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

14264

RECEIVED
By kcollins at 7:20 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: Burlington Resources Oil & Gas Company, LP OGRID #: 14538
Address: PO BOX 4289, Farmington, NM 87499
Facility or well name: San Juan 27-4 Unit Com 137
API Number: 30-039-22376 OCD Permit Number: _____
U/L or Qtr/Qtr A Section 34 Township 27 N Range 4 W County: Rio Arriba
Center of Proposed Design: Latitude 36.534616 °N Longitude -107.233423 °W NAD: ☐ 1927 ☒ 1983
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☐ **Pit:** Subsection F, G or J of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A ☐ Multi-Well Fluid Management Low Chloride Drilling Fluid ☐ yes ☐ no
☐ Lined ☐ Unlined Liner type: Thickness ____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: ____ bbl Dimensions: L___ x W___ x D____

3.
☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC
Volume: 120 bbl Type of fluid: Produced Water
Tank Construction material: Metal
☐ Secondary containment with leak detection ☒ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☐ Visible sidewalls and liner ☐ Visible sidewalls only ☐ Other _____
Liner type: Thickness 45 mil ☐ HDPE ☐ PVC ☒ Other LLDPE

4.
☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

5.
Fencing: Subsection D of 19.15.17.11 NMAC *(Applies to permanent pits, temporary pits, and below-grade tanks)*
☐ Chain link, six feet in height, two strands of barbed wire at top *(Required if located within 1000 feet of a permanent residence, school, hospital, institution or church)*
☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
☐ Alternate. Please specify _____

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:** 04-06-2016

Title: Environmental Specialist **OCD Permit Number:** _____

19.
Closure Report (required within 60 days of closure completion): 19.15.17.13 NMAC

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

☒ **Closure Completion Date:** 10/1/2012

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): Larissa Farrell Title: Regulatory Technician

Signature: Larissa Farrell Date: 2-17-16

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

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company**	Contact **Lisa Hunter**
Address **3401 East 30th St, Farmington, NM**	Telephone No. **(505) 258-1607**
Facility Name: **San Juan 27-4 Com 137**	Facility Type: **Gas Well**

Surface Owner **Federal**	Mineral Owner **Federal**	API No. **3003922376**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	**34**	**27N**	**04W**	**800**	**North**	**1120**	**East**	**Rio Arriba**

Latitude 36.53469 Longitude -107.23341

NATURE OF RELEASE

Type of Release **Hydrocarbon**	Volume of Release **Unknown**	Volume Recovered **None**
Source of Release **Below Grade Tank (BGT) Closure**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **10-22-12**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom? **N/A**	
By Whom? **N/A**	Date and Hour **N/A**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. **N/A**	

If a Watercourse was Impacted, Describe Fully.*
N/A

Describe Cause of Problem and Remedial Action Taken.*
Below-Grade Tank Closure activities with samples taken resulting in constituents exceeded standards outlined by 19.15.17.13 NMAC.

Describe Area Affected and Cleanup Action Taken.*
NMOCD action levels for releases are specified in NMOCD's Guidelines for Leaks, Spills and Releases and the release was assigned a ranking score of 10. Samples were collected and analytical results are below applicable NMOCD action levels. No further work will be performed. The final report is attached for review.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to 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 Approved by Environmental Specialist:	
Printed Name: **Lisa Hunter**		
Title: **Field Environmental Specialist**	Approval Date:	Expiration Date:
E-mail Address: **Lisa.Hunter@cop.com**	Conditions of Approval:	Attached ☐
Date: **February 11, 2016** Phone: **(505) 258-1607**		

* Attach Additional Sheets If Necessary

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

June 24, 2013

Lisa Hunter
ConocoPhillips
San Juan Business Unit
Office 214-4
5525 Hwy 64
Farmington, New Mexico 87401

Via electronic mail to:
SJBUE-Team@ConocoPhillips.com

RE: Initial Release Assessment and Final Excavation Report
San Juan 27-4 Com #137
Rio Arriba County, New Mexico

Dear Ms. Hunter:

On October 23, 2012, and May 9, 2013, Animas Environmental Services, LLC (AES) completed an initial release assessment and environmental clearance of the final excavation limits at the ConocoPhillips (CoP) San Juan 27-4 Com #137, located in Rio Arriba County, New Mexico. The historical release was reported to be from the former condensate tank at the location. The initial release assessment was completed by AES on October 23, 2012. The final excavation was also completed by contractors while AES was on location on May 9, 2013.

1.0 Site Information

1.1 Location

Location - NE¼ NE¼, Section 34, T27N, R4W, Rio Arriba County, New Mexico
Well Head Latitude/Longitude - N36.53483 and W107.23351, respectively
Release Location Latitude/Longitude – N36.53462 and W107.23343, respectively
Land Jurisdiction – U.S. Forest Service
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and no ranking information was located. The New Mexico Office of the State Engineer (NMOSE) database was reviewed for nearby water wells, and no registered

water wells were reported to be located within 1,000 feet of the location. Additionally, Google Earth and the New Mexico Tech Petroleum Recovery Research Center online mapping tool (http://ford.nmt.edu/react/project.html) were accessed to aid in the identification of downgradient surface water.

Once on site, AES personnel further assessed the ranking using topographical interpretation, Global Positioning System (GPS) elevation readings, and visual reconnaissance. AES personnel concluded that depth to groundwater at the site was greater than 100 feet below ground surface (bgs). The wash in Ciruelas Canyon is located approximately 800 feet north of the location. Based on this information, the location was assessed a ranking score of 10 per the NMOCD *Guidelines for Leaks, Spills, and Releases* (1993).

1.3 Assessments

AES was initially contacted by Bruce Yazzie of CoP on October 22, 2012, and on October 23, 2012, Heather Woods and Zachary Trujillo of AES completed the release assessment field work. The assessment included collection and field screening of a total of 41 soil samples from 10 test holes (TH-1 through TH-10) within the vicinity of the release. Based on the field screening results, AES recommended excavation of the release area. Sample locations are shown on Figure 3.

On May 9, 2013, AES returned to the location to collect confirmation soil samples of the final excavation. The field screening activities included collection of seven confirmation soil samples (SC-1 through SC-7) of the walls and base of the excavation. The final excavation was approximately 2,016 square feet by 12 to 17 feet in depth. Note that the base of the excavation was terminated on sandstone. Sample locations and final excavation extents are presented on Figure 4.

2.0 Soil Sampling

A total of 41 soil samples from TH-1 through TH-10 and seven composite soil samples (SC-1 through SC-7) were collected during the assessments. All soil samples were field screened for volatile organic compounds (VOCs), and selected samples were also analyzed for total petroleum hydrocarbons (TPH). Three of the soil samples collected during the initial assessment (TH-2, TH-4, and TH-7) and two composite samples (SC-1 and SC-7) collected during the excavation clearance were submitted for laboratory analysis.

2.1 Field Screening

2.1.1 Volatile Organic Compounds

Field screening for VOC vapors was conducted 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

Field TPH samples were analyzed 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*.

2.2 Laboratory Analyses

The soil samples 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. Soil samples were laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8021B/8260B.

Soil samples TH-2, TH-4, and TH-7 were also laboratory analyzed for:

- TPH for gasoline range organics (GRO) and diesel range organics (DRO) per USEPA Method 8015B.

2.3 Field Screening and Laboratory Analytical Results

On October 23, 2012, initial assessment field screening readings for VOCs via OVM ranged from 3.2 ppm in TH-10 up to 4,736 ppm in TH-2. Field TPH concentrations ranged from 104 mg/kg in TH-2 up to 1,140 mg/kg in TH-4.

On May 9, 2013, final excavation field screening results for VOCs via OVM showed concentrations ranging from 4.4 ppm in SC-4 to 746 ppm in SC-7. Field TPH concentrations ranged from 70.4 mg/kg in SC-4 up to 304 mg/kg in SC-1. Results are included below in Table 1 and on Figures 3 and 4. The AES Field Screening Reports are attached.

