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.

12761
45-08844

RECEIVED
By OCD 3-4-15

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

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** OGRID #: 14538
Address: PO BOX 4289, Farmington, NM 87499
Facility or well name: Kattler 1
API Number: 3004508844 OCD Permit Number:
U/L or Qtr/Qtr C (NENW) Section 2 Township 29N Range 12W County: San Juan
Center of Proposed Design: Latitude 36.75908000 °N Longitude -107.07066000 °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
closed Prior to Closure Plan Approval
☐ 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
Constituents Exceed Standards outline by 19.15.17.13 NMAC. Please submit a separate C-141 under 19.15.29 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) see front page

OCD Representative Signature: _____ **Approval Date:** Apr 24, 2015

Title: Environmental Specialst **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:** 7/17/12

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 _____ Longitude _____ 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): Kenny Davis Title: Staff Regulatory Technician

Signature: Date: 12/3/14

e-mail address: kenny.r.davis@conocophillips.com Telephone: 505-599-4045

Burlington Resources Oil Gas Company, LP
San Juan Basin
Below Grade Tank Closure Report
(Without Reclamation)

Lease Name: Kattler 1
API No.: 30-045-08844

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

General Plan:

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

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

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

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

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

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

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

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

6. BR 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.

7. **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).**

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 300.1	250

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

   A release was determined for the above referenced well.

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

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

10. 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 is missing due to employee turnovers. ConocoPhillips has reviewed our internal processes and has updated them to include the required 72 hour notification.

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

    The closure process notification to the landowner not found. COPC was not aware that the original notification sent at the time of Permitting was not the only closure notification required.
    ConocoPhillips has reviewed our internal processes and has updated them to include the required 72 hour notification.

12. 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 will be 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.

13. BR Shall seed the disturbed areas the first favorable growing season following closure of a below-grade tank. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved

methods. BLM stipulated seed mixes will used on federally regulated lands and division-approved seed mixtures (administratively approved if required) will be utilized on all State or private lands. A uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre- disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. COPC will repeat seeding or planting will be continued until successful vegetative growth occurs.

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

14. 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.

15. 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)**

Closure Documentation was not submitted within the 60 day requirement due to employee turnovers. ConocoPhillips has reviewed our internal processes and has updated them to ensure closure documentation is submitted with the 60 day time frame.

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

January 31, 2013

Crystal Tafoya
ConocoPhillips
San Juan Business Unit
Office 214-05
5525 Hwy 64
Farmington, New Mexico 87401

RE: Below Grade Tank Closure, Release, and Excavation Report
Kattler #1
San Juan County, New Mexico

Dear Ms. Tafoya:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the below grade tank (BGT) closure and final excavation of chloride contaminated soils at the ConocoPhillips (CoP) Kattler #1, located in San Juan County, New Mexico. Tank removal had been completed by CoP contractors prior to AES' arrival at the location. The final excavation was completed by CoP contractors while AES was on location on July 20, 2012.

1.0 Site Information

1.1 Location

Site Name – Kattler #1
Legal Description - NE¼ NW¼, Section 2, T29N, R12W, San Juan County, New Mexico
Well Latitude/Longitude - N36.75951 and W108.07107, respectively
BGT Latitude/Longitude - N36.75972 and W108.07124, respectively
Land Jurisdiction - Private
Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, July 2012

1.2 NMOCD Ranking

Prior to site work, the New Mexico Oil Conservation Division (NMOCD) database was reviewed, and no prior 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). A tributary to the wash in Hargis Arroyo is located approximately 270 feet north of the location. Based on this information, the location was assessed a ranking score of 10.

1.3 Assessments

AES was initially contacted by Jess Henson, CoP representative, on July 17, 2012, and on July 18, 2012, Deborah Watson and Nathan Willis of AES met with Jess Henson at the location. AES personnel collected six soil samples from below the BGT liner. Four samples were collected from the perimeter of the BGT footprint, one sample was collected from the center of the BGT footprint, and one sample was composited from the four perimeter samples and one center sample. Sample locations are shown on Figure 2.

On July 20, 2012, AES personnel returned to the site to collect confirmation soil samples of the excavation. The field screening activities included collection of five confirmation samples (SC-1 through SC-5) of the walls and base of the excavation. A composite sample (SC-6) was composited from the four walls and base of the excavation. The final excavation was approximately 24 feet by 20 feet by 4 feet grading to 5.5 feet in depth. Sample locations and excavation extents are shown on Figure 3.

2.0 Soil Sampling

On July 18, 2012, AES personnel conducted field screening and collected five soil samples (S-1 through S-5) and one 5-point composite (SC-1) from below the BGT. Soil samples were collected from approximately 0.5 feet below the former BGT for field screening of volatile organic compounds (VOCs), total petroleum hydrocarbon (TPH), and chlorides. Soil sample SC-1 was submitted for confirmation laboratory analysis. Soil sample locations are included on Figure 2.

On July 20, 2012, AES personnel conducted field screening and collected five 5-point composites (SC-1 through SC-5) of the walls and base of the excavation for field screening of chlorides. One samples, SC-6, was composited from SC-1 through SC-5 and submitted for confirmation laboratory analysis.

2.1 Field Screening

2.1.1 Volatile Organic Compounds

A portion of each sample collected on July 18, 2012, 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 (SC-1 through SC-5, July 18) 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

All 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

The composite 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. The samples were maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Soil sample SC-1 (July 18) was laboratory analyzed for:

- Benzene, toluene, ethylbenzene, and xylene (BTEX) per U.S. Environmental Protection Agency (USEPA) Method 8260B; and
- Chloride per USEPA Method 300.0.

Note sample SC-6 (July 20) was only analyzed for chloride per USEPA 300.0.

2.3 Field Screening and Laboratory Analytical Results

On July 18, 2012, field screening results for VOCs via OVM showed concentrations ranging from 4.5 ppm in S-4 up to 11.7 ppm in S-3. Field TPH concentrations ranged from 55.3 mg/kg in S-1 up to 68.7 mg/kg in S-4. Field chloride concentrations were between 80 and 240 mg/kg.

