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

14289

RECEIVED
By kcollins at 7:58 am, Mar 09, 2016

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: ConocoPhillips Company OGRID #: 217817
Address: PO BOX 4289, Farmington, NM 87499
Facility or well name: JICARILLA K 17M
API Number: 30-039-25842 OCD Permit Number: _____
U/L or Qtr/Qtr O Section 12 Township 25 N Range 5 W County: Rio Arriba
Center of Proposed Design: Latitude 36.40923 °N Longitude -107.30779 °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: Max. 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 _____mil ☐ HDPE ☐ PVC ☒ Other UNSPECIFIED

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_____

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 H_2S, Prevention Plan
- ☐ Emergency Response Plan
- ☐ Oil Field Waste Stream Characterization
- ☐ Monitoring and Inspection Plan
- ☐ Erosion Control Plan
- ☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

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	☐ Yes ☐ No ☐ 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	☐ Yes ☐ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☐ No ☐ NA
Within 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	☐ 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 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	☐ Yes ☐ No
Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ 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
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 Fuller **Approval Date:** 04-08-2016

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:** 6/14/12

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

22.

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): Kelly G. Roberts Title: Regulatory Technician

Signature: Kelly G. Roberts Date: 1/7/16

e-mail address: Kelly.Roberts@cop.com Telephone: (505) 326-9775

ConocoPhillips Company
San Juan Basin
Below Grade Tank Closure Report

Lease Name: JICARILLA K 17M
API No.: 30-039-25842

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. COPC 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, COPC 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. COPC 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. COPC 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 COPC 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. COPC will test the soils beneath the below-grade tank to determine whether a release has occurred. COPC 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 COPC or the division determines that a release has occurred, then COPC 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 COPC 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:
   i. Operator's name
   ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.

   Notification was not found.

9. The surface owner shall be notified of COPC'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. COPC 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 in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **ConocoPhillips Company**	Contact **Ashley Maxwell**
Address **3401 E. 30th St., Farmington, NM 87402**	Telephone No. **505-324-5169**
Facility Name **Jicarilla K 17M**	Facility Type **Gas Well**

Surface Owner **Jicarilla Tribe**	Mineral Owner **Jicarilla Tribe**	API No. **3003925842** **Contract Number 145**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
O	**12**	**025N**	**005W**	**790'**	**South**	**1850'**	**East**	**Rio Arriba**

Latitude 36.409 Longitude -107.30758

NATURE OF RELEASE

Type of Release **Production Fluids**	Volume of Release **Unknown**	Volume Recovered **233 yds³**
Source of Release **Below Grade Tank**	Date and Hour of Occurrence **9/4/2012**	Date and Hour of Discovery
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom? **Ashley Maxwell**	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* Below Grade Tank Closure Activities

Describe Area Affected and Cleanup Action Taken.*

The below grade tank sample results were above regulatory standard by USEPA method 418.1 for TPH confirming a release. Excavation was required based on Jicarilla Apache Nation Oil & Gas Administration (JANOGA) soil remediation action levels. The excavation was 30'X35'X6' and 233 yds³ of soil was transported to a third party land farm. Excavation and confirmation sampling occurred. Analytical results were below the regulatory standards set forth by JANOGA; therefore no further action is needed.

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:	OIL CONSERVATION DIVISION	
Printed Name: **Ashley Maxwell**	Approved by Environmental Specialist:	
Title: **Field Environmental Specialist**	Approval Date:	Expiration Date:
E-mail Address: **ashley.p.wethington@conocophillips.com**	Conditions of Approval:	Attached ☐
Date **December 3, 2012** Phone: **505-324-5169**		

* Attach Additional Sheets If Necessary

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3274

November 16, 2012

Ashley Maxwell
ConocoPhillips
San Juan Business Unit
Office 216-2
5525 Hwy 64
Farmington, New Mexico 87401

RE: Below Grade Tank Closure and Release Report
Jicarilla K #17M
Rio Arriba County, New Mexico

Dear Ms. Maxwell:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the below grade tank (BGT) closure and release confirmation at the ConocoPhillips (CoP) Jicarilla K #17M, located in Rio Arriba County, New Mexico. Tank removal was completed by CoP contractors prior to AES' arrival on site.

