

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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
Revised June 6, 2013

For temporary pits, below-grade tanks, and multi-well fluid management pits, submit to the appropriate NMOCD District Office.
For permanent pits submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application

14273

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

RECEIVED

By kcollins at 7:36 am, Mar 09, 2016

Instructions: Please submit one application (Form C-144) per individual pit, 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: Burlington Resources Oil & Gas Company, LP OGRID #: 14538

Address: PO BOX 4289, Farmington, NM 87499

Facility or well name: Federal B 1

API Number: 30-045-08923 OCD Permit Number: _____

U/L or Qtr/Qtr N Section 31 Township 30 N Range 11 W County: San Juan

Center of Proposed Design: Latitude 36.763672 °N Longitude -108.033789 °W NAD: ☐ 1927 ☒ 1983

Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.

☐ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC

Temporary: ☐ Drilling ☐ Workover

☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no

☐ 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 _____

3.

☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC

Volume: 120 bbl Type of fluid: Produced Water

Tank Construction material: Metal

☐ 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 45 mil ☐ HDPE ☐ PVC ☒ Other LLDPE

4.

☐ **Alternative Method:**

Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.

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 _____

clw

6.

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)

7.

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 19.15.16.8 NMAC

8.

Variances 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:

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval.

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

9.

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. Siting criteria does not apply to drying pads or above-grade tanks.

General siting

Ground water is less than 25 feet below the bottom of a low chloride temporary pit or below-grade tank.

- ☐ NM Office of the State Engineer - iWATERS database search; ☐ USGS; ☐ Data obtained from nearby wells

☐ Yes ☐ No
☒ NA

Ground water is less than 50 feet below the bottom of a Temporary pit, permanent pit, or Multi-Well Fluid Management pit.

NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No
☒ NA

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. **(Does not apply to below grade tanks)**

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within the area overlying a subsurface mine. **(Does not apply to below grade tanks)**

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area. **(Does not apply to below grade tanks)**

- 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. **(Does not apply to below grade tanks)**

- FEMA map

☐ Yes ☐ No

Below Grade Tanks

Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☒ No

Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)

Within 100 feet of a continuously flowing watercourse, or any other significant watercourse or within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). (Applies to low chloride temporary pits.)

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a occupied 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 200 horizontal feet of a spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 300feet of any other fresh water well or spring, in existence at the time of the initial application.

NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 100 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Temporary Pit Non-low chloride drilling fluid

Within 300 feet of a continuously flowing watercourse, or any other significant watercourse, or within 200 feet of any 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 spring or a private, domestic fresh water well used by less than five households for domestic or stock watering purposes, or 1000 feet of any other fresh water well or spring, in the existence at the time of the initial application;

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Permanent Pit or Multi-Well Fluid Management Pit

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 1000 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 spring or a fresh water well used for domestic or stock watering purposes, 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 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

10.

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: _____

11.

Multi-Well Fluid Management Pit 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.

- ☐ 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
- ☐ A List of wells with approved application for permit to drill associated with the pit.
- ☐ 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

- ☐ Hydrogeologic Data - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
- ☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC

- ☐ Previously Approved Design (attach copy of design) API Number: _____ or Permit Number: _____

12. **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 H₂S, 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

13. **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 ☐ Multi-well Fluid Management Pit
☐ 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

14. **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 C 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 H of 19.15.17.13 NMAC
- ☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

15. **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 require justifications and/or demonstrations of equivalency. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 25 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 25-50 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 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 100 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, 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 300 horizontal feet of a private, domestic fresh water well or spring used for domestic or stock watering purposes, 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
Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 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 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 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

16.

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 E of 19.15.17.13 NMAC
- ☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K 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 19.15.17.13 NMAC
- ☐ Waste Material Sampling Plan - based upon the appropriate requirements 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 H of 19.15.17.13 NMAC
- ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC

17.

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: _____

18.

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

OCD Representative Signature: Vanessa Renteria Approval Date: 04-05-2016

Title: Environmental Specialist OCD Permit Number: _____

19.

Closure Report (required within 60 days of closure completion): 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: 10/16/2009

20.

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.

21.

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)
- ☐ Proof of Deed Notice (required for on-site closure for private land only)
- ☐ Plot Plan (for on-site closures and temporary pits)
- ☒ Confirmation Sampling Analytical Results (if applicable)
- ☐ Waste Material Sampling Analytical Results (required for on-site closure)
- ☐ Disposal Facility Name and Permit Number
- ☒ Soil Backfilling and Cover Installation
- ☒ Re-vegetation Application Rates and Seeding Technique
- ☒ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude N Longitude W NAD: ☐ 1927 ☐ 1983

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): Larissa Farrell Title: Regulatory Technician

Signature: *Larissa Farrell* Date: 1/21/14

e-mail address: Larissa.L.Farrell@cop.com Telephone: (505) 326-9504

Burlington Resources Oil & Gas Company, LP
San Juan Basin
Below Grade Tank Closure Report

Lease Name: Federal B 1

API No.: 30-045-08923

In accordance with Rule 19.15.17.13 NMAC the following information describes the closure of the below-grade tank referenced above. All proper documentation regarding closure activities is being included with the C-144.