On July 20, 2012, final excavation field screening results for chlorides showed concentrations ranging from 100 mg/kg in SC-2 through SC-4 up to 180 mg/kg in SC-1

and SC-5. Results are included below in Table 1 and on Figures 2 and 3. The AES Field Screening Reports are attached.

Table 1. Soil Field Screening VOCs, TPH, and Chloride Results
Kattler #1 BGT Closure and Final Excavation, July 2012

Sample ID	Date Sampled	Sample Depth (ft bgs)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)	Field Chlorides (mg/kg)
NMOCD Action Level (NMAC 19.15.17.13E)			--	**100**	**250**
S-1	7/18/12	0.5	10.3	55.3	200
S-2	7/18/12	0.5	7.8	66.2	80
S-3	7/18/12	0.5	11.7	63.8	160
S-4	7/18/12	0.5	4.5	68.7	160
S-5	7/18/12	0.5	7.5	60.2	240
SC-1	7/20/12	1 to 5	NA	NA	180
SC-2	7/20/12	1 to 5	NA	NA	100
SC-3	7/20/12	1 to 5	NA	NA	100
SC-4	7/20/12	1 to 5	NA	NA	100
SC-5	7/20/12	5	NA	NA	180

NA - not analyzed

Laboratory analytical results for SC-1 (July 18) reported benzene and total BTEX concentrations in SC-1 as less than 0.050 mg/kg and 0.25 mg/kg, respectively. However, the laboratory chloride concentration was reported at 680 mg/kg.

Laboratory analytical results for SC-6 (July 20) were used to confirm field screening results during excavation activities, and the chloride concentration was reported at 90 mg/kg. Results are presented in Table 2 and on Figures 2 and 3. Laboratory analytical reports are attached.

Table 2. Soil Laboratory Analytical Results
Kattler #1 BGT Closure and Final Excavation, July 2012

Sample ID	Date Sampled	Depth (ft)	Benzene (mg/kg)	BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Chlorides (mg/kg)
NMOCD Action Level (NMAC 19.15.17.13E)			**0.2**	**50**	**100**		**250**
SC-1	07/18/12	0.5	<0.050	<0.25	NA	NA	**680**
SC-6	07/20/12	1 to 5.5	NA	NA	NA	NA	90

NA - not analyzed

3.0 Conclusions and Recommendations

NMOCD action levels for BGT closures are specified in New Mexico Administrative Code (NMAC) 19.15.17.13E. Field TPH concentrations were below the NMOCD action level of 100 mg/kg, with the highest concentration reported in S-4 with 68.7 mg/kg. Benzene and total BTEX concentrations in SC-1 were below the NMOCD action level of 0.2 mg/kg and 50 mg/kg, respectively. However, chloride concentrations in SC-1 (July 18) exceeded the NMOCD action level of 250 mg/kg with 680 mg/kg. Excavation of chloride contaminated soils was recommended.

On July 20, 2012, final assessment of the excavation area was completed. Field screening results of the excavation extents showed that chloride concentrations were below applicable NMOCD action levels for all of the final four walls and base of the excavation. Laboratory analytical results from July 20, 2012, confirmed that chloride concentrations were below NMOCD action levels.

Based on field screening and laboratory analytical results for benzene, total BTEX, TPH, and chlorides, no further work is recommended at the Kattler #1.