Table 1. Soil Field Screening VOCs and TPH Results
San Juan 27-4 Com #137 Initial Release Assessment and Final Excavation
October 2012 and May 2013

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	Field TPH (mg/kg)
*NMOCD Action Level**			*100*	*1,000*
TH-1	10/23/12	4	**100**	143
		9	93.3	140
TH-2	10/23/12	1	7.4	NA
		5	13.2	NA
		6	**310**	NA
		8.5	**4,736**	104
		10	**4,599**	NA
		11	**4,689**	NA
		13	**4,474**	NA
		14.5	**4,009**	NA
		15.5	**4,617**	107
TH-3	10/23/12	1.5	5.9	NA
		7	9.6	NA
		9	6.0	NA
		14	15.4	NA
TH-4	10/23/12	2	6.0	NA
		4	**3,925**	NA
		9	**4,383**	**1,140**
		10.5	**2,410**	NA
		12	**392**	NA
		14	**242**	NA
TH-5	10/23/12	2	9.1	NA
		6.5	8.8	NA
TH-6	10/23/12	5.5	32.4	NA
		6.5	12.2	NA

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs via OVM (ppm)	Field TPH (mg/kg)
NMOCD Action Level*			100	1,000
TH-7	10/23/12	4.5	**4,022**	NA
		9	**4,105**	NA
		11.5	44.6	282
TH-8	10/23/12	3	8.6	NA
		7	42.4	NA
		9	5.4	NA
		12	15.3	NA
		14.5	24.0	NA
TH-9	10/23/12	4	9.7	NA
		7.5	7.2	NA
		10	54.3	NA
		12	32.2	NA
		13	10.0	NA
TH-10	10/23/12	4	4.3	NA
		9	6.3	NA
		10	3.2	NA
SC-1	5/9/13	1 to 12	**743**	304
SC-2	5/9/13	1 to 17	91.5	135
SC-3	5/9/13	1 to 12	7.7	87.5
SC-4	5/9/13	1 to 17	4.4	70.4
SC-5	5/9/13	1 to 12	65.3	83.3
SC-6	5/9/13	1 to 17	8.2	83.8
SC-7	5/9/13	12 to 17	**746**	98.5

NA – Not Analyzed
*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993)

Laboratory analyses for TH-2, TH-4, and TH-7 were used to confirm field screening results from the initial assessment. Benzene concentrations ranged from below laboratory detection limits in TH-2 and TH-7 to 0.19 mg/kg in TH-4, and total BTEX concentrations ranged from 63 mg/kg in TH-2 up to 127 mg/kg in TH-4. TPH

concentrations (as GRO/DRO) ranged from 1,070 mg/kg in TH-4 up to 2,800 mg/kg in TH-2.

During final clearance in May 2013, laboratory analyses for SC-1 and SC-7 were used to confirm field screening during excavation activities. Benzene concentrations were reported below laboratory detection limits of 0.25 mg/kg (SC-1) and 0.050 mg/kg (SC-7). Total BTEX concentrations were reported as 0.65 mg/kg (SC-1) and 0.67 mg/kg (SC-7). Results are presented in Table 2 and on Figures 3 and 4. Laboratory analytical reports are attached.

Table 2. Laboratory Analytical Results – Benzene, Total BTEX, and TPH
San Juan 27-4 Com #137 Initial Release Assessment and Final Excavation
October 2012 and May 2013

Sample ID	Date Sampled	Sample Depth (ft bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	GRO (mg/kg)	DRO (mg/kg)
NMOCD Action Level*			10	50	1,000	
TH-2	10/23/12	8.5	<0.50	**63**	**1,200**	**1,600**
TH-4	10/23/12	9	0.19	**127**	**930**	**140**
TH-7	10/23/12	9	<0.20	**105**	**1,500**	**310**
SC-1	5/9/13	1 to 12	<0.25	0.65	NA	NA
SC-7	5/9/13	12 to 17	<0.050	0.67	NA	NA

NA – Not Analyzed
*Action level determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993)

3.0 Conclusions and Recommendations

On October 23, 2012, AES conducted an initial assessment associated with a historical release from the former condensate tank at the San Juan 27-4 Com #137. Action levels for releases are determined by the NMOCD ranking score per *NMOCD Guidelines for Leaks, Spills, and Releases* (August 1993), and the site was assigned a ranking score of 10. Field screening showed concentrations above the NMOCD action levels of 100 ppm VOCs in TH-2, TH-4, and TH-7, with the highest VOC concentration reported in TH-2 with 4,736 ppm. Field screening also showed TPH concentrations above the NMOCD action level of 1,000 mg/kg in TH-4 with a concentration of 1,140 mg/kg. Laboratory analytical results from October 23, 2012, reported total BTEX above the applicable NMOCD action levels in TH-2, TH-4, and TH-7. TPH concentrations as GRO/DRO exceeded the NMOCD action level of 1,000 mg/kg in TH-2 (2,800 mg/kg), TH-4 (1,070 mg/kg), and TH-7 (1,810 mg/kg).

On May 9, 2013, final assessment of the excavation area was completed. Field screening results of the excavation extents showed that VOC concentrations were reported below applicable NMOCD action levels for all of the final four walls of the excavation, except the northeast corner which had a VOC concentration of 743 ppm (SC-1). The base of the excavation (SC-7), which was terminated on sandstone, also had a VOC concentration above the NMOCD action level (746 ppm). However, laboratory analytical results for benzene and total BTEX in SC-1 and SC-7 were reported below the NMOCD action levels of 10 mg/kg and 50 mg/kg, respectively. Field screening results for each of the final four walls and base of the excavation reported TPH concentrations below the NMOCD action level of 1,000 mg/kg.

Based on excavation of petroleum contaminated soils, field screening, and laboratory analytical results for VOCs, benzene, total BTEX, and TPH, no further work is recommended at the San Juan 27-4 Com #137.

