	Project #:	92270-0771
Sample ID:	5 Pt Composite	Date Reported:	07/13/11
Lab ID#:	58904	Date Sampled:	07/12/11
Sample Matrix:	Soil	Date Received:	07/12/11
Preservative:	Cool	Date Analyzed:	07/13/11
Condition:	Intact	Chain of Custody:	12167

Parameter	Concentration (mg/Kg)
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**Total Chloride****250**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Redfern #1**

  
Analyst  
Review



Client:	Chevron North America	Project #:	92270-0771
Sample ID:	Background	Date Reported:	07/13/11
Lab ID#:	58905	Date Sampled:	07/12/11
Sample Matrix:	Soil	Date Received:	07/12/11
Preservative:	Cool	Date Analyzed:	07/13/11
Condition:	Intact	Chain of Custody:	12167

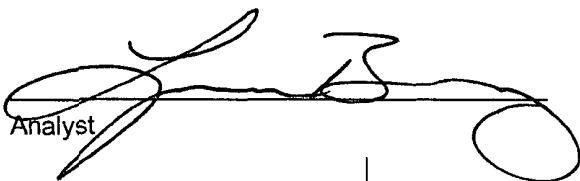
Parameter	Concentration (mg/Kg)
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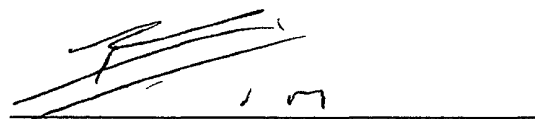
**Total Chloride**

**120**

Reference: U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.  
Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments: **Redfern #1**

  
Analyst

  
Review

\*RUSH\*

# CHAIN OF CUSTODY RECORD

12167

Client: <b>CHEVRON NORTH AMERICA</b>			Project Name / Location: <b>REDFERN #1</b>			ANALYSIS / PARAMETERS																			
Client Address:			Sampler Name: <b>T. McKnight</b>																						
Client Phone No.:			Client No.: <b>92270-0771</b>																						
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative			TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	PCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE					Sample Cool	Sample Intact	
Spr Composite	7/12/11	12:11	58904	Soil Solid	Sludge Aqueous	1/402				✓	✓								✓					Y	Y
Background	7/12/11	12:56	58905	Soil Solid	Sludge Aqueous	1/402				✓									✓					Y	Y
				Soil Solid	Sludge Aqueous																				
				Soil Solid	Sludge Aqueous																				
				Soil Solid	Sludge Aqueous																				
				Soil Solid	Sludge Aqueous																				
				Soil Solid	Sludge Aqueous																				
				Soil Solid	Sludge Aqueous																				
				Soil Solid	Sludge Aqueous																				
				Soil Solid	Sludge Aqueous																				
				Soil Solid	Sludge Aqueous																				
Relinquished by: (Signature) <i>Toni McKnight</i>						7/12/11 13:45	Time 13:45	Received by: (Signature) <i>Dene Bazzin</i>										Date 7/12/11		Time 13:45					
Relinquished by: (Signature)								Received by: (Signature)																	
Relinquished by: (Signature)								Received by: (Signature)																	

\*RUSH\*



**envirotech**  
Analytical Laboratory

5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com