General Plan:

1. BR shall close a below-grade tank within 60 days of cessation of operations per Subsection G.4 of 19.15.17.13 NMAC. This will include a) below-grade tanks that do not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC or is not included in Paragraph (5) of Subsection I of 19.15.17.11 NMAC within five years, if not retrofitted to comply with Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC; b) an earlier date that the division requires because of imminent danger to fresh water, public health or the environment. For any closure, BR will file the C144 Closure Report as required.

The below-grade tank referenced above was permitted and closed within 60 days of cessation of the below-grade tanks operation.

2. BR shall remove liquids and sludge from a below-grade tank prior to implementing a closure method and shall dispose of the liquids and sludge in a division-approved facility. The facilities to be used will be Basin Disposal (Permit #NM-01-005), JFJ Landfarm % Industrial Ecosystem Inc. (Permit # NM-01-0010B) and Envirotech Land Farm (Permit #NM-01-011). The liner after being cleaned well (Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC) will be disposed of at the San Juan County Regional Landfill located on CR 3100.

All recovered liquids were disposed of at Basin Disposal (Permit #NM-01-005) and any sludge or soil required to be removed to facilitate closure was hauled to Envirotech Land Farm (Permit #NM-01-011) and JFJ Landfarm % IEI (Permit #NM-01-0010B). The liner was cleaned per Subsection D, Paragraph 1, Subparagraph (m) of 19.15.9.712 NMAC was disposed of at the San Juan County Regional Landfill located on CR 3100.

3. BR will receive prior approval to remove the below-grade tank and dispose of it in a division-approved facility or recycle, reuse, or reclaim it in a manner that the appropriate division district office approves.

The below-grade tank was disposed of in a division-approved manner.

4. If there is any on-site equipment associated with a below-grade tank, then BR shall remove the equipment, unless the equipment is required for some other purpose.

All on-site equipment associated with the below-grade tank was removed.

5. BR will test the soils beneath the below-grade tank to determine whether a release has occurred. BR shall collect, at a minimum, a five point, composite sample; collect individual grab samples from any area that is wet, discolored or showing other evidence of a release; and analyzed for the constituents listed in Table I of 19.15.17.13 NMAC. COPC shall notify the division of its results on form C-141.

A five point composite sample was taken of the below-grade tank using sampling tools and all samples tested per Subsection B of 19.15.17.1 3(B)(1)(b). (Sample results attached). Form C-141 is attached.

Components	Tests Method	Limit (mg/kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	100
Chlorides	EPA 300.0	250

6. If BR or the division determines that a release has occurred, then BR shall comply with 19.15.3.116 NMAC and 19.15.1.19 NMAC, as appropriate.

A release was determined for the above referenced well.

7. If the sampling program demonstrates that a release has not occurred or that any release does not exceed the concentrations specified in Table I of 19.15.17.13 NMAC, then BR shall backfill the excavation with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover; recontour and re-vegetate the site.

The below-grade tank area passed all requirements of Paragraph (4) of Subsection E of 19.15.17.13 NMAC and was backfilled with compacted, non-waste containing, earthen material.

8. Notice of Closure will be given prior to closure to the Aztec Division office between 72 hours and one week via email or verbally. The notification of closure will include the following:
- Operator's name
 - Location by Unit Letter, Section, Township, and Range. Well name and API number.

Notification is not found.

9. The surface owner shall be notified of BR's closing of the below-grade tank 72 hours, but not more than one week, prior to closure as per the approved closure plan via certified mail, return receipt requested.

The closure process notification to the landowner was not found.

10. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.

The below-grade tank area was re-contoured to match fit, shape, line, form and texture of the surrounding area. Re-shaping including drainage control, to prevent ponding and erosion. Natural drainages were unimpeded and water bars and/or silt traps were placed in areas where needed to prevent erosion on a large scale. Final recontour has a uniform appearance with smooth surface, fitting the natural landscape.

11. BR shall seed the disturbed areas the first favorable growing season following closure of a below-grade tank. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM stipulated seed mixes will used on federally regulated lands and division-approved seed mixtures (administratively approved if required) will be utilized on all State or private lands. A uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre- disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. COPC will repeat seeding or planting will be continued until successful vegetative growth occurs.

Provision 13 was accomplished through complying with BLM seeding requirements as allowed by the BLM/OCD MOU.

12. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material, with chloride concentrations less than 600 mg/kg as analyzed by EPA Method 300.0, to establish vegetation at the site, or the background thickness of topsoil, whichever is greater.

The below-grade tank area was backfilled and more than four feet of cover was achieved and the cover included one foot of suitable material to establish vegetation at the site.

13. All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of the below-grade tank. Closure report will be filed on C-144 and incorporate the following:
 - Soil Backfilling and Cover Installation **(See Report)**
 - Re-vegetation application rates and seeding techniques **(See Report)**
 - Photo documentation of the site reclamation **(Included as an attachment)**
 - Confirmation Sampling Results **(Included as an attachment)**
 - Proof of closure notice **(Included as an attachment)**

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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 August 8, 2011

Submit 1 Copy to appropriate District Office to
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Burlington Resources Oil & Gas Co.	Contact Bobby Spearman
Address 3401 East 30 th St, Farmington, NM	Telephone No. (505)-320-3045
Facility Name: Federal B-1	Facility Type: Gas Well

Surface Owner: Federal	Mineral Owner: Federal	API No. 30045089230
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LOCATION OF RELEASE

Unit Letter N	Section 31	Township 30N	Range 11W	Feet from the 790	North/South Line South	Feet from the 1850	East/West Line West	County San Juan
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Latitude 36.77426 _ Longitude -108.0425

NATURE OF RELEASE

Type of Release Historic	Volume of Release unknown	Volume Recovered 554 yds
Source of Release Unknown. Discovered during P&A activities	Date and Hour of Occurrence 11-6-2009	Date and Hour of Discovery Same
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.*

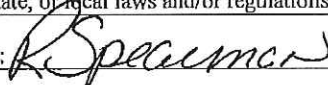
Describe Cause of Problem and Remedial Action Taken.*

Several different areas of historic contamination were found during P&A activities, Spill assessment, sampling and remediation took place.