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

Sincerely,

Landrea R. Cupps

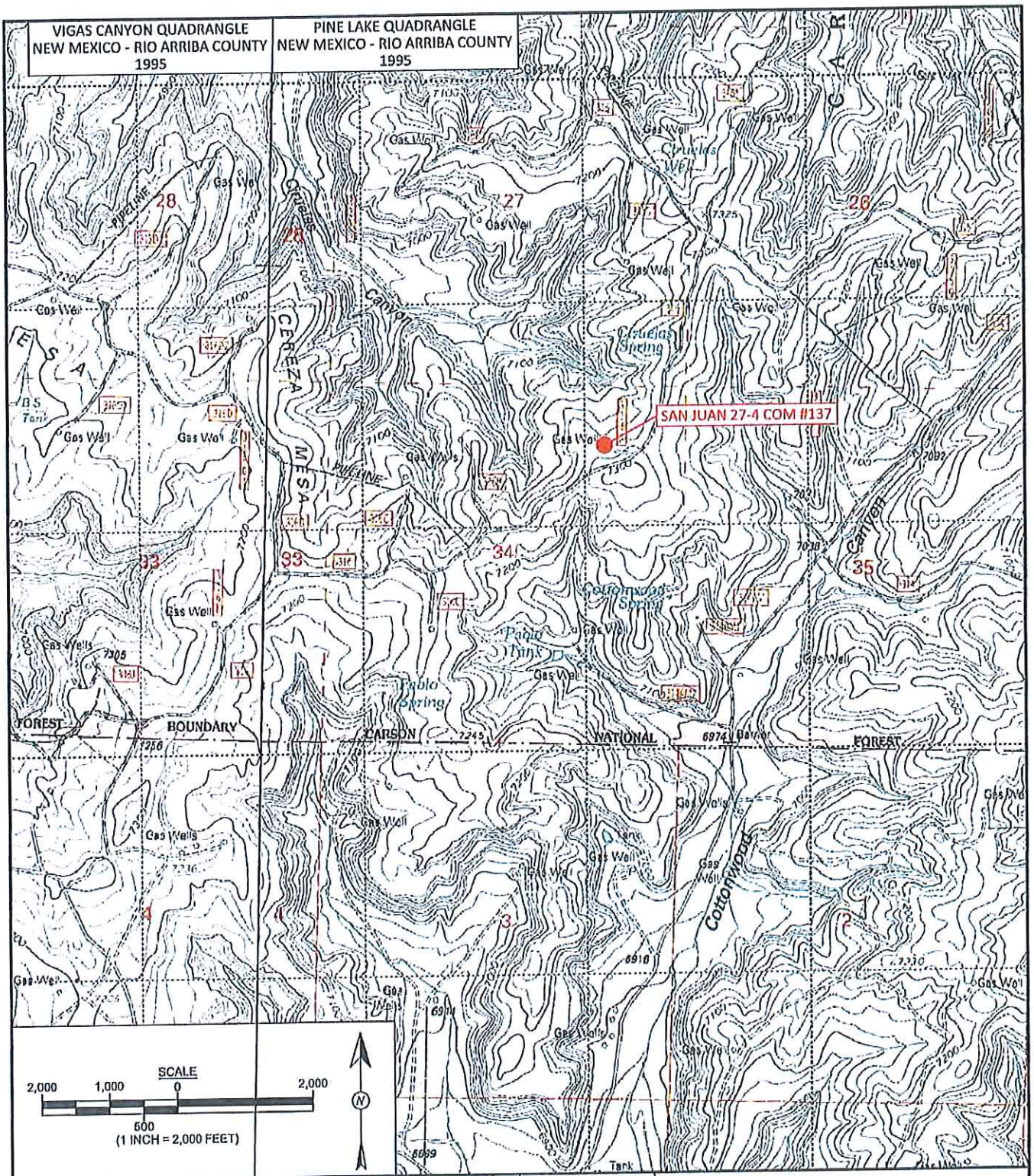
Landrea Cupps
Environmental Scientist

Elizabeth McNally

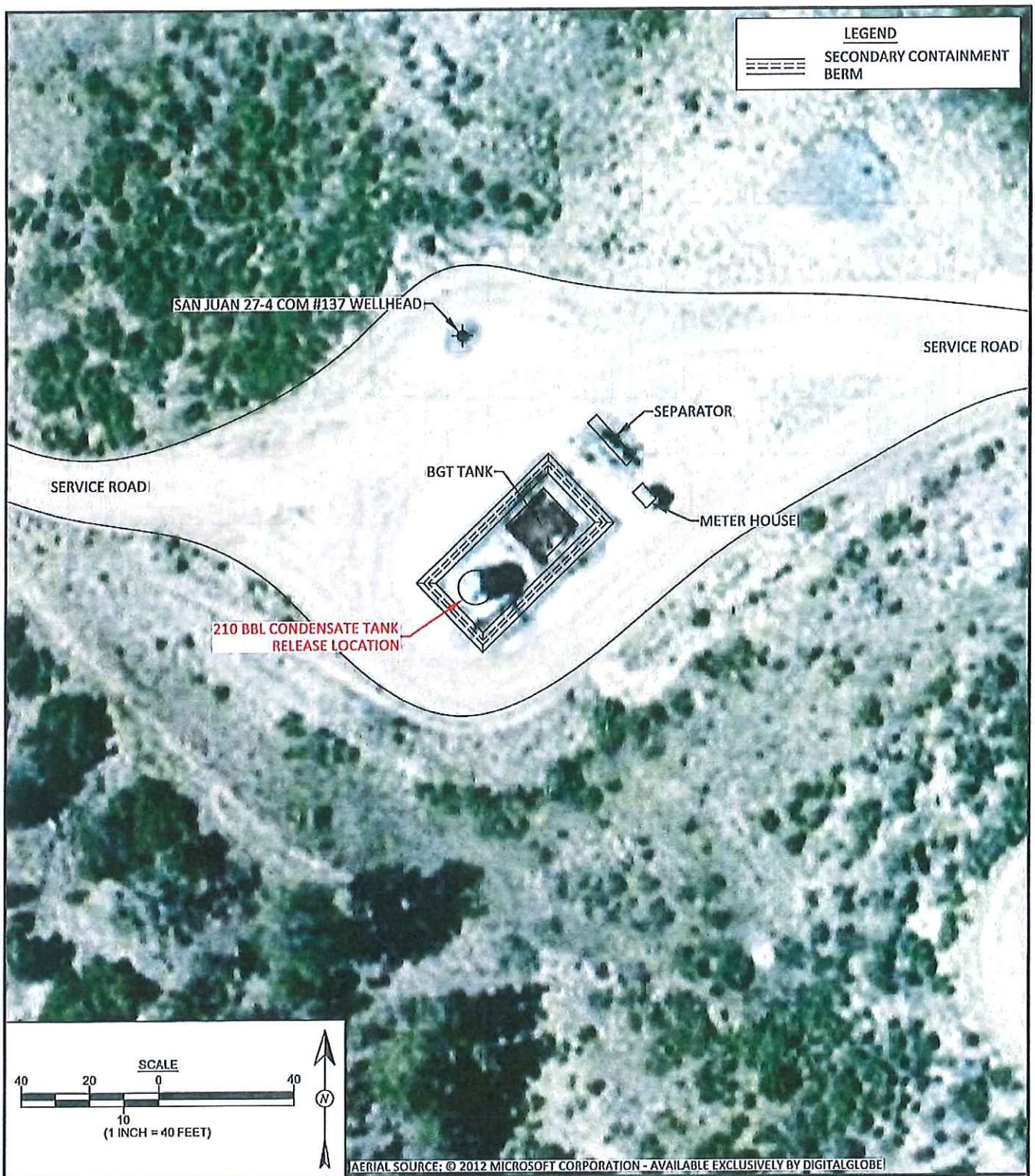
Elizabeth McNally, PE

Attachments:

- Figure 1. Topographic Site Location Map
- Figure 2. Aerial Site Map
- Figure 3. Initial Assessment Soil Sample Locations and Results, October 2012
- Figure 4. Final Excavation Soil Sample Locations and Results, May 2013
- AES Field Screening Report 102312
- AES Field Screening Report 050913
- Hall Laboratory Analytical Report 1210B43
- Hall Laboratory Analytical Report 1305408



Animas Environmental Services, LLC	DRAWN BY: C. Lameman	DATE DRAWN: October 24, 2012	**FIGURE 1**
	REVISIONS BY: C. Lameman	DATE REVISED: October 24, 2012	**TOPOGRAPHIC SITE LOCATION MAP** ConocoPhillips SAN JUAN 27-4 COM #137 RIO ARRIBA COUNTY, NEW MEXICO NE¼ NE¼, SECTION 34, T27N, R4W N36.53483, W107.23351
	CHECKED BY: D. Watson	DATE CHECKED: June 17, 2013	
	APPROVED BY: E. McNally	DATE APPROVED: June 17, 2013	



