

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

15851
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

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: BP America Production Company OGRID #: 778
Address: 200 Energy Court, Farmington, NM 87401
Facility or well name: ~~GALLEGOS CANYON UNIT 040~~ Ne. 1A #009R OIL CONS. DIV DIST. 3
API Number: 3004523950 OCD Permit Number: NOV 15 2016
U/L or Qtr/Qtr M Section 4 Township 31N Range 11W County: San Juan
Center of Proposed Design: Latitude 36.92221 Longitude -108.00092 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 TANK B
Volume: 21 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 Single wall/ Double bottom; no visible sidewalls
Liner type: Thickness _____ mil ☐ HDPE ☐ PVC ☐ Other _____

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.

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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 _____

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: _____ Approval Date: 2/20/2017

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: 9/20/2016

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 36.921910 Longitude -108.000725 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): Steve Moskal Title: Field Environmental Coordinator

Signature:  Date: November 14, 2016

e-mail address: steven.moskal@bp.com Telephone: (505) 326-9497

BP AMERICA PRODUCTION COMPANY
SAN JUAN BASIN, NORTHWEST NEW MEXICO

BELOW-GRADE TANK CLOSURE PLAN

NEIL A 009R

API No. 3004523950

Unit Letter M, Section 04, T31N, R11W

This plan will address the standard protocols and procedures for closure of below-grade tanks (BGTs) on BP America Production Company (BP) well sites. As stipulated in Paragraph A of 19.15.17.13 NMAC, BP shall close a BGT within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the New Mexico Oil Conservation Division (NMOCD) requires because of imminent danger to fresh water, public health, safety or the environment. If deviations from this plan are necessary, any specific changes will be included on form C-144 and approved by the NMOCD. BP shall close an existing BGT that does 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 after June 16, 2008, if not retrofit with a BGT that complies with the BP NMOCD approved BGT design attached to the BP Design and Construction Plan. BP shall close an existing BGT that does not meet the requirements of Paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, if not previously retrofitted to comply with the BP NMOCD approved BGT Design attached to the BP Design and Construction Plan, prior to any sale or change in operator pursuant to 19.15.9.9 NMAC. BP shall close the permitted BGT within 60 days of cessation of the BGTs operation or as required by the transitional provisions of Subsection B, D, or E of 19.15.17.17 NMAC.

General Closure Plan

1. BP shall notify the surface owner by certified mail that it plans to close a BGT. Evidence of mailing of the notice to the address of the surface owner shown in the county tax records demonstrates compliance with this requirement.
Notice is attached.
2. BP shall notify the division District III office verbally or by other means at least 72 hours, but not more than one (1) week, prior to any closure operation. The notice shall include the operator's name, and the location to be closed by unit letter, section, township and range. If the BGT closure is associated with a particular well, then the notice shall also include the well's name, number and API number.
Notice was provided and is attached.
3. BP shall remove liquids and sludge from the BGT prior to implementing a closure method and dispose of the liquids and sludge in a NMOCD's division-approved facility. The facilities to be used are:
 - a. BP Crouch Mesa Landfarm, Permit NM-02-003 (Solids)
 - b. JFJ Landfarm, Permit NM-01-010(B) (Solids and Sludge)
 - c. Basin Disposal, Permit NM-01-0005 (Liquids)
 - d. Envirotech Inc Soil Remediation Facility, Permit NM-01-0011 (Solids and Sludge)
 - e. BP Operated E.E. Elliott SWD #1, API 30-045-27799 (Liquids)

- f. BP Operated 13 GCU SWD #1, API 30-045-28601 (Liquids)
- g. BP Operated GCU 259 SWD, API 30-045-20006 (Liquids)
- h. BP Operated GCU 306 SWD, API 30-045-24286 (Liquids)
- i. BP Operated GCU 307 SWD, API 30-045-24248 (Liquids)
- j. BP Operated GCU 328 SWD, API 30-045-24735 (Liquids)
- k. BP Operated Pritchard SWD #1, API 30-045-28351 (Liquids)

All liquids and sludge in the BGT were removed and sent to one of the above NMOCD approved facilities for disposal.

4. BP shall remove the BGT and dispose of it in a NMOCD approved facility or recycle, reuse, or reclaim it in a manner that the NMOCD approves. If a liner is present and must be disposed of it will be cleaned by scraping any soils or other attached materials on the liner to a de minimus amount and disposed at a permitted solid waste facility, pursuant to Subparagraph (m) of Paragraph (1) of Subsection C of 19.15.35.8 NMAC. Documentation as to the final disposition of the removed BGT will be provided in the final closure report.

The BGT was transported for recycling.

5. BP shall remove any on-site equipment associated with a BGT unless the equipment is required for well production.

All equipment associated with the BGT has been removed.

6. BP shall test the soils beneath the BGT to determine whether a release has occurred. BP shall collect at a minimum: a five (5) point composite sample and individual grab samples from any area that is wet, discolored or showing other evidence of a release and analyze for BTEX, TPH and chlorides. The testing methods for those constituents are as follows;

Constituents	Testing Method 21 bbl BGT	Release Verification (mg/Kg)	Sample results
Benzene	US EPA Method SW-846 8021B or 8260B	0.2	<0.016
Total BTEX	US EPA Method SW-846 8021B or 8260B	50	<0.065
TPH	US EPA Method SW-846 418.1 or 8015 extended	100	<u><48</u>
Chlorides	US EPA Method 300.0 or 4500B	250 or background	<30

Notes: mg/Kg = milligram per kilogram, BTEX = benzene, toluene, ethylbenzene, and total xylenes, TPH = total petroleum hydrocarbons. Other EPA methods that the division approves may be applied to all constituents listed. Chloride closure standards will be determined by which ever concentration level is greatest.

