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

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
Type of action: Below grade tank registration	
Permit of a pit or proposed alternative method	
$\square \text{ Closure of a pit, below-grade tank, or proposed alternative metric} \\ \square \text{ Modification to an existing permit/or registration} $	ethod
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	permitter prij oeren grune tunij
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 pollu environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable government.	tion of surface water, ground water or the ental authority's rules, regulations or ordinances.
1.     Operator: <u>ConocoPhillips Company</u> OGRID #: <u>217817</u>	AN AGUS DIV DIST 3
Address: PO BOX 4289, Farmington, NM 87499	OIL CONS. DIV DIST. 3
Facility or well name: HARDIE 4E - SOUTH	DEC 21 2016
API Number:OCD Permit Number:	
U/L or Qtr/Qtr Section Township Range County	: <u>San Juan</u>
Center of Proposed Design: Latitude <u>36.71293 N</u> Longitude <u>-107.63442 W</u> NAD: 192	27 🖂 1983
Surface Owner: 🛛 Federal 🗌 State 🗋 Private 🗋 Tribal Trust or Indian Allotment	
2. auctored toing	to Pagendal
Pit: Subsection F, G or J of 19.15.17.11 NMAC	to CP approval
Temporary: Drilling Workover	rend tot paren
Permanent Emergency Cavitation P&A Multi-Well Fluid Management Low C	Chloride Drilling Fluid 🗌 yes 🔲 no
Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other	
String-Reinforced	
Liner Seams: Welded Factory Other Volume:bbl Dimension	ns: Lx Wx D
3.	
Below-grade tank: Subsection I of 19.15.17.11 NMAC	
Volume:bbl Type of fluid:Produced Water	
Tank Construction material: <u>Metal</u>	
Secondary containment with leak detection 🛛 Visible sidewalls, liner, 6-inch lift and automatic overflo	ow shut-off
□ Visible sidewalls and liner □ Visible sidewalls only □ Other	
Liner type: Thicknessmil	
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 to	
Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a p institution or church)	permanent residence, school, hospital,
Four foot height, four strands of barbed wire evenly spaced between one and four feet	
Alternate. Please specify	

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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)

#### 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

#### 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.

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
<ul> <li>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)</li> <li>Written confirmation or verification from the municipality; Written approval obtained from the municipality</li> </ul>	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
<ul> <li>Within an unstable area. (Does not apply to below grade tanks)</li> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	Yes No
Within a 100-year floodplain. (Does not apply to below grade tanks) - FEMA map	🗋 Yes 🗌 No
Below Grade Tanks	
<ul> <li>Within 100 feet of a continuously flowing watercourse, significant watercourse, lake bed, sinkhole, wetland or playa lake (measured from the ordinary high-water mark).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🛛 No
<ul> <li>Within 200 horizontal feet of a spring or a fresh water well used for public or livestock consumption;.</li> <li>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🛛 No
Temporary Pit using Low Chloride Drilling Fluid (maximum chloride content 15,000 mg/liter)	
<ul> <li>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.)</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	Yes 🗌 No
Within 300 feet from a occupied permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes No
<ul> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	
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

<ul> <li>Within 100 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	Yes No
Temporary Pit Non-low chloride drilling fluid	
<ul> <li>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).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗆 Yes 🗌 No
<ul> <li>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	🗌 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
<ul> <li>Within 300 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
Permanent Pit or Multi-Well Fluid Management Pit	
<ul> <li>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).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
<ul> <li>Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	🗌 Yes 🗌 No
<ul> <li>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.</li> <li>NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site</li> </ul>	🗋 Yes 🗌 No
<ul> <li>Within 500 feet of a wetland.</li> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	🗌 Yes 🗌 No
10. Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 N	
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the dot 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 19.15.17.12 NMAC         Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19. and 19.15.17.13 NMAC         Previously Approved Design (attach copy of design)       API Number: or Permit Number:	9 NMAC 15.17.9 NMAC
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 19.15.17.10 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. and 19.15.17.13 NMAC         Previously Approved Design (attach copy of design)       API Number: or Permit Number:         11.	9 NMAC 15.17.9 NMAC
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 19.15.17.10 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. and 19.15.17.13 NMAC         Previously Approved Design (attach copy of design)       API Number: or Permit Number:	9 NMAC 15.17.9 NMAC
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         Design Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC         Design Plan - based upon the appropriate requirements of 19.15.17.10 NMAC         Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.         and 19.15.17.13 NMAC         Image: The text of the following items must be attached to the application. Please indicate, by a check mark in the box, that the doc attached.         Image: Design Plan - based upon the appropriate requirements of 19.15.17.12 NMAC         Image: Design Plan - based upon design)       API Number:	9 NMAC 15.17.9 NMAC 