Animas Environmental Services, LLC

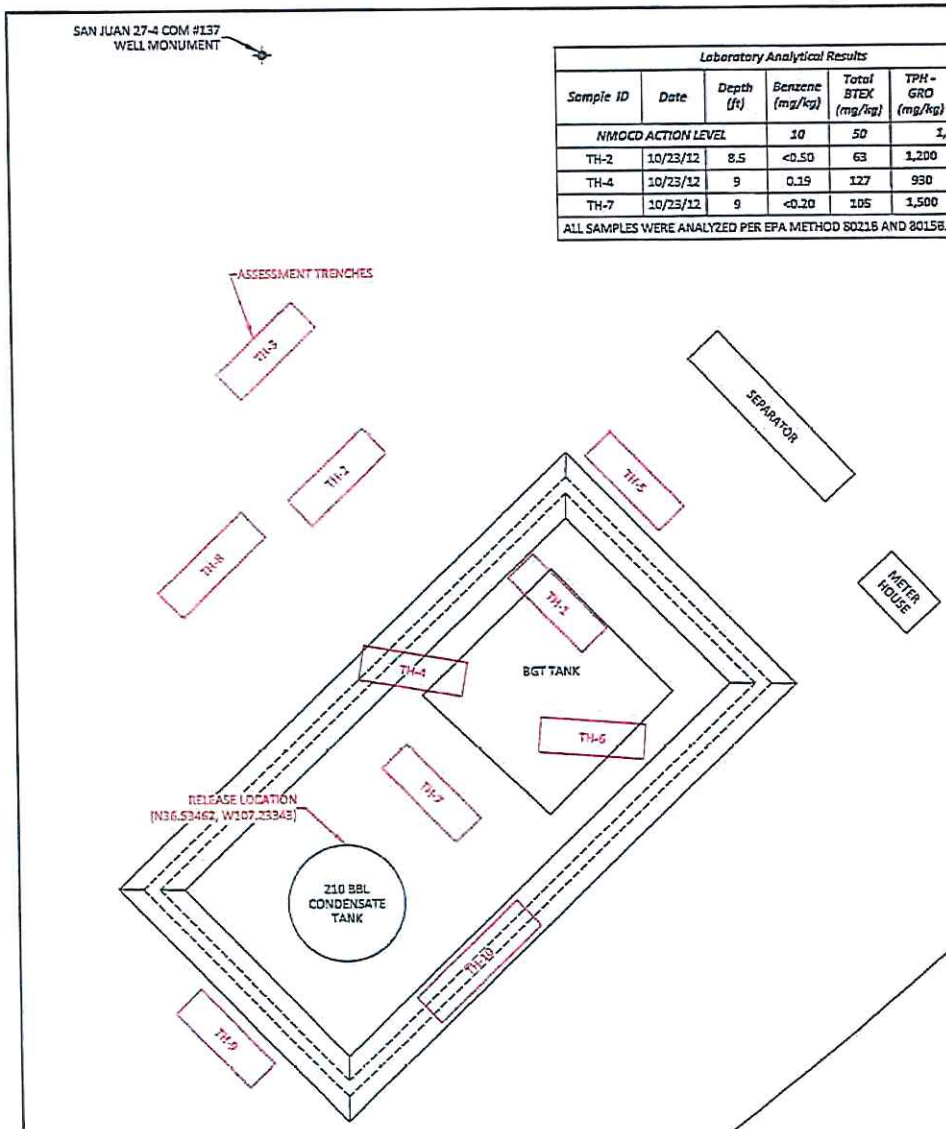
DRAWN BY: C. Lameman	DATE DRAWN: October 24, 2012
REVISIONS BY: C. Lameman	DATE REVISED: October 24, 2012
CHECKED BY: D. Watson	DATE CHECKED: June 17, 2013
APPROVED BY: E. McNally	DATE APPROVED: June 17, 2013

FIGURE 2

AERIAL SITE MAP
OCTOBER 2012
ConocoPhillips
SAN JUAN 27-4 COM #137
RIO ARRIBA COUNTY, NEW MEXICO
NE¼ NE¼, SECTION 34, T27N, R4W
N36.53483, W107.23351

FIGURE 3

INITIAL ASSESSMENT SAMPLE LOCATIONS AND RESULTS
OCTOBER 2012
ConocoPhillips
SAN JUAN 27-4 COM #137
RIO ARRIBA COUNTY, NEW MEXICO
NE¼ NE¼, SECTION 34, T27N, R4W
N36.53483, W107.23351



Laboratory Analytical Results

Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)
NMOCD ACTION LEVEL			10	50	1,000	
TH-2	10/23/12	8.5	<0.50	63	1,200	1,600
TH-4	10/23/12	9	0.19	127	930	140
TH-7	10/23/12	9	<0.20	105	1,500	310

ALL SAMPLES WERE ANALYZED PER EPA METHOD 8021B AND 8015B.

Field Screening Results

Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	1,000
TH-1	10/23/12	4	109	143
		9	93.3	140
TH-2	10/23/12	1	7.4	NA
		5	13.2	NA
		6	310	NA
		8.5	4,736	104
		10	4,599	NA
		11	4,689	NA
		13	4,474	NA
		14.5	4,009	NA
		15.5	4,617	107
TH-3	10/23/12	1.5	5.9	NA
		7	9.6	NA
		5	6.0	NA
		14	15.4	NA
TH-4	10/23/12	2	6.0	NA
		4	3,925	NA
		9	4,383	1,140
		10.5	2,410	NA
		12	392	NA
		14	242	NA
TH-5	10/23/12	2	9.1	NA
		6.5	8.8	NA
TH-6	10/23/12	5.5	32.4	NA
		6.5	12.2	NA
TH-7	10/23/12	4.5	4,022	NA
		9	4,105	NA
		11.5	44.6	282
TH-8	10/23/12	3	8.5	NA
		7	42.4	NA
		9	5.4	NA
		12	15.3	NA
		14.5	24.0	NA
TH-9	10/23/12	4	9.7	NA
		7.5	7.2	NA
		10	54.3	NA
		12	32.2	NA
		13	10.0	NA
TH-10	10/23/12	4	4.3	NA
		9	6.3	NA
		10	3.2	NA

NA - NOT ANALYZED

Animas Environmental Services, LLC

DRAWN BY:	DATE DRAWN:
C. Lameman	October 24, 2012
REVISIONS BY:	DATE REVISED:
C. Lameman	October 24, 2012
CHECKED BY:	DATE CHECKED:
D. Watson	June 17, 2013
APPROVED BY:	DATE APPROVED:
E. McNally	June 17, 2013

LEGEND

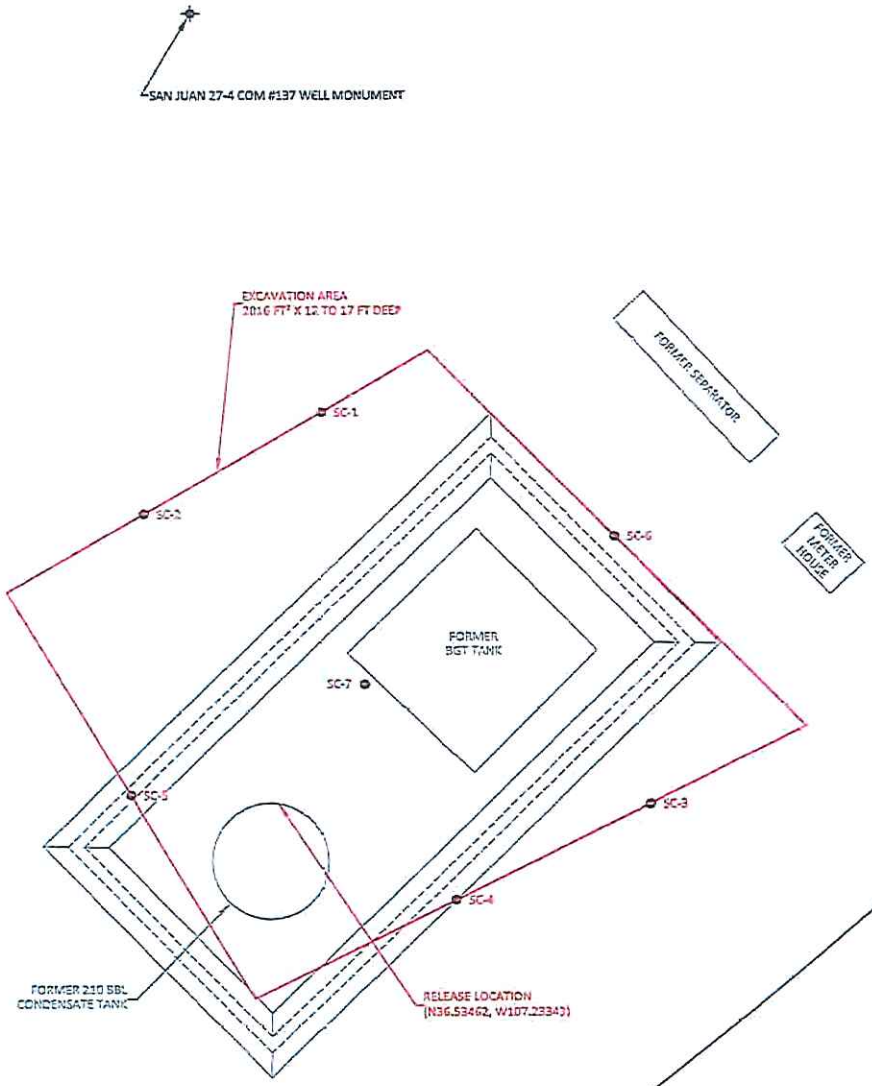
SECONDARY CONTAINMENT BERM

N

SCALE
10 5 0 10
(1 INCH = 10 FEET)