Soil under the BGT was sampled for TPH, BTEX and chloride with all concentrations below the stated limits. Based on grey to black colored soils, additional samples were collected. All soil samples indicated no impacts from the BGT. The field report and laboratory reports are attached.

7. BP shall notify the division District III office of its results on form C-141.
C-141 is attached.
8. If it is determined that a release has occurred, then BP will comply with 19.15.30 NMAC and 19.15.29 NMAC, as appropriate.
Sampling results indicate a release has not occurred. Attached is a laboratory report and C-141.
9. If the sampling demonstrates that a release has not occurred or that any release does not exceed the concentrations specified above, then BP shall backfill the excavation, with compacted, non-waste containing, earthen material; construct a division-prescribed soil cover, re-contour and re-vegetate the location. The location will be reclaimed if it is not within the active process area
Sampling results indicate a release has not occurred. Attached is a laboratory report and field report. The location will be reclaimed once the well is plugged and abandoned.
10. BP shall reclaim the BGT location and all areas associated with the BGT including associated access roads to a safe and stable condition that blends with the surrounding undisturbed area. BP shall substantially restore the impacted surface area to the condition that existed prior to oil and gas operations by placement of the soil cover as provided in Subsection H of 19.15.17.13 NMAC, re-contour the location and associated areas to a contour that approximates the original contour and blends with the surrounding topography and re-vegetate according to Subsection I of 19.15.17.13 NMAC.
The area has been backfilled and will be reclaimed once the well has been plugged and abandoned.
11. The soil cover for closures where the BGT has been removed or remediated to the NMOCD's satisfaction shall consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. The soil cover will be constructed to the site's existing grade and all practicable efforts will be made to prevent ponding of water and erosion of the cover material.
The area has been backfilled and will be reclaimed once the well has been plugged and abandoned.
12. BP shall seed the disturbed area the first growing season after closure of the BGT. Seeding will be accomplished by drilling on the contour whenever practical or by other division-approved methods. Vegetative cover will be, at a minimum, 70% of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation), consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.
The area has been backfilled and will be reclaimed once the well has been plugged and abandoned.
13. BP shall seed, plant and re-seed pursuant to Paragraph (3) of Subsection I of 19.15.17.13 NMAC, until the location successfully achieves the required vegetative cover.

The area has been backfilled and will be reclaimed once the well has been plugged and abandoned.

14. Pursuant to Paragraph (5) of Subsection I of 19.15.17.13 NMAC, BP shall notify the NMOCD when it has seeded or planted and when it successfully achieves re-vegetation.

BP will notify NMOCD when re-vegetation is successful.

15. Within 60 days of closure completion, BP shall submit a closure report on NMOCD's form C-144, and will include the following;

- a. proof of closure notification (surface owner and NMOCD)
- b. sampling analytical reports; information required by 19.15.17 NMAC;
- c. disposal facility name and permit number
- d. details on back-filling, capping, covering, and where applicable re-vegetation application rates and seeding techniques and
- e. site reclamation, photo documentation.

Closure report on C-144 form is included including photos of reclamation completion.

16. BP shall certify that all information in the report and attachments is accurate, truthful, and compliant with all applicable closure requirements and conditions specified in the approved closure plan.

Certification section of C-144 has been completed.

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

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 in
accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company: BP	Contact: Steve Moskal	
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-326-9497	
Facility Name: Neil A 009R	Facility Type: Natural gas well	
Surface Owner: Federal	Mineral Owner: Federal	API No. 3004523950

LOCATION OF RELEASE

Unit Letter M	Section 04	Township 31N	Range 11W	Feet from the 830	North/South Line South	Feet from the 1,085	East/West Line West	County: San Juan
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Latitude 36.921910° Longitude -108.000725°

NATURE OF RELEASE


Type of Release: none	Volume of Release: unknown	Volume Recovered: N/A
Source of Release: below grade tank – 21 bbl	Date and Hour of Occurrence: none	Date and Hour of Discovery: none
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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.* Sampling of the soil beneath the BGT was done during removal. Soil analysis resulted for BTEX, TPH and chloride below BGT closure standards. Field reports and laboratory results are attached.

Describe Area Affected and Cleanup Action Taken.* No action necessary. Final laboratory analysis determined no remedial action is required.

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

Signature: 	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Steve Moskal	Approved by Environmental Specialist:		
Title: Field Environmental Coordinator	Approval Date:	Expiration Date:	
E-mail Address: steven.moskal@bp.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: November 14, 2016	Phone: 505-326-9497		

* Attach Additional Sheets If Necessary

Moskal, Steven

From: Railsback, Farrah (CH2M HILL)
Sent: Thursday, September 08, 2016 1:53 PM
To: 'Smith, Cory, EMNRD'; 'Fields, Vanessa, EMNRD (Vanessa.Fields@state.nm.us)'
Cc: 'jeffcblagg@aol.com'; 'blagg_njv@yahoo.com'; Moskal, Steven
Subject: RE: BP Pit Close Notification - NEIL A 009R

BP America Production Company
200 Energy Court
Farmington, NM 87401
Phone: (505) 326-9200

SENT VIA E-MAIL TO: CORY.SMITH@STATE.NM.US; VANESSA.FIELDS@STATE.NM.US

September 8, 2016

New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

RE: Notice of Proposed Below-Grade Tank (BGT) Closure

NEIL A 009R
API 30-045-23950
(M) Section 04 – T31N – R11W
San Juan County, New Mexico

Dear Mr. Cory Smith and Mrs. Vanessa Fields,

In regards to the captioned subject and requirements of the NMOCD pit rule, this letter is notification that BP is planning to close a 95 bbl BGT and a 21 bbl BGT that will no longer be operational at this well site. We anticipate this work to start on or around September 14, 2016.

Should you have any questions, please feel free to contact BP at our Farmington office.

