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

Form C-144
July 21, 2008

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.

8915

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: Four Star Oil and Gas Company OGRID #: 131994
Address: Post Office Box 36366 Houston, TX 77236
Facility or well name: Redfern #2
API Number: 30-045-29023 OCD Permit Number:
U/L or Qtr/Qtr H Section 33 Township 30N Range 12W County: San Juan
Center of Proposed Design: Latitude 36 77005196° Longitude -108 0974572° 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. L_____ x W_____ x D_____

RECEIVED
AUG 2011
OIL CONS. DIV. DIST. 3

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: 65 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.

8/24/2011

25

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	☐ Yes ☐ 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	☐ Yes ☐ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applies to temporary, emergency, or cavitation pits and below-grade tanks)* - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. *(Applies to permanent pits)* - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☐ 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	☐ Yes ☐ 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	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ 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_2S, 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 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

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 indentify 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	☐ Yes ☐ No ☐ 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	☐ Yes ☐ No ☐ 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	☐ Yes ☐ No ☐ 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	☐ Yes ☐ 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	☐ Yes ☐ 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	☐ Yes ☐ 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	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ☐ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ☐ No
Within a 100-year floodplain. - FEMA map	☐ Yes ☐ 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): _____ Title: _____

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:** 11/07/2011

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:** June 23, 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 indentify 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 **Envirotech's NMOCD Permitted Landfarm #2/NM-01-0011**

☒ Soil Backfilling and Cover Installation **See Attached Photograph Page**

☒ Re-vegetation Application Rates and Seeding Technique **Site Still in Use, will Close Pursuant to the BLM MOU and Approved Closure Plan**

☒ Site Reclamation (Photo Documentation) **See Attached Photograph Page**

On-site Closure Location: Latitude 36.77005196° Longitude -108.0974572° 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): Mr. Don Lindsey Title: Health, Environmental and Safety Specialist

Signature: _____ Date: 8/23/11

e-mail address: llin@chevron.com Telephone: (505) 333- ~~1931~~ 1920

envirotech

August 23, 2011

Project Number 92270-0775

Mr. Don Lindsey
Chevron North America
Post Office Box 730
Aztec, New Mexico 87410

Phone: (505) 333-1931

RE: BELOW-GRADE TANK CLOSURE DOCUMENTATION FOR THE REDFERN #2 WELL SITE, SAN JUAN COUNTY, NEW MEXICO

Dear Mr. Lindsey,

Enclosed please find the field notes and analytical results for below-grade tank (BGT) closure activities conducted at the Redfern #2 well site located in Section 33, Township 30 North, Range 12 West, San Juan County, New Mexico. Upon Envirotech personnel's arrival on June 23, 2011, one (1) five (5)-point composite sample was collected from directly beneath the BGT; see attached ***Field Notes*** for sample locations. The sample was analyzed in the field for total petroleum hydrocarbons (TPH) using USEPA Method 418.1, for organic vapors using a photoionization detector (PID) and for chlorides. Additionally, the sample was placed into a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for benzene and total BTEX using USEPA Method 8021 and for total chlorides using USEPA Method 4500. The sample returned results below the regulatory standards for benzene, total BTEX and chlorides but above the regulatory standard of 100 parts per million (ppm) TPH using USEPA Method 418.1, confirming a release did occur; see attached ***Analytical Results***.

A brief site assessment was conducted and the regulatory standards were determined to be 100 ppm TPH and 100 ppm organic vapors due to horizontal distance to surface water between 200 and 1000 feet and depth to groundwater less than 100 feet, pursuant to New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Spills, Leaks, and Releases. One (1) foot of soil was removed from the bottom of the pit and analyzed in the field for TPH using USEPA Method 418.8. The one (1) foot sample beneath the former BGT returned results below the regulatory standards for TPH using USEPA Method 418.8; see attached ***Field Notes***. Envirotech, Inc. recommends no further action in regards to this incident.

Chevron North America
Redfern #2
BGT Closure Documentation
Project Number 92270-0775

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

Respectfully submitted,
ENVIROTECH, INC.