<sup>12.</sup> <u>Permanent Pits Permit Application Checklist</u> : 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 attached.	documents are
<ul> <li>Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC</li> <li>Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC</li> <li>Climatological Factors Assessment</li> <li>Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC</li> </ul>	
<ul> <li>Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC</li> </ul>	
<ul> <li>Quality Control/Quality Assurance Construction and Installation Plan</li> <li>Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC</li> <li>Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC</li> <li>Nuisance or Hazardous Odors, including H<sub>2</sub>S, Prevention Plan</li> </ul>	
<ul> <li>Emergency Response Plan</li> <li>Oil Field Waste Stream Characterization</li> </ul>	
<ul> <li>Monitoring and Inspection Plan</li> <li>Erosion Control Plan</li> <li>Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC</li> </ul>	
13.	
<u>Proposed Closure</u> : 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 Fl	uid Management Pit
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	
Waste Excavation and Removal Closure Plan Checklist:       (19.15.17.13 NMAC) Instructions: Each of the following items must be a closure plan. Please indicate, by a check mark in the box, that the documents are attached.	
15. <u>Siting Criteria (regarding on-site closure methods only)</u> : 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable sour provided below. Requests regarding changes to certain siting criteria require justifications and/or demonstrations of equivalency. P 19.15.17.10 NMAC for guidance.	
<ul> <li>Ground water is less than 25 feet below the bottom of the buried waste.</li> <li>NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells</li> </ul>	□ 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
<ul> <li>Ground water is more than 100 feet below the bottom of the buried waste.</li> <li>NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells</li> </ul>	□ Yes □ No □ NA
<ul> <li>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).</li> <li>Topographic map; Visual inspection (certification) of the proposed site</li> </ul>	Yes No
<ul> <li>Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.</li> <li>Visual inspection (certification) of the proposed site; Aerial photo; Satellite image</li> </ul>	Yes No
<ul> <li>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.</li> <li>NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site</li> </ul>	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	
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<ul> <li>Written confirmation or verification from the municipality; Written approval obtained from the municipality</li> </ul>	Yes No
<ul> <li>Within the area overlying a subsurface mine.</li> <li>Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division</li> </ul>	Yes No
Within an unstable area.	
<ul> <li>Engineering measures incorporated into the design; NM Bureau of Geology &amp; Mineral Resources; USGS; NM Geological Society; Topographic map</li> </ul>	Yes No
Within a 100-year floodplain. - FEMA map	🗌 Yes 🗌 No
16. On Site Champer Chambled (10.15.17.12.) D(AC) Instructions Fach of the following item and he started at the descent	Diana indianta
On-Site Closure Plan Checklist:       (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure play 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 19.15.17.13 NMAC         Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of Subsection K of 19.15.17.13 NMAC         Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.13 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 canned Soil Cover Design - based upon the appropriate requirements 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	11 NMAC 15.17.11 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 believed and be	ef.
Name (Print): Title:	
Signature: Date:	
e-mail address: Telephone:	
e-mail address: Telephone: <u>OCD Approval</u> : Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature: Approval Date:	
e-mail address: Telephone: <u>OCD Approva</u> l:  Permit Application (including closure plan (Approval Date:) OCD Representative Signature: Approval Date: Title: OCD Permit Number:	the closure report.
e-mail address: Telephone: 18. OCD Approval: Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature: Approval Date: Title: 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 is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not	the closure report.
e-mail address: Telephone: 18. OCD Approval: Permit Application (including closure plan Approval Closure Plan (only) OCD Conditions (see attachment) OCD Representative Signature: Approval Date: Title: 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 is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not section of the form until an approved closure plan has been obtained and the closure activities have been completed.	the closure report.