Sincerely,

Steven Moskal
BP Field Environmental Coordinator

(505) 326-9497

Farrah Railsback

BGT Project Support

970-946-9199 -cell

This email and any attachments are intended only for the addressee(s) listed above and may contain confidential, proprietary, and/or privileged information. If you are not an intended recipient, please immediately advise the sender by return email, delete this email and any attachments, and destroy any copies of same. Any unauthorized review, use, copying disclosure or distribution of this email and any attachments is prohibited.



BP America Production Company
200 Energy Court
Farmington, NM 87401

September 8, 2016

Bureau of Land Management
Gary Smith
6251 College Suite A
Farmington, NM 87402

VIA EMAIL

Re: Notification of plans to close/remove a below grade tank
Well Name: NEIL A 009R
API #: 3004523950

Dear Mr. Smith,

As part of the NM "Pit Rule": 19.15.17.13 Closure Requirements, Paragraph J. BP America Production Company (BP) is required to notify the surface owner of BP's plans to close/remove a below grade tank. BP wishes to inform you of our plans to close/remove the below grade tank on its well pad located on your surface. BP plans to commence this work on or about September 14, 2016. If there aren't any unforeseen problems, the work should be completed within 10 working days.

As a point of clarification, BP will be closing the below grade tank and either operating without one or replacing it with an above ground tank, the well site will continue to operate.

If witnessing of the tank removal is required please contact me for a specific time (505)-326-9497.