Crystal Delgai
Environmental Field Technician
cdelgai@envirotech-inc.com

Enclosures: Field Notes
Analytical Results

Cc: Client File 92270

PAGE NO: 1 OF 2

DATE STARTED: 6/23/11

DATE FINISHED: 6/23/11

ENVIROTECH INC

ENVIRONMENTAL SCIENTISTS & ENGINEERS
5796 U.S. HIGHWAY 64 - 3014
FARMINGTON, NEW MEXICO 87401
PHONE: (505) 632-0615

ENVIRONMENTAL SPECIALIST: C Delgai

LAT: 36.77005196

LONG: -108.0974572

FIELD REPORT: BGT / PIT CLOSURE VERIFICATION

LOCATION: NAME: Redfern WELL #: 2 TEMP PIT: PERMANENT PIT: BGT: ✓

LEGAL ADD: UNIT: H SEC: 33 TWP: 30N RNG: 12W PM: NM

QTR/FOOTAGE: 905 FEL 2440 FNL CNTY: San Juan ST: New Mexico

EXCAVATION APPROX: NA FT. X NA FT. X NA FT. DEEP CUBIC YARDAGE: NA

DISPOSAL FACILITY: Envirotech Landfarm REMEDIATION METHOD: Landfarm

LAND OWNER: API: 3004529023 BGT / PIT VOLUME:

CONSTRUCTION MATERIAL: DOUBLE-WALLED, WITH LEAK DETECTION:

LOCATION APPROXIMATELY: 102 FT. 52° FROM WELLHEAD

DEPTH TO GROUNDWATER: 341'

___ TEMPORARY PIT - GROUNDWATER 50-100 FEET DEEP

BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, GRO & DRO FRACTION (8015) ≤ 500 mg/kg, TPH (418.1) ≤ 2500 mg/kg, CHLORIDES ≤ 500 mg/kg

___ TEMPORARY PIT - GROUNDWATER ≥100 FEET DEEP

BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, GRO & DRO FRACTION (8015) ≤ 500 mg/kg, TPH (418.1) ≤ 2500 mg/kg, CHLORIDES ≤ 1000 mg/kg

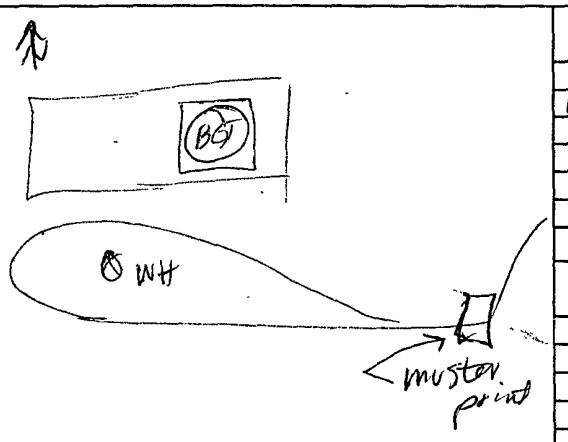
✓ PERMANENT PIT OR BGT

BENZENE ≤ 0.2 mg/kg, BTEX ≤ 50 mg/kg, TPH (418.1) ≤ 100 mg/kg, CHLORIDES ≤ 250 mg/kg

FIELD 418.1 ANALYSIS

TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. (mg/kg)
9:35	200 STD	—	-	-	-	195	—
9:37	BGT@ 6'	1	5	20	4	41	164
9:45	BGT@7'	2				10	40
		3					
		4					
		5					
		6					