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

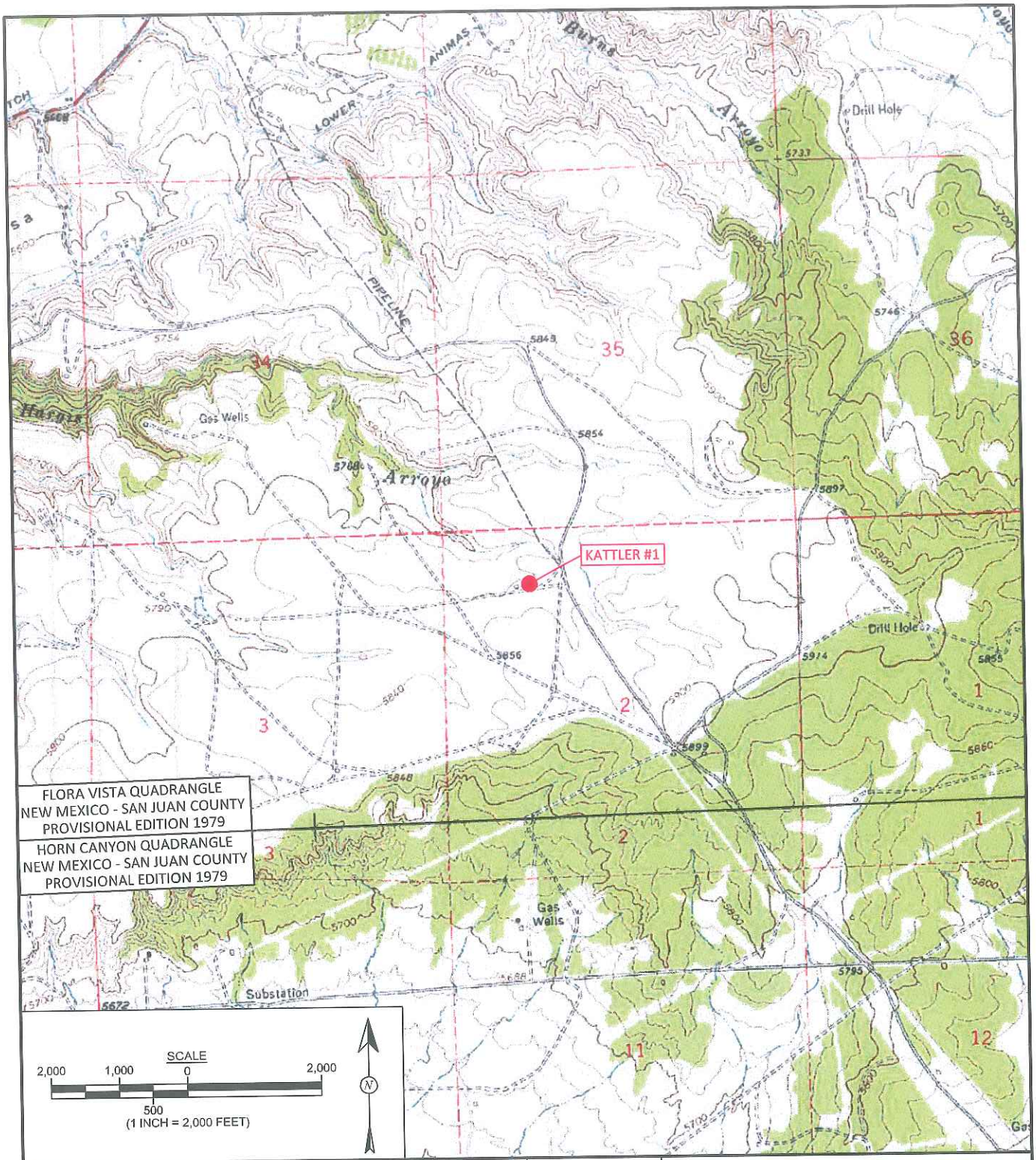
Elizabeth McNally

Elizabeth McNally, P.E.

Attachments:

Figure 1. Topographic Site Location Map
Figure 2. Aerial Site Map, July 2012
Figure 3. Final Excavation Soil Sample Locations and Results, July 2012
AES Field Screening Report 071812
AES Field Screening Report 072012
Hall Analytical Report 1207801
Hall Analytical Report 1207948

R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\Kattler #1\BGT Closure\Kattler #1 BGT Closure and Excavation Report 013113.docx

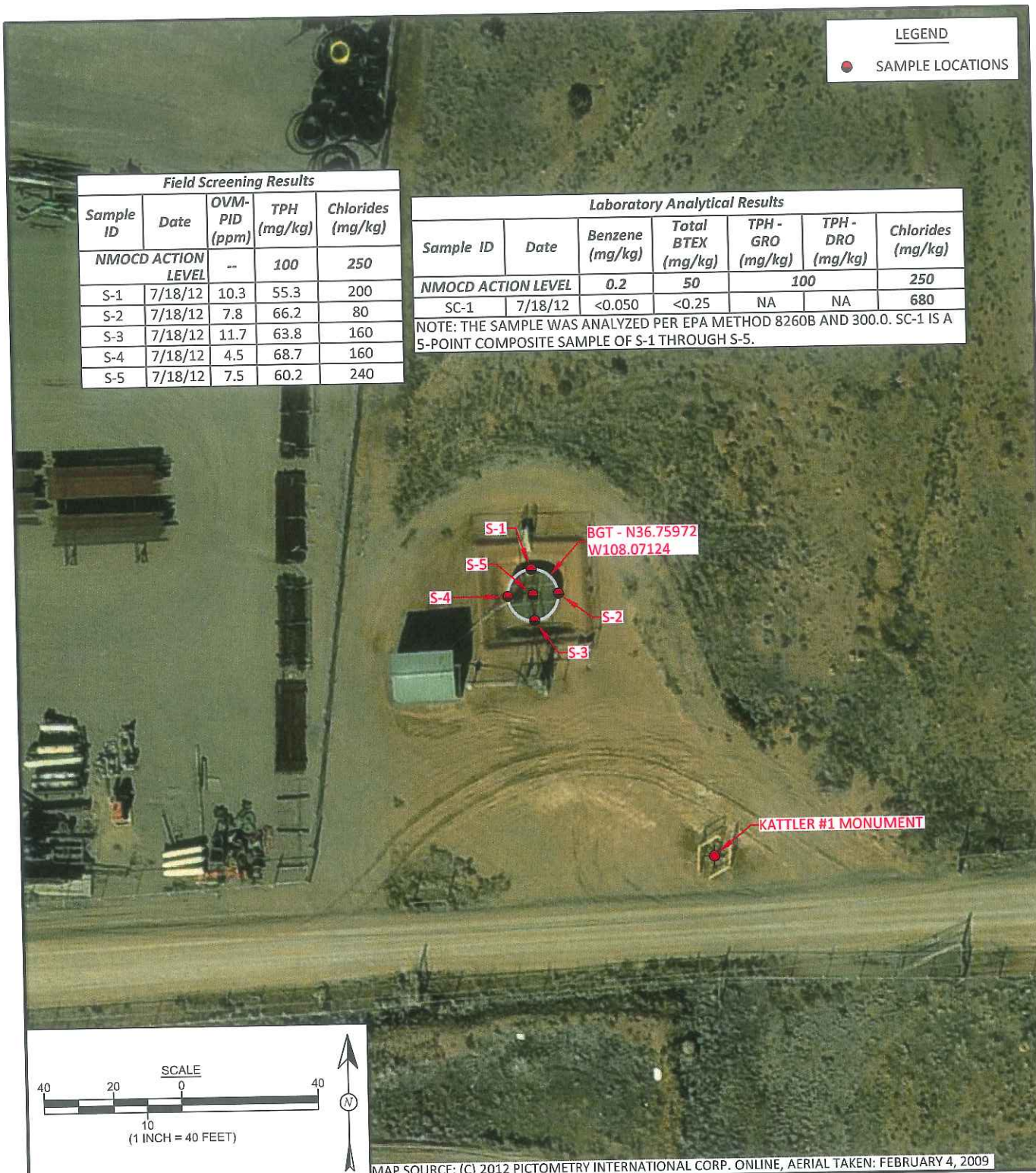


FLORA VISTA QUADRANGLE
NEW MEXICO - SAN JUAN COUNTY
PROVISIONAL EDITION 1979

HORN CANYON QUADRANGLE
NEW MEXICO - SAN JUAN COUNTY
PROVISIONAL EDITION 1979

AES
Animas Environmental Services, LLC

DRAWN BY: C. Lameman	**DATE DRAWN:** July 18, 2012	**FIGURE 1**
REVISIONS BY: C. Lameman	**DATE REVISED:** July 18, 2012	**TOPOGRAPHIC SITE LOCATION MAP**
CHECKED BY: D. Watson	**DATE CHECKED:** January 17, 2013	ConocoPhillips KATTLER #1 SAN JUAN COUNTY, NEW MEXICO NE¼ NW¼, SECTION 2, T29N, R12W N36.75951, W108.07107
APPROVED BY: E. McNally	**DATE APPROVED:** January 17, 2013	



Field Screening Results

Sample ID	Date	OVM-PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		--	100	250
S-1	7/18/12	10.3	55.3	200
S-2	7/18/12	7.8	66.2	80
S-3	7/18/12	11.7	63.8	160
S-4	7/18/12	4.5	68.7	160
S-5	7/18/12	7.5	60.2	240

Laboratory Analytical Results

Sample ID	Date	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		0.2	50	100		250
SC-1	7/18/12	<0.050	<0.25	NA	NA	680

NOTE: THE SAMPLE WAS ANALYZED PER EPA METHOD 8260B AND 300.0. SC-1 IS A 5-POINT COMPOSITE SAMPLE OF S-1 THROUGH S-5.