#### 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)	Crystal Walker	Title:	Regulatory Coordiantor		
Signature:	Jotal	Wal	ker	Date:	12/19/2016
e-mail address:	crystal.walker@cop.com				

## ConocoPhillips Company San Juan Basin Below Grade Tank Closure Report

## Lease Name: Haride 4E - SOUTH API No.: 30-045-24938

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:

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

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

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

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

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

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

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

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

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

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

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

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

#### A release was not determined for the above referenced well.

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

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

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

#### Notification was not found.

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

#### The closure process notification to the landowner was not found.

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

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

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

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

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

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

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

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office to accordance with 19.15.29 NMAC.

			Rele	ase Notifi	catior	and Co	orrective A	ction				
						OPERAT	ГOR		Initia	al Report	$\boxtimes$	Final Report
Name of Co							stal Walker					
Address 340				[			No.(505) 326-98	37				
Facility Nar	ne: Hardie	4E - SOUT	H			Facility Typ	e: Gas Well					
Surface Ow	ner FEDE	RAL		Mineral (	Owner 1	FEDERAL			API No	. 30-045-2	4938	
				LOCA	ATION	N OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/Wes	st Line	County		
E	24	29N	8W	1800		North	790	We	st	San Juan		
			Latitude	36.71293		Longitud	e <u>-107.6344</u>	2	-			
				NAT	TURE	OF RELI	EASE					
Type of Relea	ase					Volume of		V	olume R	Recovered		
Source of Re	lease					Date and H	lour of Occurrenc	e D	Date and	Hour of Dise	covery	
Was Immedia	ate Notice (	diven?				If YES, To	Whom?					
			Yes 🗌	No 🛛 Not R	equired							
By Whom?						Date and H						
Was a Water	course Read		Yes 🛛 N	Io		If YES, Vo	lume Impacting t	he Waterco	ourse.			
If a Watercou N/A	irse was Im	pacted, Descr	ibe Fully.*									
INA												
D	an 11	15		<b>m</b> 1 +			120					
Describe Cau No release w												
ito release w	as encount	er eu uur ing	une DOI (	ciosul c.								
Describe Are	a Affected a	and Cleanup	Action Tak	en.*								
N/A		1										
												1
							knowledge and u					
							nd perform correc arked as "Final Re					
							on that pose a three					
or the environ	nment. In a	ddition, NMC	OCD accept				e the operator of 1					
federal, state,	or local lay	ws and/or regu	ilations.	<del>-</del>			OIL CON	TEDVA	TION	DIVISIO	NT	
Signature:	0	10	10	1			OIL CONS	SERVA	TION	DIVISIO	IN	
	p	fal (	Val	Ker								
Printed Name	Crystal V	Valker				Approved by	Environmental S	pecialist:				
- miter Fully	. Orjour I											
Title: Regula	tory Coord	inator				Approval Dat	e:	Exp	piration l	Date:		
E-mail Addre	SS: CT	ystal.walker@	con.com			Conditions of	Approval				_	
L'indi Tiddi (		, statt trainer (a	-op.com		`					Attached		

Date: 12 19 16 Phone: (505) 326-9837 \* Attach Additional Sheets If Necessary



December 30, 2013

Lindsay Dumas ConocoPhillips San Juan Business Unit Office 214-07 5525 Hwy 64 Farmington, New Mexico 87401

#### www.animasenvironmental.com

624 E. Comanche Farmington, NM 87401 505-564-2281

> Durango, Colorado 970-403-3084

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

## RE: Below Grade Tank Closure Report Hardie #4E South BGT San Juan County, New Mexico

Dear Ms. Dumas:

Animas Environmental Services, LLC (AES) is pleased to provide the final report associated with the South below grade tank (BGT) closure at ConocoPhillips (CoP) Hardie #4E, located in San Juan County, New Mexico. Tank removal had been completed by CoP contractors prior to AES' arrival at the location.