Sincerely,

Steven Moskal

BP America Production Company

CLIENT: BP	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	API #: 3004523950 TANK ID (if applicable): B															
FIELD REPORT: (circle one): <u>BGT CONFIRMATION</u> / RELEASE INVESTIGATION / OTHER:		PAGE #: 1 of 1															
SITE INFORMATION: SITE NAME: NEIL A # 9R QUAD/UNIT: M SEC: 4 TWP: 31N RNG: 11W PM: NM CNTY: SJ ST: NM 1/4 - 1/4 / FOOTAGE: 830'S / 1,085'W SW/SW LEASE TYPE: <u>FEDERAL</u> / STATE / FEE / INDIAN LEASE #: SF078051 PROD. FORMATION: MV CONTRACTOR: BP - A. SALAZAR		DATE STARTED: 09/19/16 DATE FINISHED: ENVIRONMENTAL SPECIALIST(S): NJV															
REFERENCE POINT: WELL HEAD (W.H.) GPS COORD.: 36.92221 X 108.00092 GL ELEV.: 6,240' 1) 21 BGT (SW/DB) - B GPS COORD.: 36.921910 X 108.000725 DISTANCE/BEARING FROM W.H.: 105.5', S15E 2) GPS COORD.: DISTANCE/BEARING FROM W.H.: 3) GPS COORD.: DISTANCE/BEARING FROM W.H.: 4) GPS COORD.: DISTANCE/BEARING FROM W.H.:																	
SAMPLING DATA: CHAIN OF CUSTODY RECORD(S) # OR LAB USED: HALL 1) SAMPLE ID: 5PC - TB @ 6' (21) SAMPLE DATE: 09/19/16 SAMPLE TIME: 1010 LAB ANALYSIS: 8015B/8021B/300.0 (CI) OVM READING (ppm): 2.0 2) SAMPLE ID: 1 @ 6.5' (21 - GRAB) SAMPLE DATE: 09/19/16 SAMPLE TIME: 1015 LAB ANALYSIS: 8015B/8021B/300.0 (CI) OVM READING (ppm): 1.8 3) SAMPLE ID: SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS: 4) SAMPLE ID: SAMPLE DATE: SAMPLE TIME: LAB ANALYSIS:																	
SOIL DESCRIPTION: SOIL TYPE: SAND <u>SILTY SAND</u> SILT <u>SILTY CLAY</u> <u>CLAY</u> GRAVEL <u>OTHER</u> BEDROCK (SHALE/SANDSTONE) SOIL COLOR: OLIVE GRAY TO BLACK PLASTICITY (CLAYS): NON PLASTIC / SLIGHTLY PLASTIC / COHESIVE / MEDIUM PLASTIC / HIGHLY PLASTIC COHESION (ALL OTHERS): NON COHESIVE <u>SLIGHTLY COHESIVE</u> COHESIVE <u>HIGHLY COHESIVE</u> DENSITY (COHESIVE CLAYS & SILTS): SOFT / FIRM / STIFF / VERY STIFF / HARD CONSISTENCY (NON COHESIVE SOILS): <u>LOOSE</u> <u>FIRM</u> DENSE <u>VERY DENSE</u> HC ODOR DETECTED: <u>YES</u> NO EXPLANATION - PHYSICALLY FROM BGT AREA. MOISTURE: DRY / SLIGHTLY MOIST / MOIST <u>WET</u> <u>SATURATED</u> SUPER SATURATED SAMPLE TYPE: <u>GRAB</u> <u>COMPOSITE</u> # OF PTS. 3 & 5 ANY AREAS DISPLAYING WETNESS: <u>YES</u> / NO EXPLANATION - BENEATH BGT. DISCOLORATION/STAINING OBSERVED: <u>YES</u> NO EXPLANATION - VARYING SHADES OF GRAY, BLACK																	
SITE OBSERVATIONS: LOST INTEGRITY OF EQUIPMENT: YES / NO EXPLANATION - UNDETERMINED APPARENT EVIDENCE OF A RELEASE OBSERVED AND/OR OCCURRED: <u>YES</u> NO EXPLANATION: BASED ON DISCOLORATION & PHYSICAL HYDROCARBON ODOR. EQUIPMENT SET OVER RECLAIMED AREA: YES <u>NO</u> EXPLANATION - OTHER: BEDROCK ENCOUNTERED 6.5 FEET BELOW GRADE. EXCAVATED IMPACTED SOILS @ 21 BGT (see sketch below). NMOCD REP. PRESENT TO WITNESS SAMPLING. SOIL IMPACT DIMENSION ESTIMATION: 12 ft. X 11 ft. X 4.5 ft. EXCAVATION ESTIMATION (Cubic Yards): 22 +/- DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1,000' NEAREST SURFACE WATER: <1,000' NMOCD TPH CLOSURE STD: 1,000 ppm																	
SITE SKETCH BGT Located: off <u>on</u> site PLOT PLAN circle: <u>attached</u> <div style="display: flex; align-items: flex-start;"> <div style="border: 1px solid black; padding: 5px; margin-right: 20px; text-align: center;"> COLLECTED 8 PT. COMPOSITE FROM EXCAVATED IMPACTED SOILS @ TIME - 1430 OVM = 14.4 ppm </div> <div style="text-align: center;"> </div> <div style="margin-left: 20px;"> <table border="1" style="margin-bottom: 10px;"> <thead> <tr> <th>SAMPLE ID</th> <th>TIME</th> <th>OVM (ppm)</th> </tr> </thead> <tbody> <tr> <td>3PC - ESW @ 4'-5' (21)</td> <td>1105</td> <td>0.6</td> </tr> <tr> <td>3PC - WSW @ 4'-5' (21)</td> <td>1107</td> <td>0.6</td> </tr> <tr> <td>3PC - NSW @ 4'-5' (21)</td> <td>1115</td> <td>83.4</td> </tr> <tr> <td>3PC - ESW @ 4'-5' (21)</td> <td>1132</td> <td>2.2</td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 5px;"> OVM CALIB. READ. = 52.3 ppm RF=0.52 OVM CALIB. GAS = 100 ppm TIME: 12:00 am/pm DATE: 09/18/16 </div> </div> </div>			SAMPLE ID	TIME	OVM (ppm)	3PC - ESW @ 4'-5' (21)	1105	0.6	3PC - WSW @ 4'-5' (21)	1107	0.6	3PC - NSW @ 4'-5' (21)	1115	83.4	3PC - ESW @ 4'-5' (21)	1132	2.2
SAMPLE ID	TIME	OVM (ppm)															
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3PC - NSW @ 4'-5' (21)	1115	83.4															
3PC - ESW @ 4'-5' (21)	1132	2.2															
MISCELL. NOTES WO: REF #: P - 709 VID: VHIXONEVB2 PJ #: Permit date(s): 06/08/10 OCD Appr. date(s): 04/08/16 <table border="1" style="width:100%;"> <tr> <td style="width:10%;">Tank ID</td> <td>OVM = Organic Vapor Meter ppm = parts per million</td> </tr> <tr> <td>B</td> <td>BGT Sidewalls Visible: Y <u>(N)</u></td> </tr> <tr> <td></td> <td>BGT Sidewalls Visible: Y / N</td> </tr> <tr> <td></td> <td>BGT Sidewalls Visible: Y / N</td> </tr> </table> Magnetic declination: 10° E			Tank ID	OVM = Organic Vapor Meter ppm = parts per million	B	BGT Sidewalls Visible: Y <u>(N)</u>		BGT Sidewalls Visible: Y / N		BGT Sidewalls Visible: Y / N							
Tank ID	OVM = Organic Vapor Meter ppm = parts per million																
B	BGT Sidewalls Visible: Y <u>(N)</u>																
	BGT Sidewalls Visible: Y / N																
	BGT Sidewalls Visible: Y / N																
NOTES: BGT = BELOW-GRADE TANK; E.D. = EXCAVATION DEPRESSION; B.G. = BELOW GRADE; B = BELOW; T.H. = TEST HOLE; ~ = APPROX.; W.H. = WELL HEAD; T.B. = TANK BOTTOM; PBGTL = PREVIOUS BELOW-GRADE TANK LOCATION; SPD = SAMPLE POINT DESIGNATION; R.W. = RETAINING WALL; NA = NOT APPLICABLE OR NOT AVAILABLE; SW - SINGLE WALL; DW - DOUBLE WALL; SB - SINGLE BOTTOM; DB - DOUBLE BOTTOM. NOTES: GOOGLE EARTH IMAGERY DATE: 3/15/2015. ONSITE: 09/19/16																	

Analytical Report

Lab Order 1609A90

Date Reported: 9/21/2016

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering

Client Sample ID: 5PC - TB @ 6' (21) - B

Project: NEIL A #9R

Collection Date: 9/19/2016 10:10:00 AM

Lab ID: 1609A90-002

Matrix: MEOH (SOIL)

Received Date: 9/20/2016 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/20/2016 11:02:01 AM	27599
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/20/2016 10:28:26 AM	27592
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/20/2016 10:28:26 AM	27592
Surr: DNOP	100	70-130		%Rec	1	9/20/2016 10:28:26 AM	27592
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.2		mg/Kg	1	9/20/2016 10:12:49 AM	G37324
Surr: BFB	89.7	68.3-144		%Rec	1	9/20/2016 10:12:49 AM	G37324
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.016		mg/Kg	1	9/20/2016 10:12:49 AM	B37324
Toluene	ND	0.032		mg/Kg	1	9/20/2016 10:12:49 AM	B37324
Ethylbenzene	ND	0.032		mg/Kg	1	9/20/2016 10:12:49 AM	B37324
Xylenes, Total	ND	0.065		mg/Kg	1	9/20/2016 10:12:49 AM	B37324
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	9/20/2016 10:12:49 AM	B37324