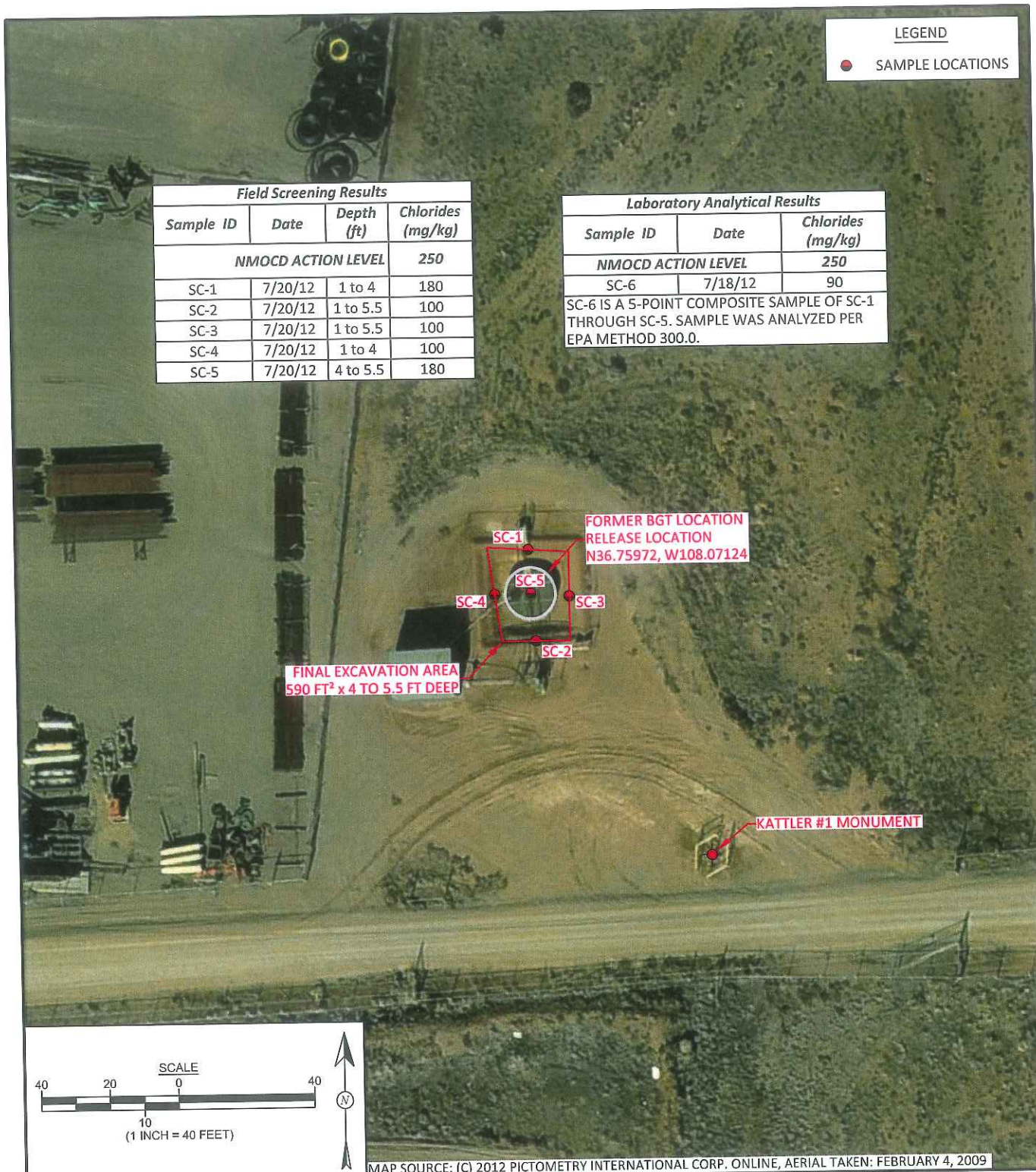
MAP SOURCE: (C) 2012 PICTOMETRY INTERNATIONAL CORP. ONLINE, AERIAL TAKEN: FEBRUARY 4, 2009

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: July 18, 2012
REVISIONS BY: C. Lameman	DATE REVISED: July 18, 2012
CHECKED BY: D. Watson	DATE CHECKED: January 17, 2013
APPROVED BY: E. McNally	DATE APPROVED: January 17, 2013

FIGURE 2

AERIAL SITE MAP
BELOW GRADE TANK CLOSURE
JULY 2012
ConocoPhillips
KATTLER #1
SAN JUAN COUNTY, NEW MEXICO
NE¼, NW¼, SECTION 2, T29N, R12W
N36.75951, W108.07107



Field Screening Results			
Sample ID	Date	Depth (ft)	Chlorides (mg/kg)
NMOCD ACTION LEVEL			250
SC-1	7/20/12	1 to 4	180
SC-2	7/20/12	1 to 5.5	100
SC-3	7/20/12	1 to 5.5	100
SC-4	7/20/12	1 to 4	100
SC-5	7/20/12	4 to 5.5	180

Laboratory Analytical Results		
Sample ID	Date	Chlorides (mg/kg)
NMOCD ACTION LEVEL		250
SC-6	7/18/12	90

SC-6 IS A 5-POINT COMPOSITE SAMPLE OF SC-1 THROUGH SC-5. SAMPLE WAS ANALYZED PER EPA METHOD 300.0.