FIGURE 4

FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS
MAY 2013
ConocoPhillips
SAN JUAN 27-4 COM #137
RIO ARRIBA COUNTY, NEW MEXICO
NE¼ NE¼, SECTION 34, T27N, R4W
N36.53483, W107.23351



Field Screening Results				
Sample ID	Date	Depth (ft)	OVM-PID (ppm)	TPH (mg/kg)
NMOCD ACTION LEVEL			100	1,000
SC-1	5/9/13	1 to 12	743	304
SC-2	5/9/13	1 to 17	91.5	135
SC-3	5/9/13	1 to 12	7.7	87.5
SC-4	5/9/13	1 to 17	4.4	70.4
SC-5	5/9/13	1 to 12	65.3	83.8
SC-6	5/9/13	1 to 17	8.2	83.8
SC-7	5/9/13	12 to 17	746	98.5
ALL SAMPLES WERE COMPOSITE SAMPLES.				

Laboratory Analytical Results (PRELIMS)				
Sample ID	Date	Depth (ft)	Benzene (mg/kg)	Total BTEX (mg/kg)
NMOCD ACTION LEVEL			10	50
SC-1	5/9/13	1 to 12	<0.25	0.65
SC-7	5/9/13	12 to 17	<0.050	0.67
ALL SAMPLES WERE ANALYZED PER EPA METHOD 8260B.				

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: May 10, 2013
REVISIONS BY: C. Lameman	DATE REVISED: May 10, 2013
CHECKED BY: D. Watson	DATE CHECKED: June 17, 2013
APPROVED BY: E. McNally	DATE APPROVED: June 17, 2013

LEGEND

FORMER SECONDARY CONTAINMENT BERM

SCALE
10 5 0 10
(1 INCH = 10 FEET)

AES Field Screening Report

Animas Environmental Services, LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

Client: ConocoPhillips

Project Location: San Juan 27-4 Com #137

Date: 10/23/2012

Matrix: Soil

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
TH-1 @ 4'	10/23/2012	12:25	100	13:27	143	40.0	1	HMW
TH-1 @ 9'	10/23/2012	12:30	93.3	13:24	140	40.0	1	HMW
TH-2 @ 1'	10/23/2012	12:31	7.4	*Not Analyzed for TPH*				
TH-2 @ 5'	10/23/2012	12:34	13.2	*Not Analyzed for TPH*				
TH-2 @ 6'	10/23/2012	12:37	310	*Not Analyzed for TPH*				
TH-2 @ 8.5'	10/23/2012	12:40	4,736	13:48	104	40.0	1	HMW
TH-2 @ 10'	10/23/2012	12:43	4,599	*Not Analyzed for TPH*				
TH-2 @ 11'	10/23/2012	12:46	4,689	*Not Analyzed for TPH*				
TH-2 @ 13'	10/23/2012	12:49	4,474	*Not Analyzed for TPH*				
TH-2 @ 14.5'	10/23/2012	12:53	4,009	*Not Analyzed for TPH*				
TH-2 @ 15.5	10/23/2012	12:56	4,617	13:51	107	40.0	1	HMW
TH-3 @ 1.5'	10/23/2012	13:58	5.9	*Not Analyzed for TPH*				
TH-3 @ 7'	10/23/2012	14:21	9.6	*Not Analyzed for TPH*				
TH-3 @ 9'	10/23/2012	14:25	6.0	*Not Analyzed for TPH*				
TH-3 @ 14'	10/23/2012	14:29	15.4	*Not Analyzed for TPH*				
TH-4 @ 2'	10/23/2012	14:33	6.0	*Not Analyzed for TPH*				
TH-4 @ 4'	10/23/2012	14:36	3,925	*Not Analyzed for TPH*				
TH-4 @ 9'	10/23/2012	14:46	4,383	16:33	1,140	20.0	1	HMW
TH-4 @ 10.5'	10/23/2012	14:48	2,410	*Not Analyzed for TPH*				
TH-4 @ 12'	10/23/2012	14:50	392	*Not Analyzed for TPH*				
TH-4 @ 14'	10/23/2012	14:55	242	*Not Analyzed for TPH*				
TH-5 @ 2'	10/23/2012	15:04	9.1	*Not Analyzed for TPH*				

Sample ID	Collection Date	Collection Time	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
TH-5 @ 6.5'	10/23/2012	15:08	8.8	*Not Analyzed for TPH*				
TH-6 @ 5.5'	10/23/2012	15:10	32.4	*Not Analyzed for TPH*				
TH-6 @ 6.5'	10/23/2012	15:12	12.2	*Not Analyzed for TPH*				
TH-7 @ 4.5'	10/23/2012	15:15	4,022	*Not Analyzed for TPH*				
TH-7 @ 9'	10/23/2012	15:20	4,105	*Not Analyzed for TPH*				
TH-7 @ 11.5'	10/23/2012	15:24	44.6	16:35	282	20.0	1	HMW
TH-8 @ 3'	10/23/2012	15:29	8.6	*Not Analyzed for TPH*				
TH-8 @ 7'	10/23/2012	15:32	42.4	*Not Analyzed for TPH*				
TH-8 @ 9'	10/23/2012	15:34	5.4	*Not Analyzed for TPH*				
TH-8 @ 12'	10/23/2012	15:36	15.3	*Not Analyzed for TPH*				
TH-8 @ 14.5'	10/23/2012	15:40	24.0	*Not Analyzed for TPH*				
TH-9 @ 4'	10/23/2012	15:47	9.7	*Not Analyzed for TPH*				
TH-9 @ 7.5'	10/23/2012	15:49	7.2	*Not Analyzed for TPH*				
TH-9 @ 10'	10/23/2012	15:51	54.3	*Not Analyzed for TPH*				
TH-9 @ 12'	10/23/2012	15:54	32.2	*Not Analyzed for TPH*				
TH-9 @ 13'	10/23/2012	15:56	10.0	*Not Analyzed for TPH*				
TH-10 @ 4'	10/23/2012	16:06	4.3	*Not Analyzed for TPH*				
TH-10 @ 9'	10/23/2012	16:09	6.3	*Not Analyzed for TPH*				
TH-10 @ 10'	10/23/2012	16:11	3.2	*Not Analyzed for TPH*				

Total Petroleum Hydrocarbons - USEPA 418.1

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

DF Dilution Factor

NA Not Analyzed

Analyst: Heather A. Woods

AES Field Screening Report

Animas Environmental Services. LLC
www.animasenvironmental.com
624 E. Comanche
Farmington, NM 87401
505-564-2281
Durango, Colorado
970-403-3084

Client: ConocoPhillips

Project Location: San Juan 27-4 Com #137

Date: 5/9/2013

Matrix: Soil

Sample ID	Collection Date	Collection Time	Location	OVM (ppm)	Time of Sample Analysis	Field TPH* (mg/kg)	TPH PQL (mg/kg)	DF	TPH Analysts Initials
SC-1	5/9/2013	12:10	Northeast Wall	743	13:03	304	20.0	1	DAW
SC-2	5/9/2013	12:25	Northwest Wall	91.5	13:06	135	20.0	1	DAW
SC-3	5/9/2013	12:17	Southeast Wall	7.7	13:10	87.5	20.0	1	DAW
SC-4	5/9/2013	12:20	Southwest Wall	4.4	13:07	70.4	20.0	1	DAW
SC-5	5/9/2013	12:15	West Wall	65.3	12:57	83.8	20.0	1	DAW
SC-6	5/9/2013	12:22	East Wall	8.2	13:29	83.3	20.0	1	DAW
SC-7	5/9/2013	14:45	Base	746	14:45	98.5	20.0	1	DAW