## 1.0 Site Information

#### 1.1 Location

Site Name – Hardie #4E

Legal Description – SW¼ NW¼, Section 24, T29N, R8W, San Juan County, New Mexico Well Latitude/Longitude – N36.71331 and W107.63448, respectively South BGT Latitude/Longitude – N36.71293 and W107.63442, respectively Land Jurisdiction – Bureau of Land Management (BLM) Figure 1. Topographic Site Location Map Figure 2. Aerial Site Map, October 2013

#### 1.2 NMOCD Ranking

Prior to site work, the location was given a ranking score in accordance with New Mexico Oil Conservation Division (NMOCD) *Guidelines for Remediation of Leaks, Spills, and Releases* (August 1993). The location was given a ranking score of 20 based on the following factors:

Lindsay Dumas Hardie #4E BGT Closure Report December 30, 2013 Page 2 of 5

- Depth to Groundwater: A Pit Remediation and Closure Report form dated June 2002 reported the depth to groundwater as greater than 100 feet below ground surface (bgs). (0 points)
- Wellhead Protection Area: The tank location is not within a wellhead protection area. (0 points)
- Distance to Surface Water Body: An unnamed wash which ultimately discharges to the wash in Jasis Canyon is located approximately 190 feet northwest of the location. (20 points)

### 1.3 BGT Closure Assessment

AES was initially contacted by Doyle Clark, CoP representative, on October 21, 2013, and on October 22, 2013, Deborah Watson and David Reese of AES mobilized to 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.

## 2.0 Soil Sampling

On October 22, 2013, 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) and total petroleum hydrocarbon (TPH). Soil sample SC-1 was field screened for VOCs and chloride and was submitted for confirmation laboratory analysis. Soil sample locations are included on Figure 2.

## 2.1 Field Screening

#### 2.1.1 Volatile Organic Compounds

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

#### 2.1.2 Total Petroleum Hydrocarbons

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

Lindsay Dumas Hardie #4E BGT Closure Report December 30, 2013 Page 3 of 5

#### 2.1.3 Chlorides

Soil sample SC-1 was 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 sample SC-1 collected for laboratory analysis was placed into a new, clean, laboratory-supplied container, which was then labeled, placed on ice, and logged onto a sample chain of custody record. The sample was maintained on ice until delivery to the analytical laboratory, Hall Environmental Analysis Laboratory (Hall), in Albuquerque, New Mexico. Soil sample SC-1 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.

## 2.3 Field and Laboratory Analytical Results

Field screening readings for VOCs via OVM ranged from 0.6 ppm in S-2 up to 3.6 ppm in S-3. Field TPH concentrations ranged from less than 20.0 mg/kg in S-2 through S-4 up to 24.1 mg/kg in S-1. The field chloride concentration in SC-1 was 40 mg/kg. Field screening results are summarized in Table 1 and presented on Figure 2. The AES Field Screening Report is attached.

Sample ID	Date Sampled	Depth below BGT (ft)	VOCs OVM Reading (ppm)	Field TPH (mg/kg)	Field Chlorides (mg/kg)
NMOCD Action L	evel (NMAC 19.	15.17.13E)	, - <b></b>	100	250
S-1	10/22/13	0.5	0.7	24.1	NA
S-2	10/22/13	0.5	0.6	<20.0	NA
S-3	10/22/13	0.5	3.6	<20.0	NA
S-4	10/22/13	0.5	2.7	<20.0	NA
S-5	10/22/13	0.5	0.9	21.4	NA
SC-1	10/22/13	0.5	0.7	NA	40

Table 1.	Soil Field Screening VOCs, TPH, and Chloride Results
	Hardie #4E South BGT Closure, October 2013

NA - Not Analyzed

Lindsay Dumas Hardie #4E BGT Closure Report December 30, 2013 Page 4 of 5

Laboratory analytical results reported benzene and total BTEX concentrations in SC-1 as less than 0.050 mg/kg and 0.25 mg/kg, respectively. The laboratory chloride concentration was reported at 39 mg/kg. Laboratory analytical results are summarized in Table 2 and included on Figure 2. The laboratory analytical report is attached.