MAP SOURCE: (C) 2012 PICTOMETRY INTERNATIONAL CORP. ONLINE, AERIAL TAKEN: FEBRUARY 4, 2009

Animas Environmental Services, LLC

DRAWN BY: C. Lameman	DATE DRAWN: January 17, 2013	**FIGURE 3**
REVISIONS BY: C. Lameman	DATE REVISED: January 17, 2013	**FINAL EXCAVATION SAMPLE LOCATIONS AND RESULTS JULY 2012**
CHECKED BY: D. Watson	DATE CHECKED: January 17, 2013	ConocoPhillips KATTLER #1 SAN JUAN COUNTY, NEW MEXICO
APPROVED BY: E. McNally	DATE APPROVED: January 17, 2013	NE¼, NW¼, SECTION 2, T29N, R12W N36.75951, W108.07107

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: Kattler #1

Date: 7/18/2012

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	7/18/2012	8:55	North	10.3	200	9:59	55.3	20.0	1	DAW
S-2	7/18/2012	8:57	East	7.8	80	10:29	66.2	20.0	1	DAW
S-3	7/18/2012	9:00	South	11.7	160	10:04	63.8	20.0	1	DAW
S-4	7/18/2012	9:03	West	4.5	160	10:06	68.7	20.0	1	DAW
S-5	7/18/2012	9:05	Center	7.5	240	10:09	60.2	20.0	1	DAW

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: Debnah Watkins

Report Finalized: 07/18/12

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: Kattler #1

Date: 7/20/2012

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
SC-1	7/20/2012	13:19	North	NA	180	*Not Analyzed for TPH.*				
SC-2	7/20/2012	13:21	South	NA	100	*Not Analyzed for TPH.*				
SC-3	7/20/2012	13:25	East	NA	100	*Not Analyzed for TPH.*				
SC-4	7/20/2012	13:29	West	NA	100	*Not Analyzed for TPH.*				
SC-5	7/20/2012	13:32	Base	NA	180	*Not Analyzed for TPH.*				

PQL Practical Quantitation Limit

ND Not Detected at the Reporting Limit
NA Not Analyzed
DF Dilution Factor

Field Chloride - Quantab Chloride Titrators or Drop Count Titration with Silver Nitrate
Total Petroleum Hydrocarbons - USEPA 418.1

Analyst: Heather M. Woods

Report Finalized: 07/20/12

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

August 03, 2012

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

RE: COP Kattler #1

OrderNo.: 1207801

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/19/2012 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued July 27, 2012.

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 **1207801**
Date Reported: **8/3/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP Kattler #1
Lab ID: 1207801-001

Client Sample ID: SC-1
Collection Date: 7/18/2012 9:10:00 AM
Matrix: MEOH (SOIL) **Received Date:** 7/19/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	680	30		mg/Kg	20	7/19/2012 12:16:00 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: **RAA**
Benzene	ND	0.050		mg/Kg	1	7/19/2012 12:58:37 PM
Toluene	ND	0.050		mg/Kg	1	7/19/2012 12:58:37 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/19/2012 12:58:37 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/19/2012 12:58:37 PM
Surr: 1,2-Dichloroethane-d4	94.8	70-130		%REC	1	7/19/2012 12:58:37 PM
Surr: 4-Bromofluorobenzene	102	70-130		%REC	1	7/19/2012 12:58:37 PM
Surr: Dibromofluoromethane	89.5	70-130		%REC	1	7/19/2012 12:58:37 PM
Surr: Toluene-d8	101	70-130		%REC	1	7/19/2012 12:58:37 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
Project: COP Kattler #1
Lab ID: 1207801-002 **Matrix:** SOIL

Client Sample ID: Stockpile
Collection Date: 7/18/2012 12:49:00 PM
Received Date: 7/19/2012 10:10:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 7471: MERCURY						Analyst: **DBD**
Mercury	ND	0.033		mg/Kg	1	7/20/2012 2:49:13 PM
MERCURY, TCLP						Analyst: **DBD**
Mercury	ND	0.020		mg/L	1	8/1/2012 1:42:01 PM
EPA METHOD 6010B: SOIL METALS						Analyst: **ELS**
Arsenic	ND	12		mg/Kg	5	7/20/2012 6:54:36 AM
Barium	390	1.0		mg/Kg	10	7/20/2012 6:58:51 AM
Cadmium	ND	0.50		mg/Kg	5	7/20/2012 6:54:36 AM
Chromium	7.4	1.5		mg/Kg	5	7/20/2012 6:54:36 AM
Lead	5.2	1.2		mg/Kg	5	7/20/2012 8:38:17 AM
Selenium	ND	12		mg/Kg	5	7/20/2012 8:38:17 AM
Silver	ND	1.2		mg/Kg	5	7/20/2012 6:54:36 AM
EPA METHOD 6010B: TCLP METALS						Analyst: **ELS**
Arsenic	ND	5.0		mg/L	1	8/3/2012 6:27:11 AM
Barium	ND	100		mg/L	1	8/2/2012 3:54:22 PM
Cadmium	ND	1.0		mg/L	1	8/3/2012 6:27:11 AM
Chromium	ND	5.0		mg/L	1	8/2/2012 3:54:22 PM
Lead	ND	5.0		mg/L	1	8/2/2012 3:54:22 PM
Selenium	ND	1.0		mg/L	1	8/2/2012 3:54:22 PM
Silver	ND	5.0		mg/L	1	8/2/2012 3:54:22 PM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- S Spike Recovery 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
- U Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1207801

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **MB-2907** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **2907** RunNo: **4157**

Prep Date: **7/19/2012** Analysis Date: **7/19/2012** SeqNo: **118814** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-2907** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **2907** RunNo: **4157**

Prep Date: **7/19/2012** Analysis Date: **7/19/2012** SeqNo: **118815** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	1.5	15.00	0	98.3	90	110			

Sample ID **1207599-001AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**

Client ID: **BatchQC** Batch ID: **2907** RunNo: **4157**

Prep Date: **7/19/2012** Analysis Date: **7/19/2012** SeqNo: **118819** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	7.5	15.00	2.511	81.1	64.4	117			