Total Petroleum Hydrocarbons - USEPA 418.1

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit

DF Dilution Factor

NA Not Analyzed

Analyst: Deborah Watson

Report Finalized: 05/09/13

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

October 31, 2012

Debbie Watson
Animas Environmental Services
624 East Comanche
Farmington, NM 87401
TEL: (505) 486-4071
FAX

RE: COP San Juan 27-4 #137

OrderNo.: 1210B43

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/25/2012 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. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP San Juan 27-4 #137
Lab ID: 1210B43-001

Client Sample ID: TH-2 @ 8.5'
Collection Date: 10/23/2012 12:40:00 PM
Matrix: MEOH (SOIL) **Received Date:** 10/25/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	1600	100		mg/Kg	10	10/25/2012 1:00:46 PM
Surr: DNOP	0	77.6-140	S	%REC	10	10/25/2012 1:00:46 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1200	50		mg/Kg	10	10/25/2012 2:34:38 PM
Surr: BFB	507	84-116	S	%REC	10	10/25/2012 2:34:38 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.50		mg/Kg	10	10/25/2012 2:34:38 PM
Toluene	ND	0.50		mg/Kg	10	10/25/2012 2:34:38 PM
Ethylbenzene	4.3	0.50		mg/Kg	10	10/25/2012 2:34:38 PM
Xylenes, Total	59	1.0		mg/Kg	10	10/25/2012 2:34:38 PM
Surr: 4-Bromofluorobenzene	185	80-120	S	%REC	10	10/25/2012 2:34:38 PM

Qualifiers:

*	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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP San Juan 27-4 #137
Lab ID: 1210B43-002
Matrix: MEOH (SOIL)
Client Sample ID: TH-4 @ 9'
Collection Date: 10/23/2012 2:46:00 PM
Received Date: 10/25/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: **JMP**
Diesel Range Organics (DRO)	140	10		mg/Kg	1	10/25/2012 12:17:14 PM
Surr: DNOP	101	77.6-140		%REC	1	10/25/2012 12:17:14 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: **NSB**
Gasoline Range Organics (GRO)	930	250		mg/Kg	50	10/25/2012 11:40:48 PM
Surr: BFB	192	84-116	S	%REC	50	10/25/2012 11:40:48 PM
EPA METHOD 8021B: VOLATILES						Analyst: **NSB**
Benzene	0.19	0.10		mg/Kg	2	10/25/2012 3:03:31 PM
Toluene	10	2.5		mg/Kg	50	10/25/2012 11:40:48 PM
Ethylbenzene	7.0	2.5		mg/Kg	50	10/25/2012 11:40:48 PM
Xylenes, Total	110	5.0		mg/Kg	50	10/25/2012 11:40:48 PM
Surr: 4-Bromofluorobenzene	115	80-120		%REC	50	10/25/2012 11:40:48 PM

Qualifiers:

*	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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP San Juan 27-4 #137
Lab ID: 1210B43-003

Client Sample ID: TH-7 @ 9'
Collection Date: 10/23/2012 3:20:00 PM
Matrix: MEOH (SOIL) **Received Date:** 10/25/2012 10:05:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: JMP
Diesel Range Organics (DRO)	310	10		mg/Kg	1	10/25/2012 12:39:00 PM
Surr: DNOP	101	77.6-140		%REC	1	10/25/2012 12:39:00 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	1500	250		mg/Kg	50	10/26/2012 12:09:32 AM
Surr: BFB	251	84-116	S	%REC	50	10/26/2012 12:09:32 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	0.20		mg/Kg	4	10/25/2012 3:32:14 PM
Toluene	5.6	2.5		mg/Kg	50	10/26/2012 12:09:32 AM
Ethylbenzene	6.5	2.5		mg/Kg	50	10/26/2012 12:09:32 AM
Xylenes, Total	93	5.0		mg/Kg	50	10/26/2012 12:09:32 AM
Surr: 4-Bromofluorobenzene	117	80-120		%REC	50	10/26/2012 12:09:32 AM

Qualifiers:

*	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
P	Sample pH greater than 2	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1210B43

31-Oct-12

Client: Animas Environmental Services

Project: COP San Juan 27-4 #137

Sample ID MB-4517	SampType: MBLK	TestCode: EPA Method 8015B: Diesel Range Organics							
Client ID: PBS	Batch ID: 4517	RunNo: 6441							
Prep Date: 10/24/2012	Analysis Date: 10/25/2012	SeqNo: 186402	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	10		10.00		101	77.6	140			

Sample ID LCS-4517	SampType: LCS	TestCode: EPA Method 8015B: Diesel Range Organics							
Client ID: LCSS	Batch ID: 4517	RunNo: 6441							
Prep Date: 10/24/2012	Analysis Date: 10/25/2012	SeqNo: 186419	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	42	10	50.00	0	84.3	52.6	130			
Surr: DNOP	4.5		5.000		90.8	77.6	140			

Sample ID 1210A51-001AMS	SampType: MS	TestCode: EPA Method 8015B: Diesel Range Organics							
Client ID: BatchQC	Batch ID: 4517	RunNo: 6441							
Prep Date: 10/24/2012	Analysis Date: 10/25/2012	SeqNo: 186977	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	40	9.8	49.02	0	81.6	57.2	146			
Surr: DNOP	4.4		4.902		90.3	77.6	140			

Sample ID 1210A51-001AMSD	SampType: MSD	TestCode: EPA Method 8015B: Diesel Range Organics							
Client ID: BatchQC	Batch ID: 4517	RunNo: 6441							
Prep Date: 10/24/2012	Analysis Date: 10/25/2012	SeqNo: 186978	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	43	9.9	49.70	0	85.9	57.2	146	6.54	24.5	
Surr: DNOP	4.5		4.970		91.1	77.6	140	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1210B43

Hall Environmental Analysis Laboratory, Inc.

31-Oct-12

Client: Animas Environmental Services
Project: COP San Juan 27-4 #137

Sample ID MB-4474	SampType: MBLK	TestCode: EPA Method 8015B: Gasoline Range							
Client ID: PBS	Batch ID: 4474	RunNo: 6487							
Prep Date: 10/23/2012	Analysis Date: 10/25/2012	SeqNo: 187625	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		95.0	84	116			

Sample ID LCS-4474	SampType: LCS	TestCode: EPA Method 8015B: Gasoline Range							
Client ID: LCSS	Batch ID: 4474	RunNo: 6487							
Prep Date: 10/23/2012	Analysis Date: 10/25/2012	SeqNo: 187626	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	5.0	25.00	0	102	74	117			
Surr: BFB	1000		1000		100	84	116			

Sample ID 1210A08-001AMS	SampType: MS	TestCode: EPA Method 8015B: Gasoline Range							
Client ID: BatchQC	Batch ID: 4474	RunNo: 6487							
Prep Date: 10/23/2012	Analysis Date: 10/25/2012	SeqNo: 187638	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	33	4.9	24.34	11.22	90.8	70	130			
Surr: BFB	1100		973.7		117	84	116			S

Sample ID 1210A08-001AMSD	SampType: MSD	TestCode: EPA Method 8015B: Gasoline Range							
Client ID: BatchQC	Batch ID: 4474	RunNo: 6487							
Prep Date: 10/23/2012	Analysis Date: 10/25/2012	SeqNo: 187639	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	33	4.9	24.39	11.22	89.9	70	130	0.479	22.1	
Surr: BFB	1100		975.6		115	84	116	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

QC SUMMARY REPORT

WO#: 1210B43

Hall Environmental Analysis Laboratory, Inc.