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.**Analytical Report**Lab Order **1609A91**Date Reported: **9/21/2016****CLIENT:** Blagg Engineering**Client Sample ID:** 1@6.5' (21)**Project:** NEIL A #9R**Collection Date:** 9/19/2016 10:15:00 AM**Lab ID:** 1609A91-001**Matrix:** MEOH (SOIL)**Received Date:** 9/20/2016 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/20/2016 11:14:26 AM	27599
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.8		mg/Kg	1	9/20/2016 10:06:02 AM	27592
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/20/2016 10:06:02 AM	27592
Surr: DNOP	99.6	70-130		%Rec	1	9/20/2016 10:06:02 AM	27592
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.1		mg/Kg	1	9/20/2016 10:36:16 AM	G37324
Surr: BFB	82.2	68.3-144		%Rec	1	9/20/2016 10:36:16 AM	G37324
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	9/20/2016 10:36:16 AM	B37324
Toluene	ND	0.041		mg/Kg	1	9/20/2016 10:36:16 AM	B37324
Ethylbenzene	ND	0.041		mg/Kg	1	9/20/2016 10:36:16 AM	B37324
Xylenes, Total	ND	0.081		mg/Kg	1	9/20/2016 10:36:16 AM	B37324
Surr: 4-Bromofluorobenzene	97.0	80-120		%Rec	1	9/20/2016 10:36:16 AM	B37324

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609A91

Date Reported: 9/21/2016

CLIENT: Blagg Engineering

Client Sample ID: 3pc-ESW@4'-5' (21)

Project: NEIL A #9R

Collection Date: 9/19/2016 11:05:00 AM

Lab ID: 1609A91-002

Matrix: MEOH (SOIL)

Received Date: 9/20/2016 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/20/2016 11:26:50 AM	27599
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.1		mg/Kg	1	9/20/2016 10:27:43 AM	27592
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/20/2016 10:27:43 AM	27592
Surr: DNOP	103	70-130		%Rec	1	9/20/2016 10:27:43 AM	27592
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	9/20/2016 10:59:49 AM	G37324
Surr: BFB	83.0	68.3-144		%Rec	1	9/20/2016 10:59:49 AM	G37324
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	9/20/2016 10:59:49 AM	B37324
Toluene	ND	0.034		mg/Kg	1	9/20/2016 10:59:49 AM	B37324
Ethylbenzene	ND	0.034		mg/Kg	1	9/20/2016 10:59:49 AM	B37324
Xylenes, Total	ND	0.067		mg/Kg	1	9/20/2016 10:59:49 AM	B37324
Surr: 4-Bromofluorobenzene	99.1	80-120		%Rec	1	9/20/2016 10:59:49 AM	B37324

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609A91

Date Reported: 9/21/2016

CLIENT: Blagg Engineering

Client Sample ID: 3pc-WSW@4'-5' (21)

Project: NEIL A #9R

Collection Date: 9/19/2016 11:07:00 AM

Lab ID: 1609A91-003

Matrix: MEOH (SOIL)

Received Date: 9/20/2016 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/20/2016 11:39:14 AM	27599
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	9/20/2016 10:49:31 AM	27592
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	9/20/2016 10:49:31 AM	27592
Surr: DNOP	106	70-130		%Rec	1	9/20/2016 10:49:31 AM	27592
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.3		mg/Kg	1	9/20/2016 11:23:16 AM	G37324
Surr: BFB	82.2	68.3-144		%Rec	1	9/20/2016 11:23:16 AM	G37324
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.016		mg/Kg	1	9/20/2016 11:23:16 AM	B37324
Toluene	ND	0.033		mg/Kg	1	9/20/2016 11:23:16 AM	B37324
Ethylbenzene	ND	0.033		mg/Kg	1	9/20/2016 11:23:16 AM	B37324
Xylenes, Total	ND	0.065		mg/Kg	1	9/20/2016 11:23:16 AM	B37324
Surr: 4-Bromofluorobenzene	97.6	80-120		%Rec	1	9/20/2016 11:23:16 AM	B37324

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609A91

Date Reported: 9/21/2016

CLIENT: Blagg Engineering

Client Sample ID: 3pc-NSW@4'-5' (21)

Project: NEIL A #9R

Collection Date: 9/19/2016 11:15:00 AM

Lab ID: 1609A91-004

Matrix: MEOH (SOIL)

Received Date: 9/20/2016 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/20/2016 11:51:39 AM	27599
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/20/2016 11:11:18 AM	27592
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	9/20/2016 11:11:18 AM	27592
Surr: DNOP	104	70-130		%Rec	1	9/20/2016 11:11:18 AM	27592
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.0		mg/Kg	1	9/20/2016 11:46:47 AM	G37324
Surr: BFB	98.7	68.3-144		%Rec	1	9/20/2016 11:46:47 AM	G37324
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.020		mg/Kg	1	9/20/2016 11:46:47 AM	B37324
Toluene	ND	0.040		mg/Kg	1	9/20/2016 11:46:47 AM	B37324
Ethylbenzene	ND	0.040		mg/Kg	1	9/20/2016 11:46:47 AM	B37324
Xylenes, Total	ND	0.080		mg/Kg	1	9/20/2016 11:46:47 AM	B37324
Surr: 4-Bromofluorobenzene	97.3	80-120		%Rec	1	9/20/2016 11:46:47 AM	B37324

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609A91

Date Reported: 9/21/2016

CLIENT: Blagg Engineering

Client Sample ID: 3pc-SSW@4'-5' (21)

Project: NEIL A #9R

Collection Date: 9/19/2016 11:32:00 AM

Lab ID: 1609A91-005

Matrix: MEOH (SOIL)