Describe Area Affected and Cleanup Action Taken.*

Historical hydrocarbon impacted soil was found during P&A activities for the subject well. Excavation #1 was 51' x 30' x 7' in depth, Excavation #2 was 15' x 15' x 3' in depth and Excavation #3 was 15' x 15' x 16' depth 554 yds of soil was transported to IEI land farm. Analytical results were below the regulatory standards - no further action required. The soil sampling report is attached for review.

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: 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Bobby Spearman	Approved by Environmental Specialist:		
Title: Field Environmental Specialist	Approval Date:	Expiration Date:	
E-mail Address: Robert.E.Spearman@conocophillips.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 1/16/2016	Phone: (505) 320-3045		

* Attach Additional Sheets If Necessary



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CONFIRMATION SAMPLING REPORT

LOCATED AT:

BURLINGTON RESOURCES

FEDERAL B #1

SECTION 31, TOWNSHIP 30N, RANGE 11W

SAN JUAN COUNTY, NEW MEXICO

PREPARED FOR:

CONOCOPHILLIPS

MS. KELSI GURVITZ

3401 EAST 30TH STREET

FARMINGTON, NEW MEXICO 87401

PROJECT NO. 92115-1127

NOVEMBER 2009



January 7, 2010

Project No.92115-1127

Ms. Kelsi Gurvitz
ConocoPhillips
3401 East 30th Street
Farmington, New Mexico 87401

Phone. (505) 320-2461
Fax (505) 599-4005


RE: CONFIRMATION SAMPLING REPORT FOR THE FEDERAL B #1 WELL SITE, SAN JUAN COUNTY, NEW MEXICO

Dear Ms. Gurvitz,

Enclosed please find the report entitled *Confirmation Sampling Report* detailing spill assessment and confirmation sampling activities at the Burlington Resources Federal B #1 well site located in Section 31, Township 30N, Range 11W, San Juan County, New Mexico.

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.


James McDaniel
Project Scientist
jmcdaniel@envirotech-inc.com

Enclosures: One (1) Report

Cc: Client File No. 92115

**CONOCOPHILLIPS
CONFIRMATION SAMPLING REPORT
LOCATED AT
BURLINGTON RESOURCES
FEDERAL B #1
SECTION 31, TOWNSHIP 30N, RANGE 11W
SAN JUAN COUNTY, NEW MEXICO**

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Figures: Figure 1, Vicinity Map
 Figure 2, Site Map

Tables: Table 1, Analytical Results

Appendices: Appendix A, Analytical Results
 Appendix B, Field Notes

INTRODUCTION

Envirotech, Inc. of Farmington, New Mexico, was contracted by ConocoPhillips to provide spill assessment and confirmation sampling activities for historical releases at the Burlington Resources Federal B #1 well site located in Section 31, Township 30N, Range 11W, San Juan County, New Mexico; see *Figure 1, Vicinity Map*. Several different areas of historical contamination were discovered during plugging and abandoning activities being performed on this site. Spill assessment and confirmation sampling activities included the sample collection and analysis, documentation and reporting.

ACTIVITIES PERFORMED

On October 16, 2009 Envirotech, Inc. was contacted with a request to perform an assessment for a suspected earthen pit at the above mentioned location. Upon arrival a brief site assessment was performed, and the site was ranked a 20 according to the New Mexico Oil Conservation Division (NMOCD) Guidelines for the Remediation of Leaks, Spills and Releases. This was due to a wash at less than 200 feet from the well site. This set the closure standard to 100 ppm total petroleum hydrocarbons (TPH) and 100 ppm organic vapors (OV). A test hole was hand augured in the center of the suspected former earthen pit that appeared to be approximately 15' x 14'. This suspected earthen pit was located in the south-west corner of the well pad, labeled on the site map as excavation #2; see enclosed *Figure 2, Site Map*. Samples were collected from three (3) feet below ground surface (BGS), five (5) feet BGS, eight (8) feet BGS, and ten (10) feet BGS and analyzed for OV using a Photo Ionization Detector (PID). Each of the samples collected returned results above the 100 ppm OV standard; see enclosed *Table 1, Analytical Results*. The samples collected from eight (8) feet BGS and ten (10) feet BGS were also analyzed in the field for TPH using USEPA Method 418.1. Both samples returned results above the 100 ppm TPH standard for this site at 2,410 ppm and 8,720 ppm; see enclosed *Appendix A, Analytical Results* and *Table 1, Analytical Results*. The sample collected at 10' BGS was then collected into a four (4)-ounce glass jar, capped headspace free, and transported with ice under chain of custody to Envirotech's laboratory and analyzed for Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) via USEPA Method 8015 and benzene, toluene, ethyl-benzene, and total xylenes (BTEX) via USEPA Method 8021. The sample returned results above the 100 ppm DRO/GRO standard but below the 10 ppm benzene and the 50 ppm BTEX standards determined for this site; see enclosed *Analytical Results*. Four (4) additional samples were collected to determine the extent of the contamination. Four (4) test holes were hand augured to a depth of five (5) feet BGS, approximately five (5) feet from the fencing around the suspected former earthen pit to the north, south, east and west. Each of the samples collected were analyzed in the field for OV using a PID. All samples were non-detect for organic vapors; see enclosed *Field Notes*. A composite sample of the four (4) test holes was then analyzed in the field for TPH using USEPA Method 418.1. This sample returned results below the 100 ppm TPH standard for this site. Envirotech, Inc. recommended to Ms. Kelsi Gurvitz, ConocoPhillips, that the former earthen pit be excavated and re-sampled at a later date.