1.0 Site Information

1.1 Location

Site Name – Jicarilla K #17M
Legal Description - SW¼ SE¼, Section 12, T25N, R5W, Rio Arriba County, New Mexico
Well Latitude/Longitude – N36.40896 and W107.30789, respectively
BGT Latitude/Longitude - N36.40923 and W107.30779, respectively
Land Jurisdiction – Jicarilla Apache Tribal Land
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, June 2012

1.2 Risk Ranking

The Jicarilla K #17M is located on Jicarilla Apache Tribal lands. Therefore, soil remediation action levels are determined by the Jicarilla Apache Nation Oil and Gas Administration (JANOGA). JANOGA remedial action levels for BGT closures are as follows: 0.2 mg/kg benzene, 50 mg/kg total BTEX (benzene, toluene, ethylbenzene, and xylenes), 100 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO), motor oil range organics (MRO), and diesel range organics (DRO), and 250 mg/kg chlorides.

1.3 BGT Closure Assessment

AES was initially contacted by Bruce Yazzie, CoP representative, on June 13, 2012, and on the June 14, 2012, Tami Ross and Zachary Trujillo of AES met with Bruce Yazzie at the location. AES personnel collected six soil samples (S-1 through S-6) from the below the BGT liner. Four samples were collected from the perimeter of the BGT footprint, and two samples were collected from the center of the BGT footprint (S-5 and S-6). A 6-point composite sample (SC-1) of the BGT footprint was collected for confirmation laboratory analysis. Additionally, one soil sample (S-7) was collected from an area of surface staining located to the southwest of the BGT.

2.0 Soil Sampling

On June 14, 2012, AES personnel conducted field screening and collected six soil samples (S-1 through S-6) and one 6-point composite (SC-1) from below the BGT. Samples S-1 through S-5 were collected at 0.5 feet below the BGT liner, and S-6 was collected from 2 feet below the depth of the BGT liner. Soil sample S-7 was at collected at 0.5 feet below ground surface (bgs) from an adjacent area of surface staining. Soil samples were collected for field screening of volatile organic compounds (VOCs), TPH, and chlorides. Soil samples SC-1 and S-7 were submitted for confirmation laboratory analyses. Soil sample locations are included on Figure 2.

2.1 Field Screening

2.1.1 Volatile Organic Compounds

A portion of each sample was utilized for field screening of VOC vapors with a photo-ionization detector (PID) organic vapor meter (OVM). Before beginning field screening, the PID-OVM was first calibrated with 100 parts per million (ppm) isobutylene gas.

2.1.2 Total Petroleum Hydrocarbons

Soil samples were also analyzed in the field for TPH per USEPA Method 418.1 using a Buck Scientific Model HC-404 Total Hydrocarbon Analyzer Infrared Spectrometer (Buck). A 3-point calibration was completed prior to conducting soil analyses. Field analytical protocol followed AES's *Standard Operating Procedure: Field Analysis Total Petroleum Hydrocarbons per EPA Method 418.1*.

2.1.3 Chlorides

Soil samples were field screened for chlorides using Chloride Drop Count Titration with silver nitrate. Sampling and analysis methods followed procedures provided by Hach Company.

2.2 Laboratory Analyses

Samples SC-1 and S-7 collected for laboratory analysis were placed into new, clean, laboratory-supplied containers, which were then labeled, placed on ice, and logged onto a sample chain of custody record. Samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. The soil samples were laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B;
- TPH for GRO, DRO, and MRO per USEPA Method 8015B;
- Chlorides per USEPA Method 300.0.

2.3 Field and Laboratory Analytical Results

Field screening readings for VOCs via OVM ranged from 15.7 ppm in S-3 up to 645 ppm in S-7. Field TPH concentrations ranged from 251 mg/kg in S-2 up to 4,560 mg/kg in S-1. Field screening VOC and TPH results are summarized in Table 1 and on Figure 2. The AES field screening report is attached.