PERIMETER



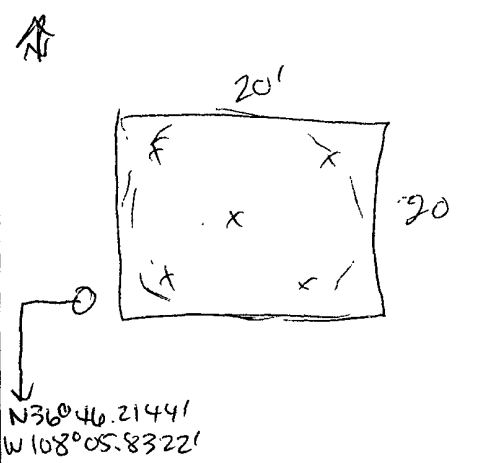
FIELD CHLORIDES RESULTS

SAMPLE ID	READING	CALC. (mg/kg)
STD	—	28
BGT@6'	1:8	56
2	—	—

PID RESULTS

SAMPLE ID	RESULTS (mg/kg)
100 STD	100
BGT@6'	0
2	0

PROFILE



LAB SAMPLES

SAMPLE ID	ANALYSIS	RESULTS
1	~~BENZENE~~	
	~~BTEX~~	
	~~GRO & DRO~~	
	CHLORIDES	

NOTES: Michael called 2M @ 10:17

WORKORDER # WHO ORDERED

Client:	envirotech (505) 632-0615 (800) 362-1879 5796 U.S. Hwy 64, Farmington, NM 87401	Project No: 92270-0775
Chevron		COC No: 12001

FIELD REPORT: SPILL CLOSURE VERIFICATION

PAGE NO: 2 OF 2

DATE STARTED: 6/23/11

DATE FINISHED: 6/23/11

ENVIRONMENTAL SPECIALIST: C Delgai

LOCATION: NAME: Redfern WELL #: 2

QUAD/UNIT: H SEC: 33 TWP: 30N RNG: 12W PM: NM CNTY: SJ ST: NM

QTR/FOOTAGE: 905 FEL 2440 FNL CONTRACTOR:

EXCAVATION APPROX: 0 FT. X 0 FT. X 1 FT. DEEP CUBIC YARDAGE:

DISPOSAL FACILITY: Envirotech Landfarm II REMEDIATION METHOD: Landfarm

LAND USE: Grazing LEASE: LAND OWNER:

CAUSE OF RELEASE: BGT removal/overflow MATERIAL RELEASED: produced water

SPILL LOCATED APPROXIMATELY: 62 FT. 52° FROM WH

DEPTH TO GROUNDWATER: 34' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: 618'

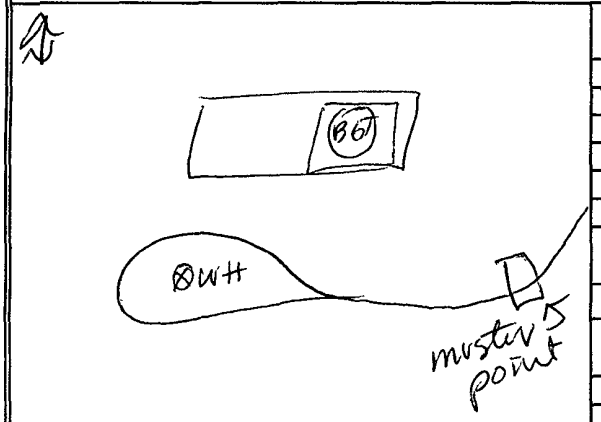
NMOCD RANKING SCORE: 30 NMOCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION:

Took 1' from bottom of pit. Soil consisted of sand + gravel.

SAMPLE DESCRIPITION	TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm
200 STD	9:35	—	—				195	—
BGT @ 6' BGS	9:37	1		5	20	4	41	164
BGT @ 7' BGS	9:45	2		5	20	4	10	40

SPILL PERIMETER



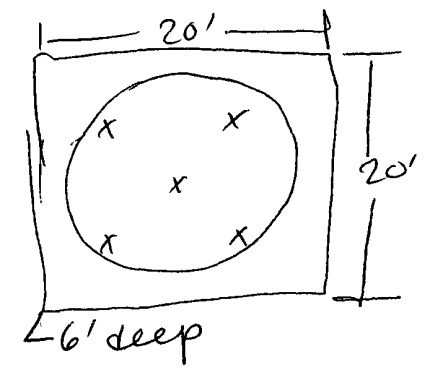
OVM RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
100 STD	100
1	0
2	0

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
1	8021, Chlorides	

SPILL PROFILE



excavated 1' on bottom

TRAVEL NOTES: CALLED OUT: ONSITE:

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EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Chevron North America	Project #:	92270-0775
Sample No.:	1	Date Reported:	7/7/2011
Sample ID:	BGT @ 6' BGS	Date Sampled:	6/23/2011
Sample Matrix:	Soil	Date Analyzed:	6/23/2011
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**164**	**5.0**

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 #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Analyst

Crystal Delgai
Printed

Review

Robyn Jones, EIT
Printed

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EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS

Client:	Chevron North America	Project #:	92270-0775
Sample No.:	2	Date Reported:	7/7/2011
Sample ID:	BGT @ 7' BGS	Date Sampled:	6/23/2011
Sample Matrix:	Soil	Date Analyzed:	6/23/2011
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	**40**	**5.0**

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 #2**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Analyst

Crystal Delgai
Printed

Review

Robyn Jones, EIT
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CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 23-Jun-11

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	
	200	195
	500	
	1000	

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

Analyst

7/7/2011
Date

Crystal Delgai
Print Name

Review

7/7/2011
Date

Robyn Jones, EIT
Print Name

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Field Chloride

Client:	Chevron North America	Project #:	92270-0775
Sample No.:	1	Date Reported:	7/7/2011
Sample ID:	BGT @ 6' BGS	Date Sampled:	6/23/2011
Sample Matrix:	Soil	Date Analyzed:	6/23/2011
Preservative:	Cool	Analysis Needed:	Chloride
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Field Chloride	**56**	**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 #2**

Analyst

Crystal Delgai
Printed

Review

Robyn Jones, EIT
Printed

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Chevron	Project #:	92270-0775
Sample ID:	BGT @ 6'	Date Reported:	06-27-11
Laboratory Number:	58621	Date Sampled:	06-23-11
Chain of Custody:	12001	Date Received:	06-23-11
Sample Matrix:	Soil	Date Analyzed:	06-24-11
Preservative:	Cool	Date Extracted:	06-23-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	**ND**	**0.9**
Toluene	**2.1**	**1.0**
Ethylbenzene	**ND**	**1.0**
p,m-Xylene	**ND**	**1.2**
o-Xylene	**ND**	**0.9**
Total BTEX	**2.1**	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	**84.3 %**
	1,4-difluorobenzene	**83.6 %**
	Bromochlorobenzene	**84.0 %**

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 #2**

Analyst

Review

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EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	0624BBLK QA/QC	Date Reported:	06-24-11
Laboratory Number:	58626	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	06-24-11
Condition:	N/A	Analysis:	BTEX
		Dilution:	10

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff. Accept. Range 0 - 15%	Blank Conc	Detect. Limit
Benzene	4.0482E+006	4.0563E+006	**0.2%**	**ND**	**0.1**
Toluene	4.1452E+006	4.1535E+006	**0.2%**	**ND**	**0.1**
Ethylbenzene	3.6546E+006	3.6619E+006	**0.2%**	**ND**	**0.1**
p,m-Xylene	1.0094E+007	1.0114E+007	**0.2%**	**ND**	**0.1**
o-Xylene	3.5279E+006	3.5350E+006	**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	**ND**	**ND**	**0.0%**	**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**	**523**	**105%**	**39 - 150**
Toluene	**ND**	**500**	**528**	**106%**	**46 - 148**
Ethylbenzene	**ND**	**500**	**525**	**105%**	**32 - 160**
p,m-Xylene	**ND**	**1000**	**1,050**	**105%**	**46 - 148**
o-Xylene	**ND**	**500**	**529**	**106%**	**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 58626-58629, 58621, 58635-58636**

Analyst

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Chloride

Client:	Chevron	Project #:	92270-0775
Sample ID:	BGT @ 6'	Date Reported:	06/24/11
Lab ID#:	58621	Date Sampled:	06/23/11
Sample Matrix:	Soil	Date Received:	06/23/11
Preservative:	Cool	Date Analyzed:	06/24/11
Condition:	Intact	Chain of Custody:	12001

Parameter	Concentration (mg/Kg)
Total Chloride	**80**

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 #2**

Analyst

Review

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CHAIN OF CUSTODY RECORD

12001

Client: Chevron	Project Name / Location: Redfern #2
Client Address:	Sampler Name: Crystal Delgai
Client Phone No.:	Client No.: 92270-0775

ANALYSIS / PARAMETERS

Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative $HgCl_2$	Preservative HCl	Preservative cool	TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE				Sample Cool	Sample Intact
BGT @ 6'	6/23/11	10:35	58621	(Soil) Sludge Solid Aqueous	1-4oz			/		/								/				✓	✓
				Soil Sludge Solid Aqueous																			
				Soil Sludge Solid Aqueous																			
				Soil Sludge Solid Aqueous																			
				Soil Sludge Solid Aqueous																			
				Soil Sludge Solid Aqueous																			
				Soil Sludge Solid Aqueous																			
				Soil Sludge Solid Aqueous																			
				Soil Sludge Solid Aqueous																			
				Soil Sludge Solid Aqueous																			