Received Date: 9/20/2016 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/20/2016 12:04:04 PM	27599
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.7		mg/Kg	1	9/20/2016 11:12:23 AM	27592
Motor Oil Range Organics (MRO)	ND	49		mg/Kg	1	9/20/2016 11:12:23 AM	27592
Surr: DNOP	101	70-130		%Rec	1	9/20/2016 11:12:23 AM	27592
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	4.4		mg/Kg	1	9/20/2016 12:10:16 PM	G37324
Surr: BFB	81.9	68.3-144		%Rec	1	9/20/2016 12:10:16 PM	G37324
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.022		mg/Kg	1	9/20/2016 12:10:16 PM	B37324
Toluene	ND	0.044		mg/Kg	1	9/20/2016 12:10:16 PM	B37324
Ethylbenzene	ND	0.044		mg/Kg	1	9/20/2016 12:10:16 PM	B37324
Xylenes, Total	ND	0.088		mg/Kg	1	9/20/2016 12:10:16 PM	B37324
Surr: 4-Bromofluorobenzene	95.2	80-120		%Rec	1	9/20/2016 12:10:16 PM	B37324

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1609A91

Date Reported: 9/21/2016

CLIENT: Blagg Engineering

Client Sample ID: 8pc-Excav. Impacted Soils (21)

Project: NEIL A #9R

Collection Date: 9/19/2016 2:30:00 PM

Lab ID: 1609A91-006

Matrix: MEOH (SOIL)

Received Date: 9/20/2016 8:40:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: LGT
Chloride	ND	30		mg/Kg	20	9/20/2016 12:16:28 PM	27599
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS							Analyst: TOM
Diesel Range Organics (DRO)	ND	9.2		mg/Kg	1	9/20/2016 10:50:23 AM	27592
Motor Oil Range Organics (MRO)	ND	46		mg/Kg	1	9/20/2016 10:50:23 AM	27592
Surr: DNOP	96.7	70-130		%Rec	1	9/20/2016 10:50:23 AM	27592
EPA METHOD 8015D: GASOLINE RANGE							Analyst: NSB
Gasoline Range Organics (GRO)	ND	3.4		mg/Kg	1	9/20/2016 12:33:46 PM	G37324
Surr: BFB	88.2	68.3-144		%Rec	1	9/20/2016 12:33:46 PM	G37324
EPA METHOD 8021B: VOLATILES							Analyst: NSB
Benzene	ND	0.017		mg/Kg	1	9/20/2016 12:33:46 PM	B37324
Toluene	ND	0.034		mg/Kg	1	9/20/2016 12:33:46 PM	B37324
Ethylbenzene	ND	0.034		mg/Kg	1	9/20/2016 12:33:46 PM	B37324
Xylenes, Total	ND	0.067		mg/Kg	1	9/20/2016 12:33:46 PM	B37324
Surr: 4-Bromofluorobenzene	96.1	80-120		%Rec	1	9/20/2016 12:33:46 PM	B37324

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Turn-Around Time:

☐ Standard

SAME

DAY

Project Name:

Mailing Address: P.O. BOX 87

NEIL A # 9R

BLOOMFIELD, NM 87413

Project #:

hone #: (505) 632-1199

Project Manager:

mail or Fax#:

!A/QC Package:

NELSON VELEZ

7 Standard

☐ Level 4 (Full Validation)

ccreditation:

Sampler: NELSON VELEZ

J NELAP

☐ Other

1 EDD (Type)

Sample Temperature:

[illegible]

Date:	Time:
7/19/16	1631

Relinquished by:

Received by:

Date Time

Date:	Time:
7/19/14	1904

Relinquished by:

Received by:

Date Time

Remarks:	
----------	--

**BILL DIRECTLY TO BP USING THE CIRCLED CONTACT WITH
CORRESPONDING VID & REFERENCE # WHEN APPLICABLE:**

VID:

Vance Hixon
VHIXONEVB2

Steve Moskal
VMOS6HQFEC

John Ritchie
VRITCJWFEC

Reference #

P - 709

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.

Chain-of-Custody Record

Client: **BLAGG ENGR. / BP AMERICA**

Mailing Address: **P.O. BOX 87**

BLOOMFIELD, NM 87413

Phone #: **(505) 632-1199**

Mail or Fax#:

VQC Package:

☒ Standard ☐ Level 4 (Full Validation)

Creditation:

NELAP ☐ Other

EDD (Type)

Turn-Around Time:

SAME DAY

☐ Standard ☒ Rush

Project Name:

NEIL A # 9R

Project #:

Project Manager:

NELSON VELEZ

Sampler: **NELSON VELEZ**

On Ice: ☒ Yes ☐ No

Sample Temperature: **1.80C**



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No	BTEX + MTBE + TPH (8021B)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH (8310 or 8270SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₃ , NO ₂ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Chloride (soil - 300.0 / water - 300.1)	Grab sample	#pt. composite sample	Air Bubbles (Y or N)
1/19/16	1015	SOIL	DE 6.5' (2)	402.-1	COOL	-001	✓	✓										✓	✓		
1/19/16	1105	SOIL	3PC-ESW @ 4'-5' (2)	402.-1	COOL	-002	✓	✓										✓		3	
1/19/16	1107	SOIL	3PC-WSW @ 4'-5' (2)	402.-1	COOL	-003	✓	✓										✓		3	
1/19/16	1115	SOIL	3PC-NSW @ 4'-5' (2)	402.-1	COOL	-004	✓	✓										✓		3	
1/19/16	1132	SOIL	3PC-SSW @ 4'-5' (2)	402.-1	COOL	-005	✓	✓										✓		3	
1/19/16	1430	SOIL	8PC-EXCAV. IMPACTED SOILS (2)	402.-1	COOL	-006	✓	✓										✓		8	