Table 1. Soil Field Screening OVM, TPH and Chloride Results
Jicarilla K #17M BGT Closure, June 2012

Sample ID	Date Sampled	Depth below BGT (ft)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)	Chloride (mg/kg)
JANOGA Action Level			--	*100*	*250*
S-1	6/14/12	0.5	**104**	**4,560**	60
S-2	6/14/12	0.5	25.5	**251**	60
S-3	6/14/12	0.5	15.7	**376**	60
S-4	6/14/12	0.5	**290**	**3,910**	60
S-5	6/14/12	0.5	**582**	**2,490**	60
S-6	6/14/12	2	50.3	**2,090**	NA
S-7	6/14/12	0.5	**645**	NA	NA

NA – Not Analyzed

Laboratory analytical results for SC-1 and S-7 reported benzene concentrations below laboratory detection limits of 0.050 mg/kg and 0.25 mg/kg, respectively. Total BTEX concentrations were less than 0.21 mg/kg in SC-1 and 35 mg/kg in S-7. TPH concentrations were reported at 1,916 mg/kg in SC-1 and 6,140 mg/kg in S-7. The chloride concentration in SC-1 was less than 30 mg/kg. Laboratory analytical results are

summarized in Table 2 and included on Figure 2. Laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results
Jicarilla K #17M BGT Closure, June 2012

Sample ID	Date	Depth (ft)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-MRO (mg/kg)	Chlorides (mg/kg)
JANOGA Action Level			**0.2**	**50**		**100**		**250**
SC-1	6/14/12	0.5 to 2	<0.050	<0.21	**36**	**780**	**1,100**	<30
S-7	6/14/12	0.5	<0.25	35	**440**	**3,900**	**1,800**	NA

NA – Not Analyzed

3.0 Conclusions

3.1 BGT Closure

Action levels for BGT closures on Jicarilla lands have been set by JANOGA. Field VOC concentrations exceeded 100 ppm in S-1, S-4, S-5, and S-7. Field TPH concentrations for samples S-1 through S-6 were reported above the applicable JANOGA action level of 100 mg/kg, with concentrations ranging from 251 mg/kg in S-2 up to 4,560 mg/kg in S-1. Based on field screening results on June 14, 2012, a release is confirmed at the Jicarilla K #17M BGT location.

3.2 Release Confirmation

Soil laboratory analytical results reported benzene, total BTEX and chloride concentrations below JANOGA action levels in both SC-1 and S-7. However, TPH concentrations as GRO, DRO, and MRO exceeded the JANOGA action level of 100 mg/kg, and therefore a release is confirmed at the Jicarilla K #17M location. Release notification and abatement should follow the protocols specified under JANOGA regulations.

If you have any questions about this report or site conditions, please do not hesitate to contact Deborah Watson at (505) 564-2281.

Sincerely,

Heather M. Woods

Heather M. Woods
Staff Geologist

Elizabeth McNally, P.E.

Attachments:

Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, June 2012
AES Field Screening Report 061412
Hall Analytical Report 1206657