On November 3, 2009, an Envirotech, Inc. scientist returned to the site to perform confirmation sampling activities. During the plugging and abandoning activities, two (2) additional contamination areas were identified. These areas are labeled on the map as Excavation #1, Excavation #2 and Excavation #3; see enclosed **Figure 2, Site Map**. Prior to Envirotech's arrival, Excavation #1 had been excavated by M&M Trucking to extents of approximately 51' x 30' x 7' deep, and Excavation #2 area had been excavated to extents of 15' x 15' x 3' deep. Five (5) samples were collected from each of these excavations. One (1) sample was collected from each of the four (4) walls, and one (1) sample was collected from the bottom. All ten (10) of these samples were analyzed in the field for TPH via USEPA Method 418.1 and for OV using a PID. All ten (10) samples returned results below the 100 ppm TPH standard and the 100 ppm OV standard determined for this site; see enclosed **Table 1, Analytical Results** and **Appendix A, Analytical Results**. No further excavation was required in Excavation #1 or Excavation #2.

On November 6, 2009, an Envirotech, Inc. scientist returned to the site to complete confirmation sampling activities. Prior to Envirotech's arrival, Excavation #3 had been excavated by M&M Trucking to extents of approximately 15' x 15' x 16' deep. Two (2) samples were collected from this excavation. One (1) sample was collected from the bottom at 16' BGS, and a composite sample was collected from the walls of the excavation. Each of these samples was analyzed in the field for TPH via USEPA Method 418.1 and for OV using a PID. Both samples returned results below the 100 ppm OV standard, but above the 100 ppm TPH standard determined for this site; see enclosed **Table 1, Analytical Results** and **Appendix A, Analytical Results**. At this time, each of these samples were collected into a four (4)-ounce glass jar, capped headspace free, and transported with ice under chain of custody to Envirotech's laboratory to be analyzed for DRO and GRO via USEPA Method 8015 and for BTEX via USEPA Method 8021. Both samples returned results below the 100 ppm TPH standard, the 10 ppm benzene standard and the 50 ppm total BTEX standard indicating that no further excavation is required; see enclosed **Table 1, Analytical Results** and **Appendix A, Analytical Results**.

All contaminated soil was transported to IEI's NMOCD permitted soil remediation facility located in Crouch Mesa, New Mexico.

SUMMARY AND CONCLUSIONS

Spill assessment and confirmation sampling activities were performed for historical releases at the Burlington Resources Federal B #1 well site located in Section 31, Township 30N, Range 11W, San Juan County, New Mexico. All contaminated soil was transported to IEI's NMOCD permitted soil remediation facility located at Crouch Mesa, New Mexico. Envirotech, Inc. recommends that no further action is required in regards to this incident.

STATEMENT OF LIMITATIONS

Envirotech, Inc. has completed spill assessment and confirmation sampling activities for historical contamination found at the Burlington Resources Federal B #1 well site located in Section 31, Township 30N, Range 11W, San Juan County, New Mexico. The work and services provided by Envirotech, Inc. were in accordance with the New Mexico Oil Conservation

Division standards. All observations and conclusions provided here are based on the information and current site conditions found at the site of the incident.

The undersigned has conducted this service at the above referenced site. This work has been conducted and reported in accordance with generally accepted professional practices in geology, engineering, environmental chemistry, and hydrogeology.

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,

Reviewed by:

ENVIROTECH, INC.