Sample ID	Date Sampled	Depth (ft)	Benzene (mg/kg)	Total 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	1	00	250	
SC-1	10/22/13	0.5	< 0.050	<0.25	NA	NA	39

Table 2. Soil Laboratory Analytical Results

#### **Conclusions and Recommendations** 3.0

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-1 with 24.1 mg/kg. Benzene and total BTEX concentrations in SC-1 were below the NMOCD action levels of 0.2 mg/kg and 50 mg/kg, respectively. Chloride concentrations in SC-1 were below the NMOCD action level of 250 mg/kg. Based on field screening and laboratory analytical results for benzene, total BTEX, TPH, and chlorides, no further work is recommended at the South BGT at the Hardie #4E location.

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

Sincerely,

David & Reve

David J. Reese **Environmental Scientist** 

Elizabeth & Mindly

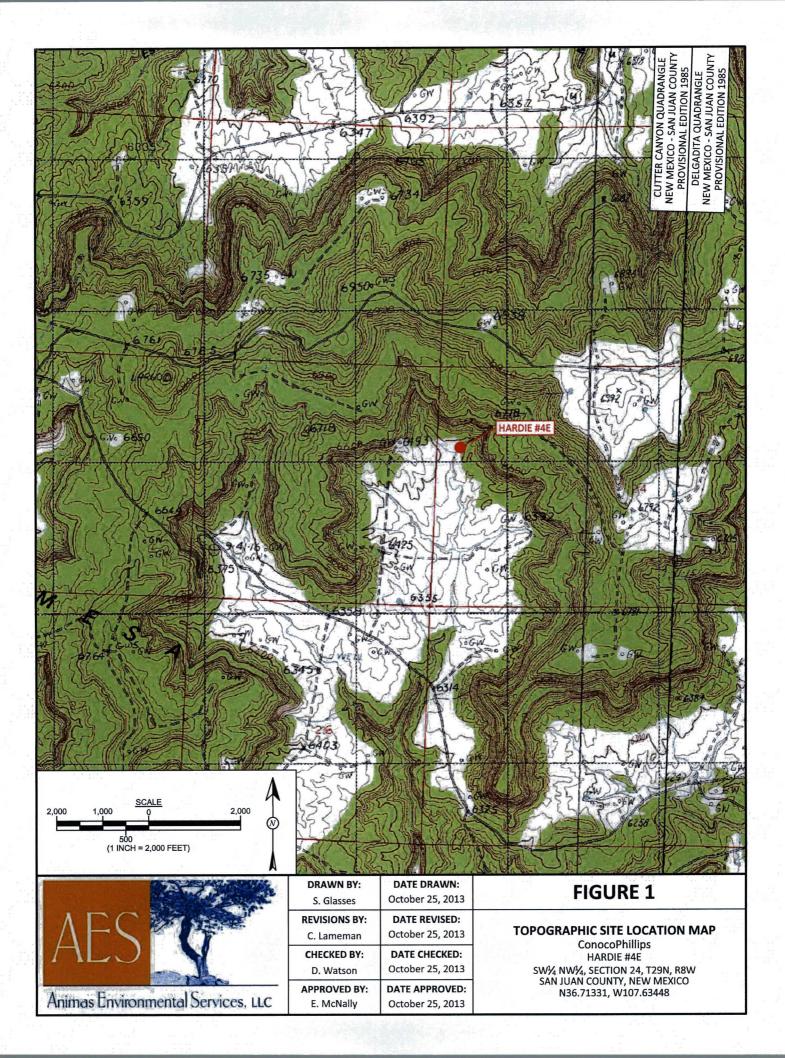
Elizabeth McNally, P.E.