Date: 1/19/16 Time: 1631 Relinquished by: *[Signature]*

Received by: *[Signature]* Date: 1/19/16 Time: 1631

Remarks: **BILL DIRECTLY TO BP USING THE CIRCLED CONTACT WITH CORRESPONDING VID & REFERENCE # WHEN APPLICABLE:**

Vance Hixon
VID: VHIXONEVB2

Steve Moskal
VMOS6HQFEC
P-709

John Ritchie
VRITCJWFEC

Date: 1/19/16 Time: 1904 Relinquished by: *[Signature]*

Received by: *[Signature]* Date: 1/19/16 Time: 0840

Reference #

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A90

21-Sep-16

Client: Blagg Engineering

Project: NEIL A #9R

Sample ID	MB-27599	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	27599	RunNo:	37349					
Prep Date:	9/20/2016	Analysis Date:	9/20/2016	SeqNo:	1160293	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-27599	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	27599	RunNo:	37349					
Prep Date:	9/20/2016	Analysis Date:	9/20/2016	SeqNo:	1160294	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A90

21-Sep-16

Client: Blagg Engineering

Project: NEIL A #9R

Sample ID	LCS-27592		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	27592		RunNo:	37319				
Prep Date:	9/20/2016		Analysis Date:	9/20/2016		SeqNo:	1159031		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	56	10	50.00	0	112	62.6	124				
Surr: DNOP	4.8		5.000		95.9	70	130				

Sample ID	MB-27592		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	27592		RunNo:	37319				
Prep Date:	9/20/2016		Analysis Date:	9/20/2016		SeqNo:	1159032		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	9.6		10.00		96.4	70	130				

Sample ID	MB-27560		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 27560		RunNo: 37319					
Prep Date:	9/19/2016		Analysis Date: 9/20/2016		SeqNo: 1159369		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		106	70	130			

Sample ID	LCS-27560		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 27560		RunNo: 37319					
Prep Date:	9/19/2016		Analysis Date: 9/20/2016		SeqNo: 1159425		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		91.7	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A90

21-Sep-16

Client: Blagg Engineering

Project: NEIL A #9R

Sample ID	B29		SampType: MBLK		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	PBS		Batch ID: G37324		RunNo: 37324					
Prep Date:			Analysis Date: 9/20/2016		SeqNo: 1159744		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	810		1000		81.4	68.3	144			

Sample ID	2.5UG GRO LCS	SampType: LCS			TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID: G37324			RunNo: 37324					
Prep Date:		Analysis Date: 9/20/2016			SeqNo: 1159745		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.8	74.6	123			
Surr: BFB	990		1000		98.8	68.3	144			

Sample ID	1609A90-002AMS		SampType: MS		TestCode: EPA Method 8015D: Gasoline Range					
Client ID:	5PC - TB @ 6' (21) -		Batch ID: G37324		RunNo: 37324					
Prep Date:			Analysis Date: 9/20/2016		SeqNo: 1159746		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	16	3.2	16.24	1.046	91.8	59.3	143			
Surr: BFB	600		649.8		91.9	68.3	144			

Sample ID	1609A90-002AMSD		SampType:	MSD		TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	5PC - TB @ 6' (21) -		Batch ID:	G37324		RunNo:	37324				
Prep Date:			Analysis Date:	9/20/2016		SeqNo:	1159747	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Gasoline Range Organics (GRO)	15	3.2	16.24	1.046	84.1	59.3	143	8.09	20		
Surr: BFB	590		649.8		90.6	68.3	144	0	0		

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A90

21-Sep-16

Client: Blagg Engineering

Project: NEIL A #9R

Sample ID	B29		SampType:	MBLK		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	PBS		Batch ID:	B37324		RunNo:	37324			
Prep Date:			Analysis Date:	9/20/2016		SeqNo:	1159773		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		98.0	80	120			

Sample ID	100NG BTEX LCS		SampType:	LCS		TestCode:	EPA Method 8021B: Volatiles			
Client ID:	LCSS		Batch ID:	B37324		RunNo:	37324			
Prep Date:			Analysis Date:	9/20/2016		SeqNo:	1159774		Units: mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.1	75.3	123			
Toluene	0.97	0.050	1.000	0	96.9	80	124			
Ethylbenzene	0.99	0.050	1.000	0	99.0	82.8	121			
Xylenes, Total	2.9	0.10	3.000	0	97.6	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E Value above quantitation range
H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit	P Sample pH Not In Range
R RPD outside accepted recovery limits	RL Reporting Detection Limit
S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **BLAGG**

Work Order Number: **1609A90**

RcptNo: **1**

Received by/date: AS 09/20/16

Logged By: **Lindsay Mangin**

9/20/2016 8:40:00 AM

Completed By: **Lindsay Mangin**

9/20/2016 8:47:57 AM

Reviewed By: [Signature] AT

09/20/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A91

21-Sep-16

Client: Blagg Engineering

Project: NEIL A #9R

Sample ID	MB-27599	SampType:	MBLK	TestCode:	EPA Method 300.0: Anions					
Client ID:	PBS	Batch ID:	27599	RunNo:	37349					
Prep Date:	9/20/2016	Analysis Date:	9/20/2016	SeqNo:	1160293	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-27599	SampType:	LCS	TestCode:	EPA Method 300.0: Anions					
Client ID:	LCSS	Batch ID:	27599	RunNo:	37349					
Prep Date:	9/20/2016	Analysis Date:	9/20/2016	SeqNo:	1160294	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	94.1	90	110			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A91

21-Sep-16

Client: Blagg Engineering

Project: NEIL A #9R

Sample ID	LCS-27592		SampType:	LCS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	LCSS		Batch ID:	27592		RunNo:	37319				
Prep Date:	9/20/2016		Analysis Date:	9/20/2016		SeqNo:	1159031		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	56	10	50.00	0	112	62.6	124				
Surr: DNOP	4.8		5.000		95.9	70	130				