James McDaniel
Project Scientist
jmcdaniel@envirotech-inc.com

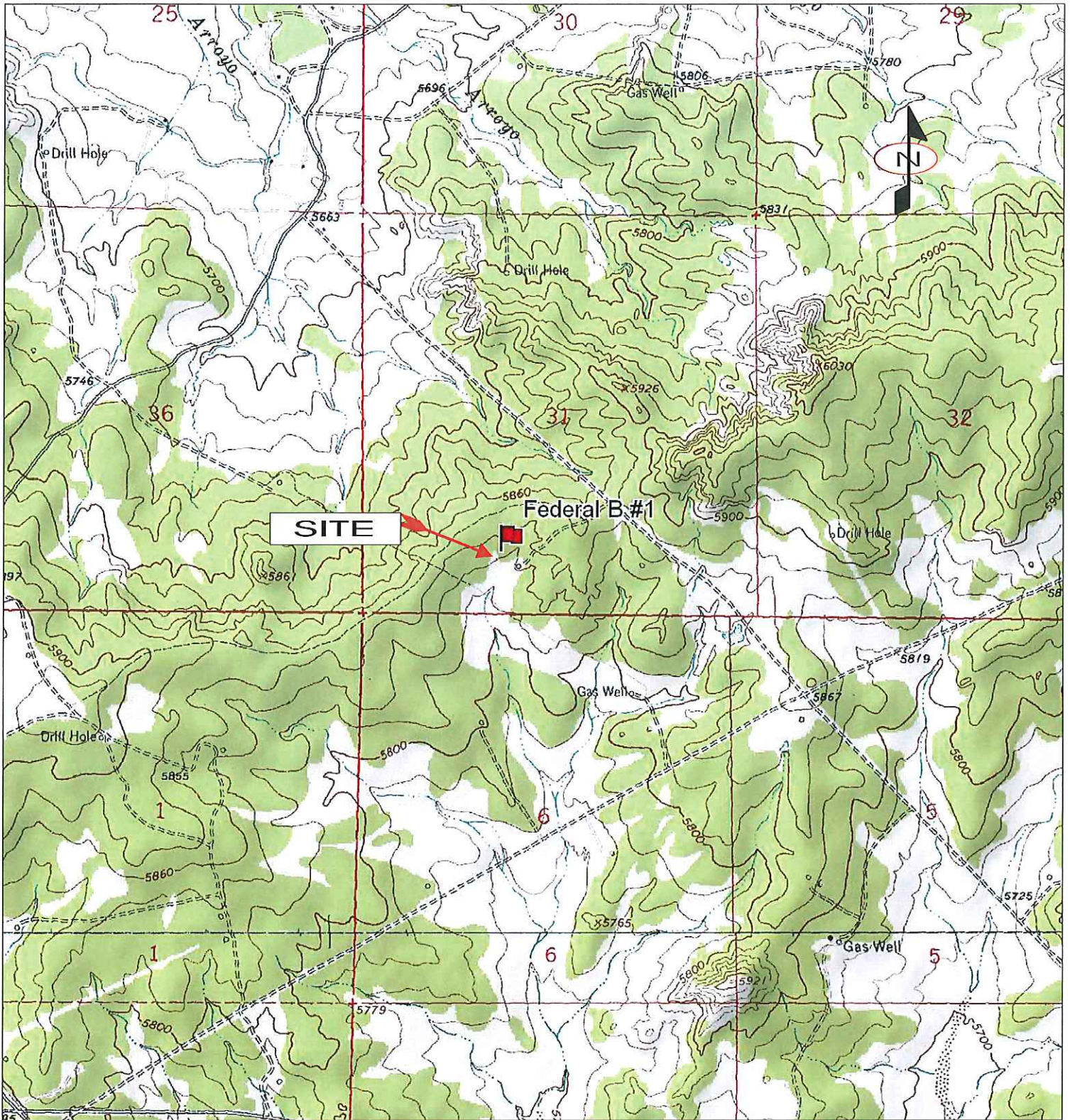


Greg Crabtree, EIT
Project Engineer/Manager
jmcdaniel@envirotech-inc.com

FIGURES

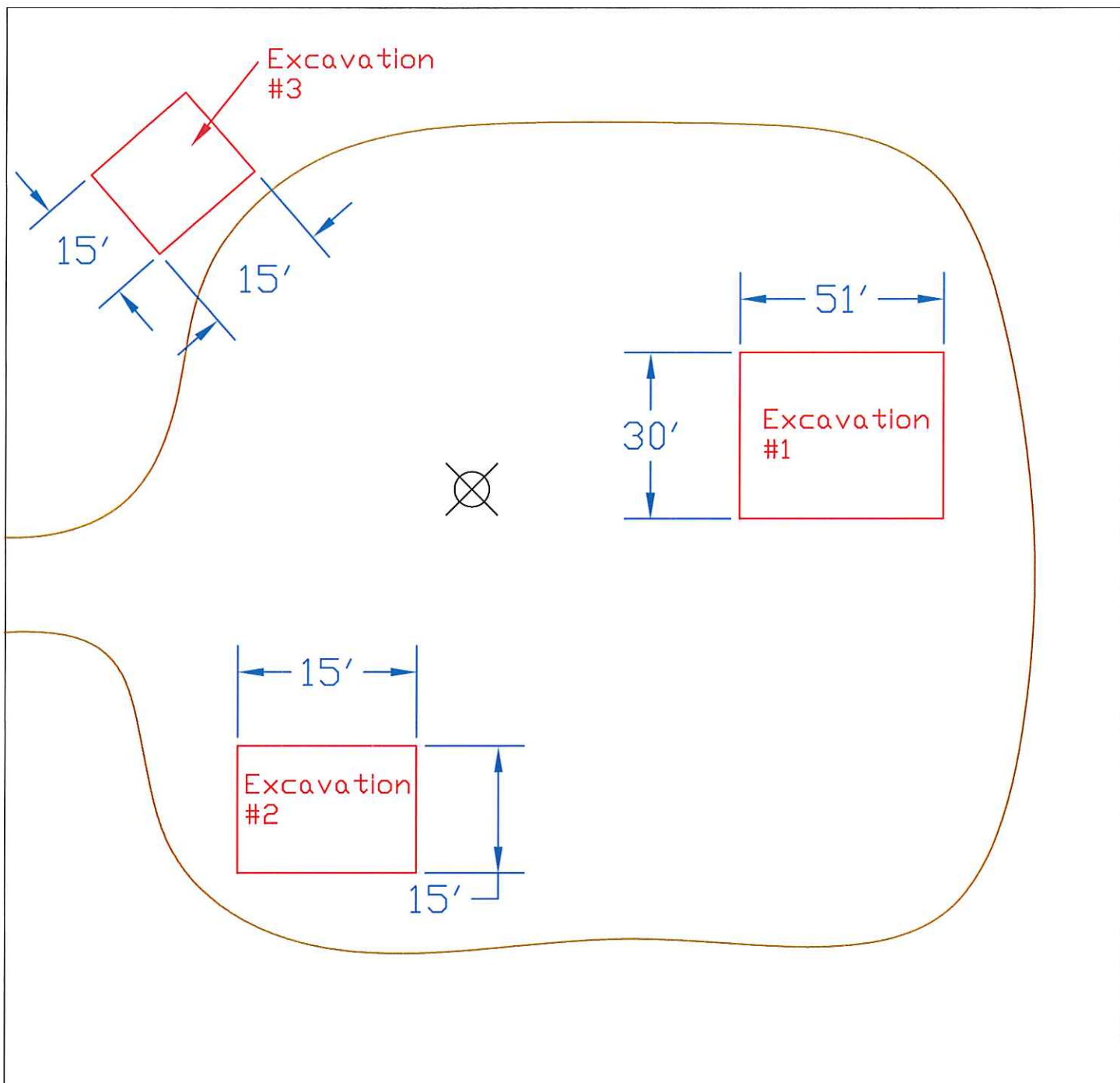
Figure 1, Vicinity Map

Figure 2, Site Map



Source: Aztec, New Mexico 7.5 Minute U.S.G.S. Topographic Quadrangle Maps
 Scale: 1:24,000 1" = 2000'

Burlington Resources Federal B #1 Well Site Section 31, Township 30N, Range 11W San Juan County, New Mexico		ENVIROTECH INC. ENVIRONMENTAL SCIENTISTS & ENGINEERS 5796 U.S. HIGHWAY 64 FARMINGTON, NEW MEXICO 87401 PHONE (505) 632-0615		Vicinity Map Figure 1	
Project# 92115-1127	Date Drawn: 11/11/09			Drawn By: James McDaniel	Project Manager: Greg Crabtree



LEGEND



Excavated Areas



P&A Marker

Site Map

Federal B #1 Well Site
Section 31, Township 30N, Range 11W
San Juan County, New Mexico

SCALE: NTS

PROJECT NO92115-1127

FIGURE NO. 2

REV

REVISIONS

NO.	DATE	BY	DESCRIPTION
MAP	DRWN	JPM	DATE 11/11/09



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5796 U.S. HIGHWAY 64, FARMINGTON, NM 87401 505-632-0615

TABLES

Table 1, Analytical Results

Table 1, Analytical Results
Confirmation Sampling Report
ConocoPhillips
Federal B #1
Project No. 92115-1127

Sample Description	Sample Number	Date	TPH (ppm) EPA Method 418.1	OVM (ppm)	Benzene (ppm) EPA Method 8021	BTEX (ppm) EPA Method 8021	GRO/DRO (ppm) EPA Method 8015
NMOC Standards	NA	NA	100	100	10.0	50	100
3' BGS		10/16/2009	NS	1802	NS	NS	NS