Sample ID **1207599-001AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**

Client ID: **BatchQC** Batch ID: **2907** RunNo: **4157**

Prep Date: **7/19/2012** Analysis Date: **7/19/2012** SeqNo: **118820** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	15	7.5	15.00	2.511	84.6	64.4	117	3.56	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#: 1207801

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID MB-2919	SampType: MBLK	TestCode: EPA Method 7471: Mercury							
Client ID: PBS	Batch ID: 2919	RunNo: 4199							
Prep Date: 7/19/2012	Analysis Date: 7/20/2012	SeqNo: 120246	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.033								

Sample ID LCS-2919	SampType: LCS	TestCode: EPA Method 7471: Mercury							
Client ID: LCSS	Batch ID: 2919	RunNo: 4199							
Prep Date: 7/19/2012	Analysis Date: 7/20/2012	SeqNo: 120247	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.17	0.033	0.1667	0	102	80	120			

Sample ID 1207796-008AMS	SampType: MS	TestCode: EPA Method 7471: Mercury							
Client ID: BatchQC	Batch ID: 2919	RunNo: 4199							
Prep Date: 7/19/2012	Analysis Date: 7/20/2012	SeqNo: 120251	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1661	0	98.8	75	125			

Sample ID 1207796-008AMSD	SampType: MSD	TestCode: EPA Method 7471: Mercury							
Client ID: BatchQC	Batch ID: 2919	RunNo: 4199							
Prep Date: 7/19/2012	Analysis Date: 7/20/2012	SeqNo: 120252	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.16	0.033	0.1643	0	98.0	75	125	1.87	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#: 1207801

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **MB-3127** SampType: **MBLK** TestCode: **MERCURY, TCLP**
Client ID: **PBW** Batch ID: **3127** RunNo: **4577**
Prep Date: **8/1/2012** Analysis Date: **8/1/2012** SeqNo: **128440** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020								

Sample ID **LCS-3127** SampType: **LCS** TestCode: **MERCURY, TCLP**
Client ID: **LCSW** Batch ID: **3127** RunNo: **4577**
Prep Date: **8/1/2012** Analysis Date: **8/1/2012** SeqNo: **128441** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	101	80	120			

Sample ID **1207B34-006AMS** SampType: **MS** TestCode: **MERCURY, TCLP**
Client ID: **BatchQC** Batch ID: **3127** RunNo: **4577**
Prep Date: **8/1/2012** Analysis Date: **8/1/2012** SeqNo: **128454** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	104	75	125			

Sample ID **1207B34-006AMSD** SampType: **MSD** TestCode: **MERCURY, TCLP**
Client ID: **BatchQC** Batch ID: **3127** RunNo: **4577**
Prep Date: **8/1/2012** Analysis Date: **8/1/2012** SeqNo: **128455** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	0	93.4	75	125	0	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#: 1207801

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **MB-2912** SampType: **MBLK** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **PBS** Batch ID: **2912** RunNo: **4168**

Prep Date: **7/19/2012** Analysis Date: **7/20/2012** SeqNo: **119211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								
Silver	ND	0.25								

Sample ID **LCS-2912** SampType: **LCS** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **LCSS** Batch ID: **2912** RunNo: **4168**

Prep Date: **7/19/2012** Analysis Date: **7/20/2012** SeqNo: **119212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0.2515	101	80	120			
Barium	24	0.10	25.00	0	94.3	80	120			
Cadmium	24	0.10	25.00	0	95.3	80	120			
Chromium	24	0.30	25.00	0.09550	93.7	80	120			
Silver	4.8	0.25	5.000	0.03050	96.3	80	120			

Sample ID **MB-2912** SampType: **MBLK** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **PBS** Batch ID: **2912** RunNo: **4174**

Prep Date: **7/19/2012** Analysis Date: **7/20/2012** SeqNo: **119449** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.25								
Selenium	ND	2.5								

Sample ID **LCS-2912** SampType: **LCS** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **LCSS** Batch ID: **2912** RunNo: **4174**

Prep Date: **7/19/2012** Analysis Date: **7/20/2012** SeqNo: **119451** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	24	0.25	25.00	0	96.0	80	120			
Selenium	22	2.5	25.00	0	86.1	80	120			

Sample ID **MB-2912** SampType: **MBLK** TestCode: **EPA Method 6010B: Soil Metals**

Client ID: **PBS** Batch ID: **2912** RunNo: **4414**

Prep Date: **7/19/2012** Analysis Date: **7/25/2012** SeqNo: **123190** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	2.5								
Barium	ND	0.10								
Cadmium	ND	0.10								
Chromium	ND	0.30								

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

WO#: 1207801

Hall Environmental Analysis Laboratory, Inc.

03-Aug-12

Client: Animas Environmental Services
Project: COP Kattler #1

Sample ID **MB-2912** SampType: **MBLK** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **PBS** Batch ID: **2912** RunNo: **4414**
Prep Date: **7/19/2012** Analysis Date: **7/25/2012** SeqNo: **123190** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.25								
Selenium	ND	2.5								
Silver	ND	0.25								

Sample ID **LCS-2912** SampType: **LCS** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **LCSS** Batch ID: **2912** RunNo: **4414**
Prep Date: **7/19/2012** Analysis Date: **7/25/2012** SeqNo: **123191** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	2.5	25.00	0.7230	96.9	80	120			
Barium	25	0.10	25.00	0	100	80	120			
Cadmium	25	0.10	25.00	0	100	80	120			
Chromium	24	0.30	25.00	0.06600	96.9	80	120			
Lead	25	0.25	25.00	0	100	80	120			
Selenium	25	2.5	25.00	0	98.2	80	120			
Silver	5.1	0.25	5.000	0	103	80	120			

Sample ID **1207640-001BMS** SampType: **MS** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **BatchQC** Batch ID: **2912** RunNo: **4414**
Prep Date: **7/19/2012** Analysis Date: **7/25/2012** SeqNo: **123197** Units: **mg/Kg-dry**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	25	15	28.40	0	88.1	75	125			
Barium	42	0.58	28.40	36.21	21.6	75	125			S
Cadmium	28	0.58	28.40	0	96.9	75	125			
Chromium	30	1.7	28.40	2.024	97.4	75	125			
Lead	29	1.5	28.40	2.697	93.5	75	125			
Selenium	28	15	28.40	6.868	73.4	75	125			S
Silver	5.4	1.5	5.679	0	95.7	75	125			