Sample ID	MB-27592		SampType:	MBLK		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	PBS		Batch ID:	27592		RunNo:	37319				
Prep Date:	9/20/2016		Analysis Date:	9/20/2016		SeqNo:	1159032		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	ND	10									
Motor Oil Range Organics (MRO)	ND	50									
Surr: DNOP	9.6		10.00		96.4	70	130				

Sample ID	1609A91-001AMS		SampType:	MS		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	1@6.5' (21)		Batch ID:	27592		RunNo:	37320				
Prep Date:	9/20/2016		Analysis Date:	9/20/2016		SeqNo:	1159363		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	44	9.4	46.77	3.061	88.5	33.9	141				
Surr: DNOP	4.6		4.677		98.5	70	130				

Sample ID	1609A91-001AMSD		SampType:	MSD		TestCode:	EPA Method 8015M/D: Diesel Range Organics				
Client ID:	1@6.5' (21)		Batch ID:	27592		RunNo:	37320				
Prep Date:	9/20/2016		Analysis Date:	9/20/2016		SeqNo:	1159364		Units: mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Diesel Range Organics (DRO)	46	9.7	48.54	3.061	88.9	33.9	141	3.91	20		
Surr: DNOP	4.8		4.854		98.9	70	130	0	0		

Sample ID	MB-27560		SampType: MBLK		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	PBS		Batch ID: 27560		RunNo: 37319					
Prep Date:	9/19/2016		Analysis Date: 9/20/2016		SeqNo: 1159369		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	11		10.00		106	70	130			

Sample ID	LCS-27560		SampType: LCS		TestCode: EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS		Batch ID: 27560		RunNo: 37319					
Prep Date:	9/19/2016		Analysis Date: 9/20/2016		SeqNo: 1159425		Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A91

21-Sep-16

Client: Blagg Engineering

Project: NEIL A #9R

Sample ID	LCS-27560	SampType:	LCS	TestCode:	EPA Method 8015M/D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	27560	RunNo:	37319					
Prep Date:	9/19/2016	Analysis Date:	9/20/2016	SeqNo:	1159425	Units:	%Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.6		5.000		91.7	70	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A91

21-Sep-16

Client: Blagg Engineering

Project: NEIL A #9R

Sample ID	B29	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	G37324	RunNo:	37324					
Prep Date:		Analysis Date:	9/20/2016	SeqNo:	1159744	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	810		1000		81.4	68.3	144			

Sample ID	2.5UG GRO LCS	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	G37324	RunNo:	37324					
Prep Date:		Analysis Date:	9/20/2016	SeqNo:	1159745	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24	5.0	25.00	0	95.8	74.6	123			
Surr: BFB	990		1000		98.8	68.3	144			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1609A91

21-Sep-16

Client: Blagg Engineering

Project: NEIL A #9R

Sample ID	B29	SampType: MBLK		TestCode: EPA Method 8021B: Volatiles						
Client ID:	PBS	Batch ID: B37324		RunNo: 37324						
Prep Date:		Analysis Date: 9/20/2016		SeqNo: 1159773		Units: mg/Kg				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.98		1.000		98.0	80	120			

Sample ID	100NG BTEX LCS	SampType: LCS			TestCode: EPA Method 8021B: Volatiles					
Client ID:	LCSS	Batch ID: B37324			RunNo: 37324					
Prep Date:		Analysis Date: 9/20/2016			SeqNo: 1159774		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.98	0.025	1.000	0	98.1	75.3	123			
Toluene	0.97	0.050	1.000	0	96.9	80	124			
Ethylbenzene	0.99	0.050	1.000	0	99.0	82.8	121			
Xylenes, Total	2.9	0.10	3.000	0	97.6	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID	1609A91-001AMS		SampType: MS		TestCode: EPA Method 8021B: Volatiles					
Client ID:	1@6.5' (21)		Batch ID: B37324		RunNo: 37324					
Prep Date:			Analysis Date: 9/20/2016		SeqNo: 1159776		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.75	0.020	0.8123	0	92.6	71.5	122			
Toluene	0.76	0.041	0.8123	0	93.1	71.2	123			
Ethylbenzene	0.76	0.041	0.8123	0	93.9	75.2	130			
Xylenes, Total	2.3	0.081	2.437	0	93.8	72.4	131			
Surr: 4-Bromofluorobenzene	0.83		0.8123		102	80	120			

Sample ID	1609A91-001AMSD		SampType: MSD		TestCode: EPA Method 8021B: Volatiles					
Client ID:	1@6.5' (21)		Batch ID: B37324		RunNo: 37324					
Prep Date:			Analysis Date: 9/20/2016		SeqNo: 1159777		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.75	0.020	0.8123	0	92.7	71.5	122	0.0496	20	
Toluene	0.76	0.041	0.8123	0	94.1	71.2	123	1.10	20	
Ethylbenzene	0.78	0.041	0.8123	0	96.5	75.2	130	2.70	20	
Xylenes, Total	2.3	0.081	2.437	0	94.5	72.4	131	0.824	20	
Surr: 4-Bromofluorobenzene	0.82		0.8123		101	80	120	0	0	

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| R RPD outside accepted recovery limits | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: BLAGG

Work Order Number: 1609A91

RcptNo: 1

Received by/date: AS 09/20/16

Logged By: Lindsay Mangin 9/20/2016 8:40:00 AM

Completed By: Lindsay Mangin 9/20/2016 8:54:36 AM

Reviewed By: [Signature] 09/20/16

Chain of Custody

1. Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒
2. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
3. How was the sample delivered? Courier

Log In

4. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
5. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
6. Sample(s) in proper container(s)? Yes ☒ No ☐
7. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
8. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
9. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
10. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☒
11. Were any sample containers received broken? Yes ☐ No ☒
12. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
13. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
14. Is it clear what analyses were requested? Yes ☒ No ☐
15. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: _____
(<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

17. Additional remarks:

18. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good	Yes			