5' BGS		10/16/2009	NS	128	NS	NS	NS
8' BGS	1	10/16/2009	2,410	151	NS	NS	NS
10' BGS	2	10/16/2009	8,720	1484	< 0.0009	3.67	152
Delineation Composite	3	10/16/2009	8	NS	NS	NS	NS
5' North @ 5' BGS		10/16/2009	NS	ND	NS	NS	NS
5' South @ 5' BGS		10/16/2009	NS	ND	NS	NS	NS
5' East @ 5' BGS		10/16/2009	NS	ND	NS	NS	NS
5' West @ 5' BGS		10/16/2009	NS	ND	NS	NS	NS
Excavation #1 North Wall	1	11/3/2009	< 5	0.1	NS	NS	NS
Excavation #1 South Wall	2	11/3/2009	24	0.3	NS	NS	NS
Excavation #1 East Wall	3	11/3/2009	< 5	ND	NS	NS	NS
Excavation #1 West Wall	4	11/3/2009	12	0.1	NS	NS	NS
Excavation #1 Bottom	5	11/3/2009	< 5	ND	NS	NS	NS
Excavation #2 Bottom	1	11/3/2009	68	17.2	NS	NS	NS
Excavation #2 North Wall	2	11/3/2009	32	3.1	NS	NS	NS
Excavation #2 South Wall	3	11/3/2009	16	ND	NS	NS	NS
Excavation #2 East Wall	4	11/3/2009	12	0.3	NS	NS	NS
Excavation #2 West Wall	5	11/3/2009	< 5	ND	NS	NS	NS
Excavation #3 Wall Composite	1	11/6/2009	324	10.6	< 0.0009	< 0.005	15.9
Excavation #3 Bottom	2	11/6/2009	176	1	< 0.0009	< 0.005	< 0.2

* Values in **BOLD** above regulatory standards

APPENDIX A

Analytical Results



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client: Burlington
Sample No.: 1
Sample ID: 8' BGS
Sample Matrix: Soil
Preservative: Cool
Condition: Cool and Intact

Project #: 92115-1127
Date Reported: 10/26/2009
Date Sampled: 10/16/2009
Date Analyzed: 10/16/2009
Analysis Needed: TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----------	--------------------------	--------------------------