Sample ID **1207640-001BMSD** SampType: **MSD** TestCode: **EPA Method 6010B: Soil Metals**
Client ID: **BatchQC** Batch ID: **2912** RunNo: **4414**
Prep Date: **7/19/2012** Analysis Date: **7/25/2012** SeqNo: **123198** Units: **mg/Kg-dry**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	26	15	28.58	0	89.5	75	125	2.19	20	
Barium	43	0.58	28.58	36.21	23.0	75	125	1.08	20	S
Cadmium	27	0.58	28.58	0	95.3	75	125	0.988	20	
Chromium	29	1.7	28.58	2.024	94.9	75	125	1.85	20	
Lead	29	1.5	28.58	2.697	93.7	75	125	0.831	20	
Selenium	32	15	28.58	6.868	87.2	75	125	13.7	20	
Silver	5.3	1.5	5.717	0	93.3	75	125	1.94	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#: 1207801

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **MB-3144** SampType: **MBLK** TestCode: **EPA Method 6010B: TCLP Metals**

Client ID: **PBW** Batch ID: **3144** RunNo: **4617**

Prep Date: **8/1/2012** Analysis Date: **8/2/2012** SeqNo: **129447** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100								
Chromium	ND	5.0								
Lead	ND	5.0								
Selenium	ND	1.0								
Silver	ND	5.0								

Sample ID **LCS-3144** SampType: **LCS** TestCode: **EPA Method 6010B: TCLP Metals**

Client ID: **LCSW** Batch ID: **3144** RunNo: **4617**

Prep Date: **8/1/2012** Analysis Date: **8/2/2012** SeqNo: **129448** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100	0.5000	0	92.7	80	120			
Chromium	ND	5.0	0.5000	0	95.3	80	120			
Lead	ND	5.0	0.5000	0	95.9	80	120			
Selenium	ND	1.0	0.5000	0	104	80	120			
Silver	ND	5.0	0.1000	0.004880	96.6	80	120			

Sample ID **1207C56-003AMS** SampType: **MS** TestCode: **EPA Method 6010B: TCLP Metals**

Client ID: **BatchQC** Batch ID: **3144** RunNo: **4617**

Prep Date: **8/1/2012** Analysis Date: **8/2/2012** SeqNo: **129483** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	5.0	0.5000	0	99.8	75	125			
Selenium	ND	1.0	0.5000	0	104	75	125			
Silver	ND	5.0	0.1000	0.01075	100	75	125			

Sample ID **1207C56-003AMSD** SampType: **MSD** TestCode: **EPA Method 6010B: TCLP Metals**

Client ID: **BatchQC** Batch ID: **3144** RunNo: **4617**

Prep Date: **8/1/2012** Analysis Date: **8/2/2012** SeqNo: **129484** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	ND	5.0	0.5000	0	91.9	75	125	0	20	
Selenium	ND	1.0	0.5000	0	101	75	125	0	20	
Silver	ND	5.0	0.1000	0.01075	90.9	75	125	0	20	

Sample ID **MB-3144** SampType: **MBLK** TestCode: **EPA Method 6010B: TCLP Metals**

Client ID: **PBW** Batch ID: **3144** RunNo: **4622**

Prep Date: **8/1/2012** Analysis Date: **8/3/2012** SeqNo: **129665** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0								
Cadmium	ND	1.0								

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#: 1207801

03-Aug-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **LCS-3144** SampType: **LCS** TestCode: **EPA Method 6010B: TCLP Metals**

Client ID: **LCSW** Batch ID: **3144** RunNo: **4622**

Prep Date: **8/1/2012** Analysis Date: **8/3/2012** SeqNo: **129666** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	107	80	120			
Cadmium	ND	1.0	0.5000	0	98.8	80	120			

Sample ID **1207C56-003AMS** SampType: **MS** TestCode: **EPA Method 6010B: TCLP Metals**

Client ID: **BatchQC** Batch ID: **3144** RunNo: **4622**

Prep Date: **8/1/2012** Analysis Date: **8/3/2012** SeqNo: **129686** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	1.0	0.5000	0	94.3	75	125			

Sample ID **1207C56-003AMSD** SampType: **MSD** TestCode: **EPA Method 6010B: TCLP Metals**

Client ID: **BatchQC** Batch ID: **3144** RunNo: **4622**

Prep Date: **8/1/2012** Analysis Date: **8/3/2012** SeqNo: **129689** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	ND	1.0	0.5000	0	91.8	75	125	0	20	

Sample ID **1207C56-003AMS** SampType: **MS** TestCode: **EPA Method 6010B: TCLP Metals**

Client ID: **BatchQC** Batch ID: **3144** RunNo: **4622**

Prep Date: **8/1/2012** Analysis Date: **8/3/2012** SeqNo: **129691** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	500	0.5000	1.293	92.8	75	125			

Sample ID **1207C56-003AMSD** SampType: **MSD** TestCode: **EPA Method 6010B: TCLP Metals**

Client ID: **BatchQC** Batch ID: **3144** RunNo: **4622**

Prep Date: **8/1/2012** Analysis Date: **8/3/2012** SeqNo: **129692** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	500	0.5000	1.293	92.9	75	125	0	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

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: 1207801

Received by/date: RM 07/19/12

Logged By: Lindsay Mangin 7/19/2012 10:10:00 AM

Completed By: Lindsay Mangin 07/19/12

Reviewed By: JO 07/19/12

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? Client

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	1.0	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: ASAP - metals
☐ Standard ☒ Rush same day

Project Name: CoP Kattker #1

Project #:

Project Manager: R. Kennemer

Sampler: Debbie Watson

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.0

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. 1205801	BTEX + [redacted] (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)	300.0 Chlorides	Air Bubbles (Y or N)
1-18-12	0910	soil	SC-1	1-4oz / 1 Moister	non / MeOH	-001	X											X	
1-18-12	1249	soil	Stockpile	2-4oz	non	-002							X						