31-Oct-12

Client: Animas Environmental Services
Project: COP San Juan 27-4 #137

Sample ID MB-4474	SampType: MBLK	TestCode: EPA Method 8021B: Volatiles							
Client ID: PBS	Batch ID: 4474	RunNo: 6487							
Prep Date: 10/23/2012	Analysis Date: 10/25/2012	SeqNo: 187651	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	1.0		1.000		102	80	120			

Sample ID LCS-4474	SampType: LCS	TestCode: EPA Method 8021B: Volatiles							
Client ID: LCSS	Batch ID: 4474	RunNo: 6487							
Prep Date: 10/23/2012	Analysis Date: 10/25/2012	SeqNo: 187652	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	105	76.3	117			
Toluene	1.0	0.050	1.000	0	104	80	120			
Ethylbenzene	1.1	0.050	1.000	0	106	77	116			
Xylenes, Total	3.2	0.10	3.000	0	106	76.7	117			
Surr: 4-Bromofluorobenzene	1.1		1.000		107	80	120			

Sample ID 1210A21-001AMS	SampType: MS	TestCode: EPA Method 8021B: Volatiles							
Client ID: BatchQC	Batch ID: 4474	RunNo: 6487							
Prep Date: 10/23/2012	Analysis Date: 10/25/2012	SeqNo: 187719	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.048	0.9653	0	97.3	67.2	113			
Toluene	0.96	0.048	0.9653	0	99.1	62.1	116			
Ethylbenzene	0.97	0.048	0.9653	0	101	67.9	127			
Xylenes, Total	2.9	0.097	2.896	0	101	60.6	134			
Surr: 4-Bromofluorobenzene	1.0		0.9653		106	80	120			

Sample ID 1210A21-001AMSD	SampType: MSD	TestCode: EPA Method 8021B: Volatiles							
Client ID: BatchQC	Batch ID: 4474	RunNo: 6487							
Prep Date: 10/23/2012	Analysis Date: 10/25/2012	SeqNo: 187720	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.99	0.048	0.9653	0	102	67.2	113	5.00	14.3	
Toluene	1.0	0.048	0.9653	0	104	62.1	116	5.16	15.9	
Ethylbenzene	1.0	0.048	0.9653	0	108	67.9	127	6.85	14.4	
Xylenes, Total	3.1	0.097	2.896	0	109	60.6	134	7.20	12.6	
Surr: 4-Bromofluorobenzene	1.0		0.9653		106	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits

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: 1210B43

Received by/date: 10/25/12

Logged By: Ashley Gallegos 10/25/2012 10:05:00 AM

Completed By: Ashley Gallegos 10/25/2012 10:10:37 AM

Reviewed By: 10/25/12

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	# of preserved bottles checked for pH:
14. Are matrices correctly identified on Chain of Custody?	Yes ✓	No	(<2 or >12 unless noted)
15. Is it clear what analyses were requested?	Yes ✓	No	Adjusted?
16. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ✓	No	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
2	1.0	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services LLC

Mailing Address: 624 E Comanche Farmington NM 87401

Phone #: 505 564 2281

email or Fax#:

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

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☒ Rush same day

Project Name: CoP San Juan 27-4 #137

Project #:

Project Manager: D Watson

Sampler: H Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No 1210803	BTEX + ~~MTBE~~ + ~~TMB's~~ (8021)	BTEX + MTBE + TPH (Gas only)	TPH Method 8015B (Gas/Diesel) (8015D)	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)					Air Bubbles (Y or N)
10-23-12	1240	soil	TH-2 @ 8.5'	MeOH kit 4oz	MeOH	-001	X		X													
10-23-12	1446	soil	TH-4 @ 9'	MeOH kit 4oz	MeOH	-002	X		X													
10-23-12	1520	soil	TH-7 @ 9'	MeOH kit 4oz	MeOH	-003	X		X													

Date:	Time:	Relinquished by:	Received by:	Date	Time
10/24/12	1624	Heather M. Woods	Christine Walters	10/24/12	1624
10/24/12	1741	Christine Walters		10/25/12	1005

Remarks: Bill to ConocoPhillips
IO0: 10340353
Area: 25
Supervisor: Harry Dee
User ID: KGARCIA
ordered by: Ashley Maxwell

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.

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

May 14, 2013

Debbie Watson
Animas Environmental
624 East Comanche
Farmington, NM 87401
TEL: (505) 486-4071
FAX

RE: CoP SJ 27-4 Com #137

OrderNo.: 1305408

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 5/10/2013 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. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Project: CoP SJ 27-4 Com #137
Lab ID: 1305408-001

Client Sample ID: SC-1
Collection Date: 5/9/2013 12:10:00 PM
Matrix: MEOH (SOIL) **Received Date:** 5/10/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.25		mg/Kg	5	5/10/2013 11:46:37 AM
Toluene	ND	0.25		mg/Kg	5	5/10/2013 11:46:37 AM
Ethylbenzene	ND	0.25		mg/Kg	5	5/10/2013 11:46:37 AM
Xylenes, Total	0.65	0.50		mg/Kg	5	5/10/2013 11:46:37 AM
Surr: 1,2-Dichloroethane-d4	84.2	70-130		%REC	5	5/10/2013 11:46:37 AM
Surr: 4-Bromofluorobenzene	98.3	70-130		%REC	5	5/10/2013 11:46:37 AM
Surr: Dibromofluoromethane	91.2	70-130		%REC	5	5/10/2013 11:46:37 AM
Surr: Toluene-d8	88.0	70-130		%REC	5	5/10/2013 11:46:37 AM

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH greater than 2
RL	Reporting Detection Limit
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental
Project: CoP SJ 27-4 Com #137
Lab ID: 1305408-002

Client Sample ID: SC-7
Collection Date: 5/9/2013 2:45:00 PM
Matrix: MEOH (SOIL) **Received Date:** 5/10/2013 10:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA
Benzene	ND	0.050		mg/Kg	1	5/10/2013 12:14:57 PM
Toluene	ND	0.050		mg/Kg	1	5/10/2013 12:14:57 PM
Ethylbenzene	ND	0.050		mg/Kg	1	5/10/2013 12:14:57 PM
Xylenes, Total	0.67	0.10		mg/Kg	1	5/10/2013 12:14:57 PM
Surr: 1,2-Dichloroethane-d4	94.8	70-130		%REC	1	5/10/2013 12:14:57 PM
Surr: 4-Bromofluorobenzene	115	70-130		%REC	1	5/10/2013 12:14:57 PM
Surr: Dibromofluoromethane	93.9	70-130		%REC	1	5/10/2013 12:14:57 PM
Surr: Toluene-d8	92.3	70-130		%REC	1	5/10/2013 12:14:57 PM

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
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 greater than 2	R	RPD outside accepted recovery limits
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1305408

14-May-13

Client: Animas Environmental

Project: CoP SJ 27-4 Com #137

Sample ID mb-7366	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List
Client ID: PBS	Batch ID: R10546	RunNo: 10546
Prep Date: 5/9/2013	Analysis Date: 5/10/2013	SeqNo: 298232 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: 1,2-Dichloroethane-d4	0.42		0.5000		84.2	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.5000		88.2	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		91.3	70	130			
Surr: Toluene-d8	0.49		0.5000		97.5	70	130			

Sample ID lcs-7366	SampType: LCS	TestCode: EPA Method 8260B: Volatiles Short List
Client ID: LCSS	Batch ID: R10546	RunNo: 10546
Prep Date: 5/9/2013	Analysis Date: 5/10/2013	SeqNo: 298233 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.94	0.050	1.000	0	93.5	70	130			
Toluene	1.0	0.050	1.000	0	104	80	120			
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		86.2	70	130			
Surr: 4-Bromofluorobenzene	0.44		0.5000		87.8	70	130			
Surr: Dibromofluoromethane	0.45		0.5000		90.5	70	130			
Surr: Toluene-d8	0.48		0.5000		95.5	70	130			