Total Petroleum Hydrocarbons	2,410	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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Robyn S. Jones
Printed



Review

James McDaniel
Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client: Burlington
Sample No.: 2
Sample ID: 10' BGS
Sample Matrix: Soil
Preservative: Cool
Condition: Cool and Intact

Project #: 92115-1127
Date Reported: 10/26/2009
Date Sampled: 10/16/2009
Date Analyzed: 10/16/2009
Analysis Needed: TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----------	--------------------------	--------------------------

Total Petroleum Hydrocarbons	8,720	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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Robyn S. Jones
Printed



Review

James McDaniel
Printed



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Burlington	Project #:	92115-1127
Sample No.:	3	Date Reported:	10/26/2009
Sample ID:	Delineation Comp.	Date Sampled:	10/16/2009
Sample Matrix:	Soil	Date Analyzed:	10/16/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----------	--------------------------	--------------------------

Total Petroleum Hydrocarbons	8	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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Robyn S. Jones

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Review

James McDaniel

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CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 16-Oct-09

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	205
	200	
	500	
	1000	

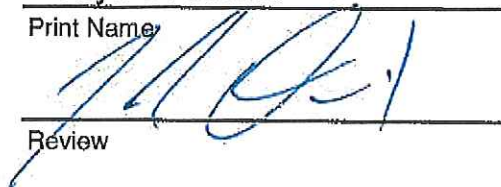
The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.



Analyst

Robyn S. Jones

Print Name



Review

James McDaniel

Print Name

10/29/09

Date

10/29/09

Date



envirotech
Analytical Laboratory

**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

Client:	Burlington	Project #:	92115-1127
Sample ID:	10' BGS	Date Reported:	10-21-09
Laboratory Number:	52151	Date Sampled:	10-16-09
Chain of Custody No:	8222	Date Received:	10-16-09
Sample Matrix:	Soil	Date Extracted:	10-19-09
Preservative:	Cool	Date Analyzed:	10-20-09
Condition:	Intact	Analysis Requested:	8015 TPH


Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	42.4	0.4
Diesel Range (C10 - C28)	110	0.2
Total Petroleum Hydrocarbons	152	0.4

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Federal B1**


Analyst


Review



envirotech

Analytical Laboratory

EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	10-20-09 QA/QC	Date Reported:	10-21-09
Laboratory Number:	52120	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-20-09
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	05-07-07	8.2208E+002	8.2241E+002	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	9.8051E+002	9.8091E+002	0.04%	0 - 15%

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	ND	ND	0.0%	0 - 30%
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	ND	250	242	96.8%	75 - 125%
Diesel Range C10 - C28	ND	250	238	95.2%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for Samples 52120, 52121, 52137, 52138, 52151, 52157, 52158, and 52168.

Analyst

Review



envirotech

Analytical Laboratory

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Burlington	Project #:	92115-1127
Sample ID:	10' BGS	Date Reported:	10-21-09
Laboratory Number:	52151	Date Sampled:	10-16-09
Chain of Custody:	8222	Date Received:	10-16-09
Sample Matrix:	Soil	Date Analyzed:	10-20-09
Preservative:	Cool	Date Extracted:	10-19-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	109	1.0
Ethylbenzene	182	1.0
p,m-Xylene	2,690	1.2
o-Xylene	687	0.9
Total BTEX	3,670	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	97.0 %
	1,4-difluorobenzene	97.0 %
	Bromochlorobenzene	97.0 %

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: Federal B1

Analyst

Review

Client:	N/A	Project #:	N/A
Sample ID:	10-20-BT QA/QC	Date Reported:	10-21-09
Laboratory Number:	52113	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-20-09
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RE:	C-Cal RE:	%Diff:	Blank Conc	Detect Limit
		Accept. Range 0 - 15%			
Benzene	8.9065E+005	8.9243E+005	0.2%	ND	0.1
Toluene	8.2358E+005	8.2523E+005	0.2%	ND	0.1
Ethylbenzene	7.4480E+005	7.4629E+005	0.2%	ND	0.1
p,m-Xylene	1.8287E+006	1.8324E+006	0.2%	ND	0.1
o-Xylene	7.0468E+005	7.0609E+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	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

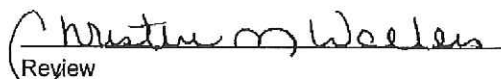
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	50.0	51.2	102%	39 - 150
Toluene	ND	50.0	51.0	102%	46 - 148
Ethylbenzene	ND	50.0	51.0	102%	32 - 160
p,m-Xylene	ND	100	98.5	98.5%	46 - 148
o-Xylene	ND	50.0	52.6	105%	46 - 148

ND - Parameter not detected at the stated detection limit.

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 52113, 52114, 52120, 52121, 52137, 52138, 52151, 52157, 52158, and 52168.