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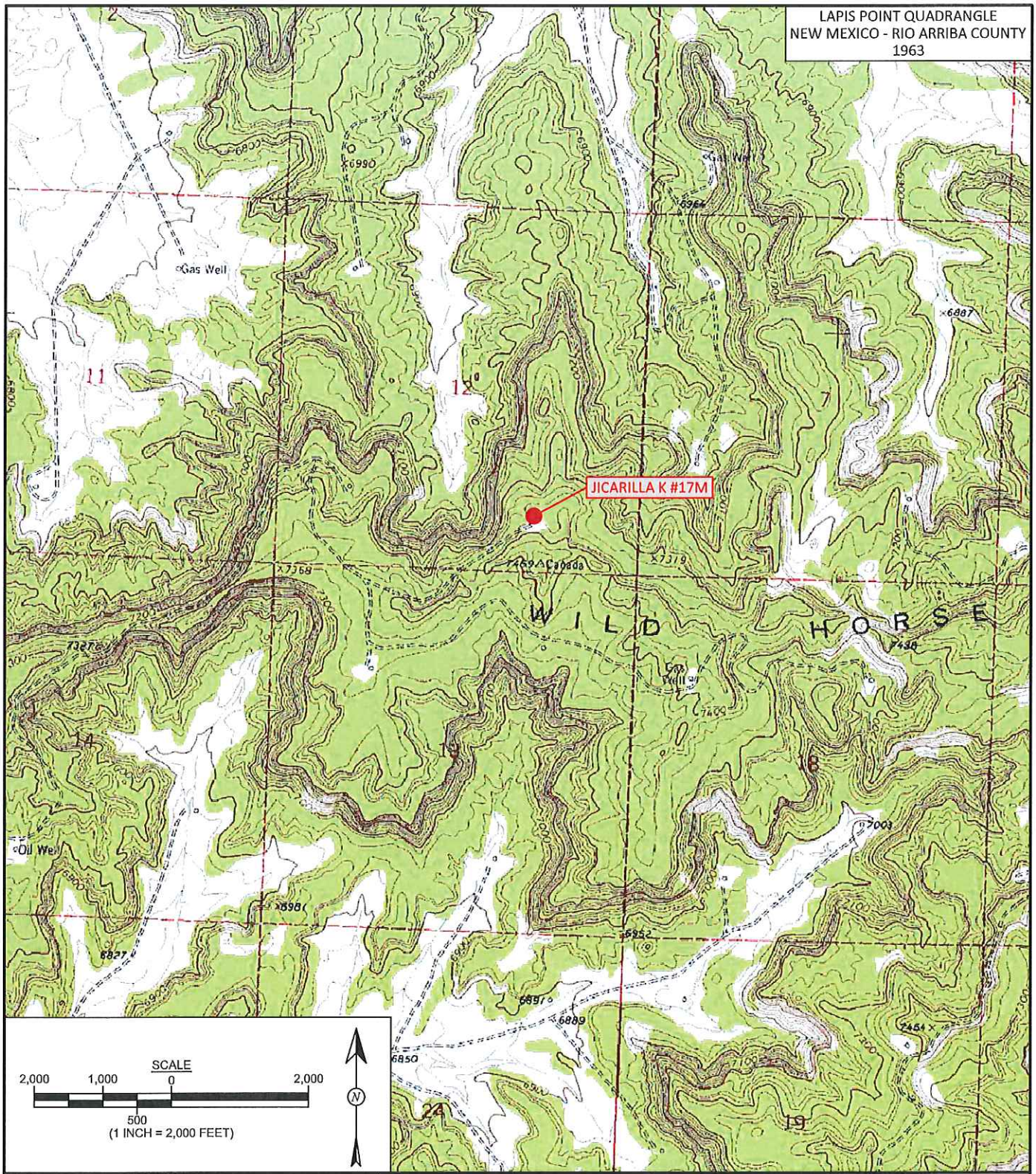