Date: 1/18/12 Time: 1622 Relinquished by: Debbie Watson
Received by: Christine Walker Date: 1/18/12 Time: 1622

Date: 1/18/12 Time: 1702 Relinquished by: Christine Walker
Received by: [signature] Date: 1/19/12 Time: 1010

Remarks: Bill to ConocoPhillips
WO: 10336323 User ID: KAITLW
act. code: C200 Work ordered: Jess Henson
Supervisor: Harry Dee Area: 3

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

July 24, 2012

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

RE: COP Kattler #1

OrderNo.: 1207948

Dear Debbie Watson:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/21/2012 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

Analytical Report
Lab Order **1207948**
Date Reported: **7/24/2012**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP Kattler #1
Lab ID: 1207948-001 **Matrix:** SOIL

Client Sample ID: SC-6
Collection Date: 7/20/2012 1:40:00 PM
Received Date: 7/21/2012 2:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	90	30		mg/Kg	20	7/23/2012 11:09:34 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
R	RPD outside accepted recovery limits
S	Spike Recovery 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
U	Samples with CalcVal < MDL

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Animas Environmental Services
Project: COP Kattler #1
Lab ID: 1207948-002 **Matrix:** SOIL

Client Sample ID: Background
Collection Date: 7/18/2012 12:08:00 PM
Received Date: 7/21/2012 2:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **BRM**
Chloride	ND	30		mg/Kg	20	7/23/2012 11:21:59 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
R	RPD outside accepted recovery limits
S	Spike Recovery 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
U	Samples with CalcVal < MDL

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1207948

24-Jul-12

Client: Animas Environmental Services

Project: COP Kattler #1

Sample ID **MB-2967** SampType: **MBLK** TestCode: **EPA Method 300.0: Anions**

Client ID: **PBS** Batch ID: **2967** RunNo: **4241**

Prep Date: **7/23/2012** Analysis Date: **7/23/2012** SeqNo: **121293** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID **LCS-2967** SampType: **LCS** TestCode: **EPA Method 300.0: Anions**

Client ID: **LCSS** Batch ID: **2967** RunNo: **4241**

Prep Date: **7/23/2012** Analysis Date: **7/23/2012** SeqNo: **121294** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	96.1	90	110			

Sample ID **1207838-001AMS** SampType: **MS** TestCode: **EPA Method 300.0: Anions**

Client ID: **BatchQC** Batch ID: **2967** RunNo: **4241**

Prep Date: **7/23/2012** Analysis Date: **7/23/2012** SeqNo: **121298** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	48	15	15.00	35.17	88.6	64.4	117			

Sample ID **1207838-001AMSD** SampType: **MSD** TestCode: **EPA Method 300.0: Anions**

Client ID: **BatchQC** Batch ID: **2967** RunNo: **4241**

Prep Date: **7/23/2012** Analysis Date: **7/23/2012** SeqNo: **121299** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	50	15	15.00	35.17	98.1	64.4	117	2.89	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

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: 1207948

Received by/date: AF 07/21/12

Logged By: Anne Thorne — 7/21/2012 2:00:00 PM — Ann Thorne

Completed By: Anne Thorne — 7/23/2012 — Ann Thorne

Reviewed By: AF 07/23/12

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	3.2	Good	Yes			

Chain-of-Custody Record

Client: Animas Environmental Services, LLC

Mailing Address: 1624 E. Comanche
Farmington, NM 87401

Phone #: (505) 564-2281

email or Fax#: (505) 326-2022

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

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☒ Rush Same Day

Project Name:
CoP Kattler #1

Project #:

Project Manager:
D. Watson

Sampler: Heather Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 3/2 °C

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. 1207944	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) 300.0 Cl,	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
7/20/12	1340	Soil	SC-10	2 4oz Jars	None	-001								X								
7/10/12	1208	Soil	Background	1 4oz Jar	None	-002								X								

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/20/12	1530	Heather M. Woods	Christine Walters	7/20/12	1530
7/20/12	1600	Christine Walters		7/21/12	1400

Remarks: Bill to ConocoPhillips
WO#: 10336323 Area: 3
Activity Code: C20D Supervisor: Harry Dee
User ID: KAITLW

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.

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 Oil & Gas Company**	Contact **Crystal Tafoya**
Address 3401 East 30th St, Farmington, NM	Telephone No.(505) 326-9837
Facility Name: **Kattler 1**	Facility Type: **Gas Well**

Surface Owner **Fee**	Mineral Owner **Fee**	API No.**30-045-08844**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	2	29N	12W	990	North	1650	West	San Juan

Latitude 36.75908 Longitude 108.07066

NATURE OF RELEASE

Type of Release **Produced Fluids**	Volume of Release **Unknown**	Volume Recovered **None**
Source of Release **Below Grade Tank**	Date and Hour of Occurrence **Unknown**	Date and Hour of Discovery **July 17, 2012**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	RCVD FEB 22 '13
By Whom?	Date and Hour	OIL CONS. DIV.
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	DIST. 3

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 standards by USEPA method 418.1 for TPH confirming a release. Th excavation was 24' x 20' x 5.5' and 98 cubic yards of soil was transported to a third party landfarm. Excavation and confirmation sampling occurred. Analytical results for TPH, BTEX and Chlorides were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Release; therefore no further action is required. 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: Crystal A. Tafoya	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Jonathan D. Kelly
Printed Name: **Crystal Tafoya**	
Title: **Field Environmental Specialist**	Approval Date: 2/27/2013 Expiration Date:
E-mail Address: crystal.tafoya@conocophillips.com	Conditions of Approval: Attached ☐
Date: 2/19/2013 Phone: (505) 326-9837	

* Attach Additional Sheets If Necessary

nJK1305848824


BURLINGTON
RESOURCES
KATTLER #1
FORMATION PC
LATITUDE N 36° 45.5
LONGITUDE W 108° 4.29
990' FNL 1650' FWL
SEC. 02 T029N R012W
LEASE NO. FEE ELEV. 5855
API NO. 30-045-08044
SAN JUAN COUNTY, NEW MEXICO