 Analyst


 Review

8222

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



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Burlington	Project #:	92115-1127
Sample No.:	1	Date Reported:	11/11/2009
Sample ID:	Exc. #1 North Wall	Date Sampled:	11/3/2009
Sample Matrix:	Soil	Date Analyzed:	11/3/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	ND	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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Scott Gonzales
Printed



James McDaniel
Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Burlington	Project #:	92115-1127
Sample No.:	2	Date Reported:	11/11/2009
Sample ID:	Exc. #1 South Wall	Date Sampled:	11/3/2009
Sample Matrix:	Soil	Date Analyzed:	11/3/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
-----------	--------------------------	--------------------------

Total Petroleum Hydrocarbons	24	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: **Federal B #1**


Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

Printed



Analyst

James McDaniel

Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Burlington	Project #:	92115-1127
Sample No.:	3	Date Reported:	11/11/2009
Sample ID:	Exc. #1 East Wall	Date Sampled:	11/3/2009
Sample Matrix:	Soil	Date Analyzed:	11/3/2009
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	ND	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: **Federal B #1**

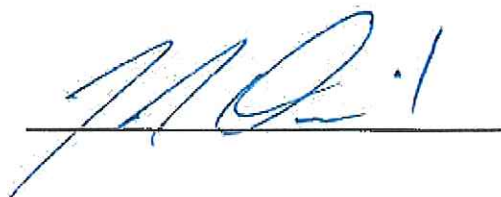
Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

Printed



Analyst

James McDaniel

Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Burlington	Project #:	92115-1127
Sample No.:	4	Date Reported:	11/11/2009
Sample ID:	Exc. #1 West Wall	Date Sampled:	11/3/2009
Sample Matrix:	Soil	Date Analyzed:	11/3/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	12	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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Scott Gonzales
Printed



James McDaniel
Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Burlington	Project #:	92115-1127
Sample No.:	5	Date Reported:	11/11/2009
Sample ID:	Exc. #1 Bottom	Date Sampled:	11/3/2009
Sample Matrix:	Soil	Date Analyzed:	11/3/2009
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	ND	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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

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Analyst

James McDaniel

Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client: Burlington
Sample No.: 1
Sample ID: Exc. #2 Bottom
Sample Matrix: Soil
Preservative: Cool
Condition: Cool and Intact

Project #: 92115-1127
Date Reported: 11/11/2009
Date Sampled: 11/3/2009
Date Analyzed: 11/3/2009
Analysis Needed: TPH-418.1

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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Total Petroleum Hydrocarbons	68	5.0
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ND = Parameter not detected at the stated detection limit.

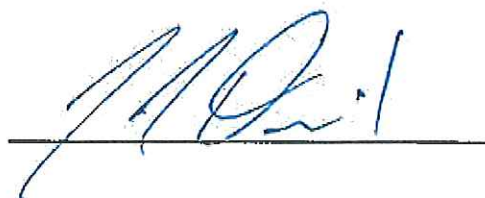
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Scott Gonzales
Printed



James McDaniel
Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Burlington	Project #:	92115-1127
Sample No.:	2	Date Reported:	11/11/2009
Sample ID:	Exc. #2 North Wall	Date Sampled:	11/3/2009
Sample Matrix:	Soil	Date Analyzed:	11/3/2009
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	32	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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

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James McDaniel

James McDaniel

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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Burlington	Project #:	92115-1127
Sample No.:	3	Date Reported:	11/11/2009
Sample ID:	Exc. #2 South Wall	Date Sampled:	11/3/2009
Sample Matrix:	Soil	Date Analyzed:	11/3/2009
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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

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Analyst

James McDaniel

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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Burlington	Project #:	92115-1127
Sample No.:	4	Date Reported:	11/11/2009
Sample ID:	Exc. #2 East Wall	Date Sampled:	11/3/2009
Sample Matrix:	Soil	Date Analyzed:	11/3/2009
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	12	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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

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Analyst

James McDaniel

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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	Burlington	Project #:	92115-1127
Sample No.:	5	Date Reported:	11/11/2009
Sample ID:	Exc. #2 West Wall	Date Sampled:	11/3/2009
Sample Matrix:	Soil	Date Analyzed:	11/3/2009
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	ND	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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Scott Gonzales
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James McDaniel
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CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 3-Nov-09

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	191
	200	
	500	
	1000	


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


Analyst

1-11-10
Date

Scott Gonzales

Print Name


Review

11/11/09
Date

James McDaniel

Print Name



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Burlington	Project #:	92115-1127
Sample No.:	1	Date Reported:	11/11/2009
Sample ID:	Exc. #3 Wall Composite	Date Sampled:	11/6/2009
Sample Matrix:	Soil	Date Analyzed:	11/6/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	324	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: **Federal B #1**


Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Rene Garcia Reyes

Printed



James McDaniel

Printed



EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Client:	Burlington	Project #:	92115-1127
Sample No.:	2	Date Reported:	11/11/2009
Sample ID:	Exc. #3 Bottom	Date Sampled:	11/6/2009
Sample Matrix:	Soil	Date Analyzed:	11/6/2009
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	176	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: **Federal B #1**

Instrument calibrated to 200 ppm standard. Zeroed before each sample

Analyst

Rene Garcia Reyes

Printed

James McDaniel

Printed



CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 6-Nov-09

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	218
	200	
	500	
	1000	

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

Analyst

Date

11/11/09

Rene Garcia Reyes

Print Name

Review

James McDaniel

Print Name

Date

11/11/09



envirotech
Analytical Laboratory

**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

Client:	Burlington	Project #:	92115-1127
Sample ID:	Bottom	Date Reported:	11-10-09
Laboratory Number:	52373	Date Sampled:	11-06-09
Chain of Custody No:	8359	Date Received:	11-06-09
Sample Matrix:	Soil	Date Extracted:	11-06-09
Preservative:	Cool	Date Analyzed:	11-09-09
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Federal B#1**


Analyst


Review