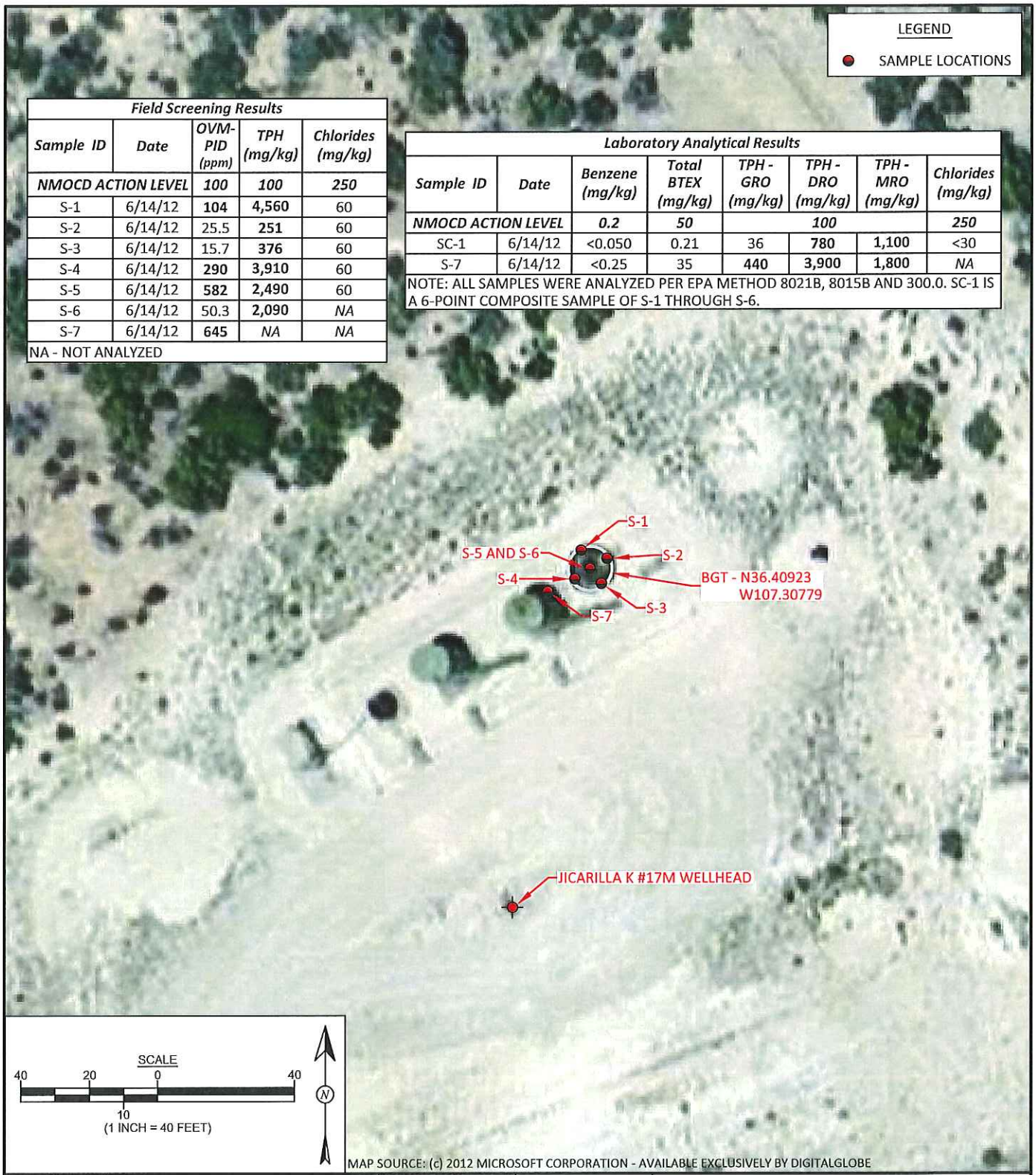
AES

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** June 21, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** June 21, 2012
CHECKED BY: D. Watson	**DATE CHECKED:** June 21, 2012
APPROVED BY: E. McNally	**DATE APPROVED:** June 21, 2012

FIGURE 1

TOPOGRAPHIC SITE LOCATION MAP
ConocoPhillips
JICARILLA K #17M
RIO ARRIBA COUNTY, NEW MEXICO
SW¼ SE¼, SECTION 12, T25N, R5W
N36.40896, W107.30789



Field Screening Results

Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		100	100	250
S-1	6/14/12	**104**	**4,560**	60
S-2	6/14/12	25.5	**251**	60
S-3	6/14/12	15.7	**376**	60
S-4	6/14/12	**290**	**3,910**	60
S-5	6/14/12	**582**	**2,490**	60
S-6	6/14/12	50.3	**2,090**	NA
S-7	6/14/12	**645**	NA	NA

NA - NOT ANALYZED

Laboratory Analytical Results

Sample ID	Date	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	TPH - MRO (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		0.2	50	100			250
SC-1	6/14/12	<0.050	0.21	36	**780**	**1,100**	<30
S-7	6/14/12	<0.25	35	**440**	**3,900**	**1,800**	NA

NOTE: ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B, 8015B AND 300.0. SC-1 IS A 6-POINT COMPOSITE SAMPLE OF S-1 THROUGH S-6.

MAP SOURCE: (c) 2012 MICROSOFT CORPORATION - AVAILABLE EXCLUSIVELY BY DIGITALGLOBE

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** June 22, 2012
REVISIONS BY: C. Lameman	**DATE REVISED:** June 22, 2012
CHECKED BY: D. Watson	**DATE CHECKED:** June 22, 2012
APPROVED BY: E. McNally	**DATE APPROVED:** June 22, 2012

FIGURE 2

AERIAL SITE MAP
BELOW GRADE TANK CLOSURE
JUNE 2012
ConocoPhillips
JICARILLA K #17M
RIO ARRIBA COUNTY, NEW MEXICO
SW¼ SE¼, SECTION 12, T25N, R5W
N36.40896, W107.30789

AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3274

Client: ConocoPhillips

Project Location: Jicarilla K #17M

Date: 6/14/2012

Matrix: Soil

Sample ID	Collection Date	Time of Sample Collection	Sample Location	OVM (ppm)	Field Chloride (mg/kg)	Field TPH Analysis Time	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
S-1	6/14/2012	11:15	North	104	60	12:18	4,560	200	10	TCR
S-2	6/14/2012	11:25	East	25.5	60	12:21	251	20.0	1	TCR
S-3	6/14/2012	11:35	South	15.7	60	12:27	376	20.0	1	TCR
S-4	6/14/2012	11:45	West	290	60	12:32	3,910	200	10	TCR
S-5	6/14/2012	11:53	Center @ 0.5'	582	60	12:41	2,490	200	10	TCR
S-6	6/14/2012	12:44	Center @ 2'	50.3	NA	13:15	2,090	20.0	1	TCR
S-7	6/14/2012	13:14	Surface Stain	645	NA	*Not Analyzed for TPH.*				

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

NA Not Analyzed

DF Dilution Factor

**Field TPH concentrations recorded may be below PQL.*

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate

Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Tami Ross

Report Finalized: 06/14/12

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

June 18, 2012

Tami Ross

Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 793-2072
FAX

RE: Jicarilla K #17M OrderNo.: 1206657

Dear Tami Ross:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/15/2012 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1206657**
Date Reported: **6/18/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: SC-1
Project: Jicarilla K #17M
Collection Date: 6/14/2012 11:55:00 AM
Lab ID: 1206657-001
Matrix: MEOH (SOIL)
Received Date: 6/15/2012 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JMP**
Diesel Range Organics (DRO)	780	97		mg/Kg	10	6/15/2012 12:21:52 PM
Motor Oil Range Organics (MRO)	1100	480		mg/Kg	10	6/15/2012 12:21:52 PM
Surr: DNOP	0	77.6-140	S	%REC	10	6/15/2012 12:21:52 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	36	5.0		mg/Kg	1	6/15/2012 12:23:08 PM
Surr: BFB	259	69.7-121	S	%REC	1	6/15/2012 12:23:08 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.050		mg/Kg	1	6/15/2012 12:23:08 PM
Toluene	0.21	0.050		mg/Kg	1	6/15/2012 12:23:08 PM
Ethylbenzene	ND	0.050		mg/Kg	1	6/15/2012 12:23:08 PM
Xylenes, Total	ND	0.10		mg/Kg	1	6/15/2012 12:23:08 PM
Surr: 4-Bromofluorobenzene	114	80-120		%REC	1	6/15/2012 12:23:08 PM
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	ND	30		mg/Kg	20	6/15/2012 12:04:25 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Client Sample ID: SC-7
Project: Jicarilla K #17M
Collection Date: 6/14/2012 1:18:00 PM
Lab ID: 1206657-002
Matrix: MEOH (SOIL)
Received Date: 6/15/2012 9:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JMP**
Diesel Range Organics (DRO)	3900	98		mg/Kg	10	6/15/2012 12:45:06 PM
Motor Oil Range Organics (MRO)	1800	490		mg/Kg	10	6/15/2012 12:45:06 PM
Surr: DNOP	0	77.6-140	S	%REC	10	6/15/2012 12:45:06 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **RAA**
Gasoline Range Organics (GRO)	440	25		mg/Kg	5	6/15/2012 12:53:49 PM
Surr: BFB	405	69.7-121	S	%REC	5	6/15/2012 12:53:49 PM
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**
Benzene	ND	0.25		mg/Kg	5	6/15/2012 12:53:49 PM
Toluene	3.0	0.25		mg/Kg	5	6/15/2012 12:53:49 PM
Ethylbenzene	1.9	0.25		mg/Kg	5	6/15/2012 12:53:49 PM
Xylenes, Total	30	0.50		mg/Kg	5	6/15/2012 12:53:49 PM
Surr: 4-Bromofluorobenzene	118	80-120		%REC	5	6/15/2012 12:53:49 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
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
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits	U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1206657**