Sample ID 1305408-001AMS	SampType: MS	TestCode: EPA Method 8260B: Volatiles Short List
Client ID: SC-1	Batch ID: R10546	RunNo: 10546
Prep Date:	Analysis Date: 5/10/2013	SeqNo: 298234 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.91	0.050	1.000	0.01652	89.0	67.5	124			
Toluene	0.92	0.050	1.000	0	92.1	55.8	142			
Surr: 1,2-Dichloroethane-d4	0.43		0.5000		86.9	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		95.0	70	130			
Surr: Dibromofluoromethane	0.46		0.5000		91.8	70	130			
Surr: Toluene-d8	0.42		0.5000		84.5	70	130			

Sample ID 1305408-001AMSD	SampType: MSD	TestCode: EPA Method 8260B: Volatiles Short List
Client ID: SC-1	Batch ID: R10546	RunNo: 10546
Prep Date:	Analysis Date: 5/10/2013	SeqNo: 298235 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.90	0.050	1.000	0.01652	88.3	67.5	124	0.698	20	
Toluene	0.88	0.050	1.000	0	87.8	55.8	142	4.85	20	
Surr: 1,2-Dichloroethane-d4	0.44		0.5000		87.2	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1305408

14-May-13

Client: Animas Environmental

Project: CoP SJ 27-4 Com #137

Sample ID 1305408-001AMSD	SampType: MSD	TestCode: EPA Method 8260B: Volatiles Short List
Client ID: SC-1	Batch ID: R10546	RunNo: 10546
Prep Date:	Analysis Date: 5/10/2013	SeqNo: 298235 Units: mg/Kg

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.0	70	130	0	0	
Surr: Dibromofluoromethane	0.46		0.5000		91.4	70	130	0	0	
Surr: Toluene-d8	0.42		0.5000		84.3	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH greater than 2
- RL Reporting Detection Limit
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits

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: 1305408 | RcptNo: 1

Received by/date: 05/10/13

Logged By: Michelle Garcia 5/10/2013 10:00:00 AM Michelle Garcia

Completed By: Michelle Garcia 5/10/2013 10:06:18 AM Michelle Garcia

Reviewed By: 05/10/13

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° 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 ☑

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

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 ☐

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 °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Client: Animas Environmental Services, LLC	Turn-Around Time: ☐ Standard ☒ Rush same day
Mailing Address: 624 E. Comanche Farmington, NM 87401	Project Name: CoP SJ 27-4 #137 com P
Phone #: 505-564-2281	Project #:
email or Fax#:	Project Manager: Debbie Watson
QA/QC Package: ☒ Standard ☐ Level 4 (Full Validation)	Sampler: Stephanie Lynn
Accreditation ☐ NELAP ☐ Other	On Ice: ☑ Yes ☐ No
☐ EDD (Type)	Sample Temperature: 1.0

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1305405
~~5/9/13~~						
5/9/13	1210	soil	SC-1	MeOH Kits 4oz	MeOH	-001
5/9/13	1445	soil	SC-7	MeOH Kits 4oz	MeOH	-002

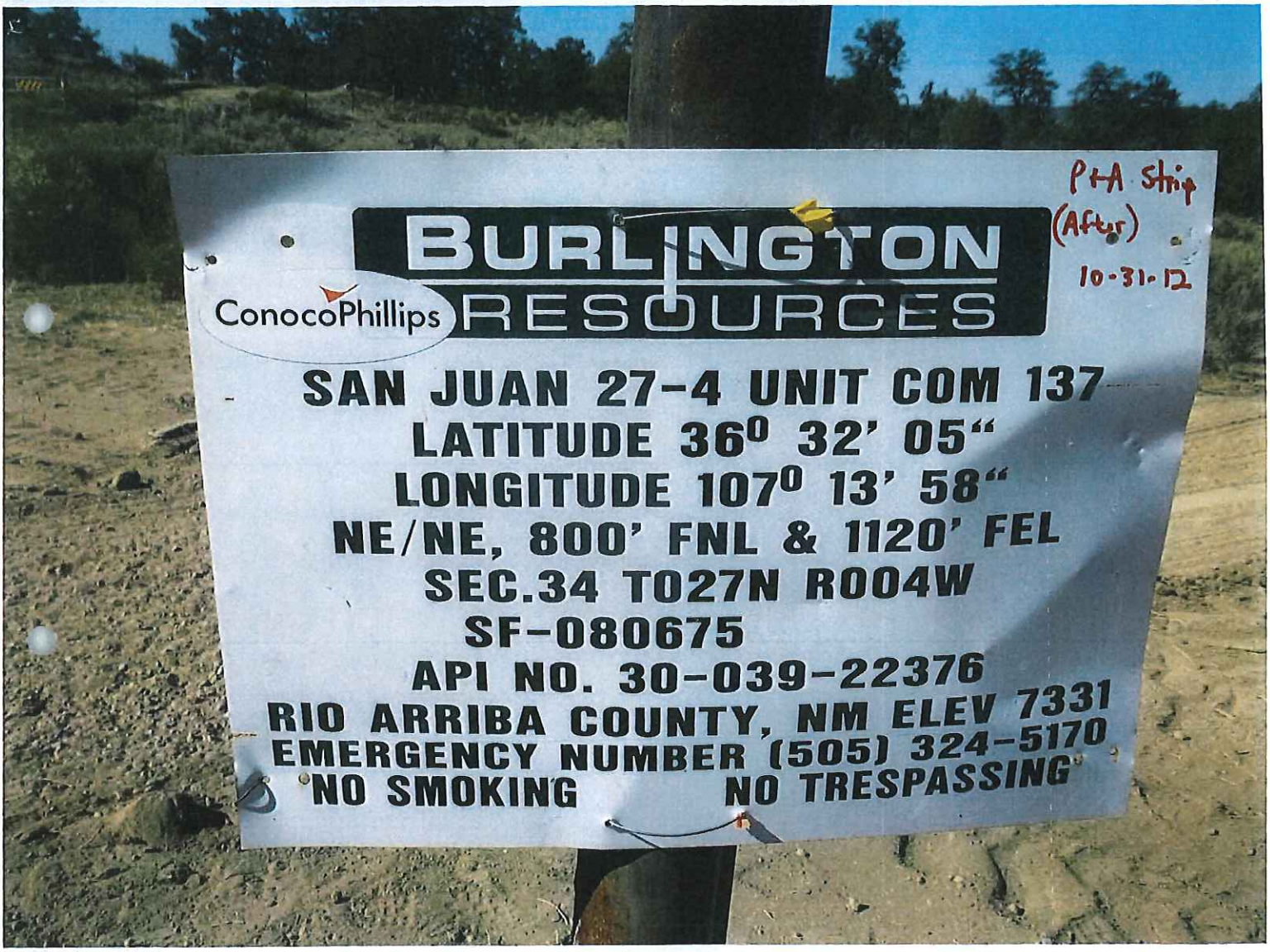
Analysis Request

BTEX + ~~MTBE~~ + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
X															
X															

Date:	Time:	Relinquished by:	Received by:	Date	Time
5/10/13	615	Stephanie Lynn	Christine Walker	5/10/13	615
5/10/13	645	Christine Walker		05/10/13	1000

Remarks: Bill to Conoco
WO: 9537702
Act code: D150
Supervisor: Mike Smith
UserID: KGarcia
Ordered: Eric Smith

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.


PHA Strip
(After)
10-31-12
BURLINGTON
RESOURCES
ConocoPhillips
SAN JUAN 27-4 UNIT COM 137
LATITUDE 36° 32' 05"
LONGITUDE 107° 13' 58"
NE/NE, 800' FNL & 1120' FEL
SEC.34 T027N R004W
SF-080675
API NO. 30-039-22376
RIO ARRIBA COUNTY, NM ELEV 7331
EMERGENCY NUMBER (505) 324-5170
NO SMOKING
NO TRESPASSING