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Crystal Delgai	6/23/11	11:00	[signature]	6/23/11	11:00
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

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Bill of Lading

MANIFEST # 38928

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

DATE 6-28-11 JOB# 92270-0786

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT						TRANSPORTING COMPANY			
	POINT OF ORIGIN	DESTINATION	MATERIAL	GRID	YDS	BBLS	COMPANY	TRK#	TIME	DRIVER SIGNATURE
1	Chevron Red Fern #2	LFH	Cont Soil	K-11	12	—	E-tech	658	1056	Mike Hoyt
2		11	11	K-11	12	—	E-tech	615	1100	
					24					

RESULTS:			LANDFARM EMPLOYEE:	NOTES:
<287	CHLORIDE TEST	1	Gary Robinson	Nonexempt
	PAINT FILTER TEST	1	Certification of above receival & placement	

"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: E-Tech NAME MIKE Hoyt SIGNATURE Mike Hoyt

COMPANY CONTACT _____ PHONE _____ DATE 6-28-11

Signatures required prior to distribution of this legal document.

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

ACCENT Printing • Form 28-1212

BELOW GRADE TANK (BGT) CLOSURE PLAN

SITE NAME:

REDFERN #2 WELL SITE
UNIT LETTER H, SECTION 33, TOWNSHIP 30 NORTH, RANGE 12 WEST
SAN JUAN COUNTY, NEW MEXICO
LATITUDE: N 36.770065° LONGITUDE: W108.097364°

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. DON LINDSEY
CHEVRON NORTH AMERICA
POST OFFICE BOX 370
AZTEC, NEW MEXICO 87410
(432) 687-7123

INITIALLY SUBMITTED:
MARCH 2010

BELOW GRADE TANK (BGT) CLOSURE PLAN
CHEVRON NORTH AMERICA
REDFERN #2 WELL SITE
RIO ARRIBA COUNTY, NEW MEXICO

TABLE OF CONTENTS

INTRODUCTION

Chevron North America would like to submit a closure plan for the below grade tank (BGT) at the Redfern #2 Well Site located in the SE ¼ NE ¼ of Section 33, Township 30 North, Range 12 West, 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 #2 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. The Closure Plan was approved on September 13, 2011, by Mr. Brad Jones with the NMOCD, Santa Fe Office.**

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 16, 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. **A Sundry Notice was sent to the BLM Farmington field office on June 2, 2011.**

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
BGT @ 6' BGS	164 ppm	<0.0009 ppm	0.0021 ppm	56 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. **The BGT pit was excavated and approximately 24 yards of contaminated soil was transported to Envirotech's Landfarm #2, permit # NM-01-0011; see attached Bill of Lading. Upon closure samples returning results below 100 ppm TPH, the BGT pit was backfilled with non-waste containing, 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.

1. **An initial C-141 Release Notification Form was submitted 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. **The closure standard for the Redfern #2 well site was determined to be 100 ppm TPH and 100 ppm organic vapors or 10 ppm benzene and 50 ppm total BTEX in accordance with the NMOCD Guidelines for the Remediation of Leaks, Spills and Releases. Samples collected returned results below the regulatory cleanup standards determined for the site.**

Sample ID	TPH (418.1)	Organic Vapors (PID)
BGT @ 7' BGS	40 ppm	Non Detect

REPORTING

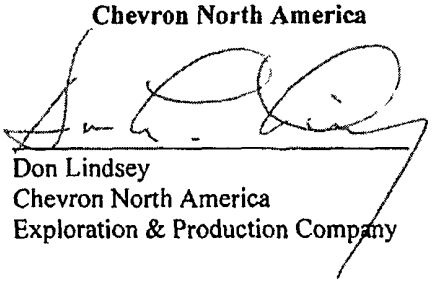
Reporting will occur within 60 days following the BGT closure and will consist of a form C-144 with all supporting data, and a form C-141 with all supporting data, if necessary. The supporting

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.