18-Jun-12

Client: Animas Environmental Services

Project: Jicarilla K #17M

Sample ID	MB-2412	SampType:	MBLK		TestCode:	EPA Method 300.0: Anions				
Client ID:	PBS	Batch ID:	2412		RunNo:	3478				
Prep Date:	6/15/2012	Analysis Date:	6/15/2012		SeqNo:	97485	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	LCS-2412	SampType:	LCS		TestCode:	EPA Method 300.0: Anions				
Client ID:	LCSS	Batch ID:	2412		RunNo:	3478				
Prep Date:	6/15/2012	Analysis Date:	6/15/2012		SeqNo:	97486	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	97.2	90	110			

Sample ID	1206526-001AMS	SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	2412		RunNo:	3478				
Prep Date:	6/15/2012	Analysis Date:	6/15/2012		SeqNo:	97492	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	19	15	15.00	4.059	97.4	64.4	117			

Sample ID	1206526-001AMSD	SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	2412		RunNo:	3478				
Prep Date:	6/15/2012	Analysis Date:	6/15/2012		SeqNo:	97493	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	17	15	15.00	4.059	89.4	64.4	117	6.59	20	

Sample ID	1206527-001AMS	SampType:	MS		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	2412		RunNo:	3478				
Prep Date:	6/15/2012	Analysis Date:	6/15/2012		SeqNo:	97498	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	18	7.5	15.00	4.211	94.8	64.4	117			

Sample ID	1206527-001AMSD	SampType:	MSD		TestCode:	EPA Method 300.0: Anions				
Client ID:	BatchQC	Batch ID:	2412		RunNo:	3478				
Prep Date:	6/15/2012	Analysis Date:	6/15/2012		SeqNo:	97499	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	18	7.5	15.00	4.211	90.6	64.4	117	3.49	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1206657**

18-Jun-12

Client: Animas Environmental Services

Project: Jicarilla K #17M

Sample ID **MB-2414**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **2414**	RunNo: **3419**
Prep Date: **6/15/2012**	Analysis Date: **6/15/2012**	SeqNo: **97008** 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	12		10.00		119	77.6	140			

Sample ID **LCS-2414**	SampType: **LCS**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **2414**	RunNo: **3419**
Prep Date: **6/15/2012**	Analysis Date: **6/15/2012**	SeqNo: **97060** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	36	10	50.00	0	71.9	52.6	130			
Surr: DNOP	5.1		5.000		102	77.6	140			

Sample ID **1206628-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **2414**	RunNo: **3476**
Prep Date: **6/15/2012**	Analysis Date: **6/17/2012**	SeqNo: **97463** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	9.7	48.73	0	82.9	57.2	146			
Surr: DNOP	4.9		4.873		101	77.6	140			

Sample ID **1206628-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015B: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **2414**	RunNo: **3476**
Prep Date: **6/15/2012**	Analysis Date: **6/17/2012**	SeqNo: **97464** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	37	9.9	49.26	0	74.8	57.2	146	9.20	24.5	
Surr: DNOP	4.9		4.926		98.5	77.6	140	0	0	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1206657**

18-Jun-12

Client: Animas Environmental Services
Project: Jicarilla K #17M

Sample ID **MB-2392**	SampType: **MBLK**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **PBS**	Batch ID: **2392**	RunNo: **3464**
Prep Date: **6/14/2012**	Analysis Date: **6/15/2012**	SeqNo: **97874** 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	950		1000		94.8	69.7	121			

Sample ID **LCS-2392**	SampType: **LCS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **LCSS**	Batch ID: **2392**	RunNo: **3464**
Prep Date: **6/14/2012**	Analysis Date: **6/15/2012**	SeqNo: **97903** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	31	5.0	25.00	0	123	98.5	133			
Surr: BFB	960		1000		96.3	69.7	121			

Sample ID **1206516-011AMS**	SampType: **MS**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **BatchQC**	Batch ID: **2392**	RunNo: **3464**
Prep Date: **6/14/2012**	Analysis Date: **6/16/2012**	SeqNo: **97904** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	30	4.7	23.54	4.661	108	85.4	147			
Surr: BFB	1000		941.6		108	69.7	121			

Sample ID **1206516-011AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015B: Gasoline Range**
Client ID: **BatchQC**	Batch ID: **2392**	RunNo: **3464**
Prep Date: **6/14/2012**	Analysis Date: **6/16/2012**	SeqNo: **97905** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	33	4.8	24.06	4.661	119	85.4	147	9.99	19.2	
Surr: BFB	940		962.5		97.6	69.7	121	0	0	

Qualifiers:

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1206657**

18-Jun-12

Client: Animas Environmental Services
Project: Jicarilla K #17M

Sample ID **MB-2392**	SampType: **MBLK**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS**	Batch ID: **2392**	RunNo: **3464**
Prep Date: **6/14/2012**	Analysis Date: **6/15/2012**	SeqNo: **97991** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	0.91		1.000		90.7	80	120			

Sample ID **LCS-2392**	SampType: **LCS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS**	Batch ID: **2392**	RunNo: **3464**
Prep Date: **6/14/2012**	Analysis Date: **6/15/2012**	SeqNo: **97995** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.050	1.000	0	99.3	83.3	107			
Toluene	0.95	0.050	1.000	0	95.2	74.3	115			
Ethylbenzene	1.0	0.050	1.000	0	104	80.9	122			
Xylenes, Total	3.2	0.10	3.000	0	106	85.2	123			
Surr: 4-Bromofluorobenzene	1.1		1.000		106	80	120			

Sample ID **1206524-001AMS**	SampType: **MS**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BatchQC**	Batch ID: **2392**	RunNo: **3464**
Prep Date: **6/14/2012**	Analysis Date: **6/16/2012**	SeqNo: **97996** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.047	0.9407	0	106	67.2	113			
Toluene	0.97	0.047	0.9407	0.008163	103	62.1	116			
Ethylbenzene	1.1	0.047	0.9407	0	114	67.9	127			
Xylenes, Total	3.3	0.094	2.822	0.03499	115	60.6	134			
Surr: 4-Bromofluorobenzene	1.1		0.9407		114	80	120			

Sample ID **1206524-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8021B: Volatiles**
Client ID: **BatchQC**	Batch ID: **2392**	RunNo: **3464**
Prep Date: **6/14/2012**	Analysis Date: **6/16/2012**	SeqNo: **97997** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.97	0.047	0.9381	0	103	67.2	113	3.00	14.3	
Toluene	0.94	0.047	0.9381	0.008163	99.6	62.1	116	3.33	15.9	
Ethylbenzene	1.0	0.047	0.9381	0	111	67.9	127	2.34	14.4	
Xylenes, Total	3.2	0.094	2.814	0.03499	114	60.6	134	1.45	12.6	
Surr: 4-Bromofluorobenzene	1.1		0.9381		112	80	120	0	0	

Qualifiers:

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HALL ENVIRONMENTAL ANALYSIS LABORATORY

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:	Animas Environmental	Work Order Number:	1206657
Received by/date:	MG	06/15/12	
Logged By:	Michelle Garcia	6/15/2012 9:45:00 AM	Michelle Garcia
Completed By:	Michelle Garcia	6/15/2012 9:55:57 AM	Michelle Garcia
Reviewed By:		06/15/12	

Chain of Custody

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

Log In

4. Coolers are present? (see 19. for cooler specific information) Yes ☑ No ☐ NA ☐
5. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☑ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
10. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
11. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
12. Were any sample containers received broken? Yes ☐ No ☑
13. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
15. Is it clear what analyses were requested? Yes ☑ No ☐
16. 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)

17. 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: _____

18. Additional remarks:

19. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.7	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental

Mailing Address: 624 E Comanche
Farmington NM 87401

Phone #: 505 564-2281

email or Fax#: tross@animasenvironmental.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☒ Rush SAME DAY

Project Name:
Jicarilla K #17M

Project #:

Project Manager:
Tami Ross

Sampler: Tami Ross

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.7°

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. 1201257	BTEX + ~~MTBE + TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	TPH 8015 MRO				Air Bubbles (Y or N)
6/14/12	11:55	SOIL	SC-1	2 4oz 1 MeOH Kit	MeOH	-001	X		X					X				X				
6/14/12	13:18	SOIL	SC-7	1 MeOH Kit	MeOH	-002	X		X									X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
6/14/12	1800	Tami Ross	Mike Gr	06/15/12	0945
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: BILL TO CONOCO PHILLIPS

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.