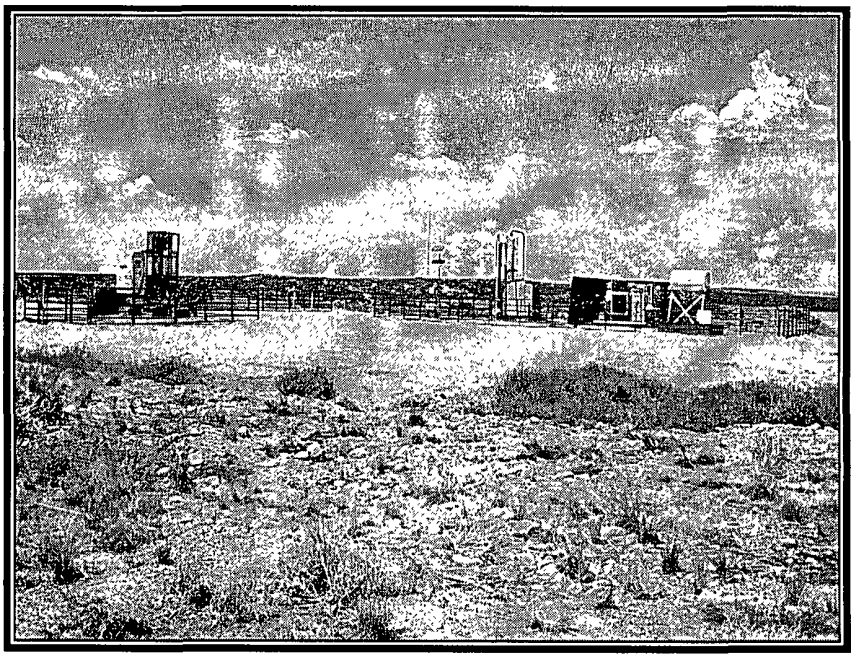
Respectfully Submitted:

Chevron North America

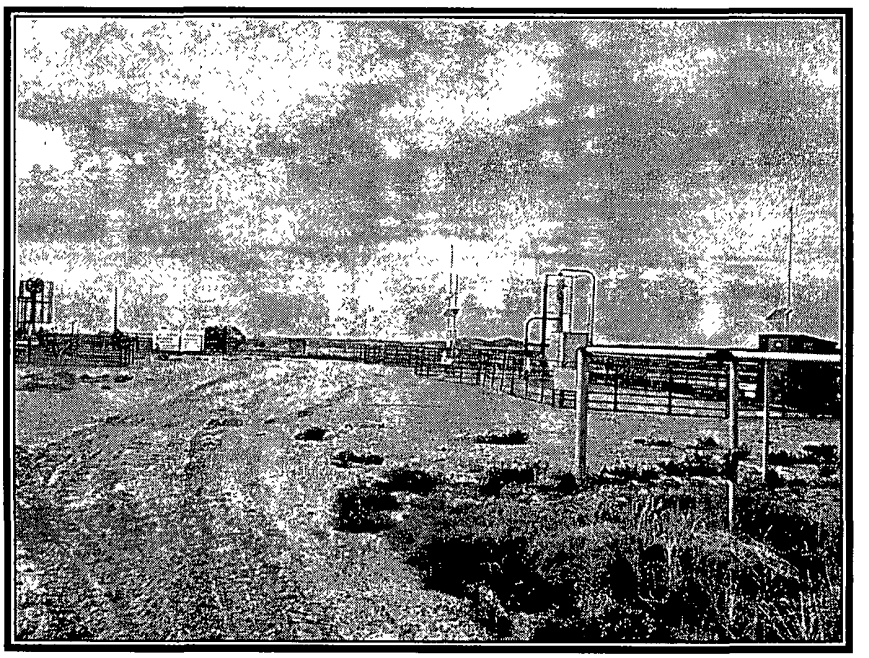


Don Lindsey
Chevron North America
Exploration & Production Company

Site Photography
Chevron North America
Redfern #2 Well Site
Below Grade Tank Closure
Project No. 92270-0775
June 23, 2011



Picture 1: Former Below Grade Tank



Picture 2: Backfilled Below Grade Tank Pit