Lindsay Dumas Hardie #4E BGT Closure Report December 30, 2013 Page 5 of 5

Attachments:

Figure 1. Topographic Site Location Map Figure 2. Aerial Site Map, October 2013 AES Field Screening Report 102213 Hall Analytical Report 1310A82

R:\Animas 2000\Dropbox\2013 Projects\ConocoPhillips\Hardie #4E\BGT South\Hardie #4E South BGT Closure Report 123013.docx



	Field Scr	eening R	esults	
Sample ID	Date	OVM- PID (ppm)	TPH (mg/kg)	Chlorides (mg/kg)
NMOCD ACTION LEVEL		-	100	250
S-1	10/22/13	0.7	24.1	NA
S-2	10/22/13	0.6	<20	NA
S-3	10/22/13	3.6	<20	NA
S-4	10/22/13	2.7	<20	NA
S-5	10/22/13	0.9	21.4	NA
SC-1	10/22/13	0.7	NA	40

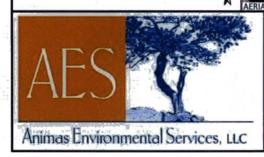
		Laborato	ry Analytica	al Results		
Sample ID	Date	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH - GRO (mg/kg)	TPH - DRO (mg/kg)	Chlorides (mg/kg)
NMOCD ACT	TION LEVEL	0.2	50	10	00	250
SC-1	10/22/13	< 0.050	<0.25	NA	NA	39

THROUGH S-5. NA - NOT ANALYZED

HARDIE #4E WELLHEAD

LEGEND SAMPLE LOCATIONS

CALE 10 (1 INCH = 40 FEET)



	DATE DOALLING	DD ALLAN DV
FIGUR	DATE DRAWN:	DRAWN BY:
	October 25, 2013	S. Glasses
AERIAL SITE	DATE REVISED:	<b>REVISIONS BY:</b>
SOUTH BELOW GRAD	October 25, 2013	C. Lameman
OCTOBER	DATE CHECKED:	CHECKED BY:
ConocoPhi		
HARDIE #	October 25, 2013	D. Watson
SW¼ NW¼, SECTION SAN JUAN COUNTY,	DATE APPROVED:	APPROVED BY:
N36.71331, W10	October 25, 2013	E. McNally

SOUTH BGT - N36.71293 W107.63442

	FIGURE 2		
	AERIAL SITE MAP		
SOL	JTH BELOW GRADE TANK CLO	DS	URE
	OCTOBER 2013		
	ConocoPhillips		
	HARDIE #4E		
	SW1/4 NW1/4, SECTION 24, T29N, R81		
	SAN JUAN COUNTY, NEW MEXICO		
	N36.71331, W107.63448		

## **AES Field Screening Report**

## Client: ConocoPhillips

Project Location: Hardie #4E South BGT

Date: 10/22/2013

Matrix: Soil



Animas Environmental Services. LLC

www.animasenvironmental.com

624 E. Comanche Farmington, NM 87401 505-564-2281

> Durango, Colorado 970-403-3084

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	10/22/2013	14:12	North	0.7	NA	15:33	24.1	20.0	1	DAW
S-2	10/22/2013	14:14	South	0.6	NA	15:35	< 20.0	20.0	1	DAW
S-3	10/22/2013	14:16	East	3.6	NA	15:37	< 20.0	20.0	1	DAW
S-4	10/22/2013	14:18	West	2.7	NA	15:40	< 20.0	20.0	1	DAW
S-5	10/22/2013	14:20	Center	0.9	NA	15:42	21.4	20.0	1	DAW
SC-1	10/22/2013	14:25	Composite	0.7	40		Not	Analyzed for Tl	PH.	

DF Dilution Factor

NA Not Analyzed

- ND Not Detected at the Reporting Limit
- PQL Practical Quantitation Limit

\*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:

Debrah Water



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

October 24, 2013

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

OrderNo.: 1310A82

Dear Debbie Watson:

RE: CoP Hardie 4E

Hall Environmental Analysis Laboratory received 1 sample(s) on 10/23/2013 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 <u>www.hallenvironmental.com</u> or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. 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. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. 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.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

andia

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Analytic	al R	eport	
Lab Order	1310	DA82	

#### Date Reported: 10/24/2013

## Hall Environmental Analysis Laboratory, Inc.

 CLIENT: Animas Environmental
 Client Sample ID: SC-2 SC-1 DAW

 Project:
 CoP Hardie 4E
 Collection Date: 10/22/2013 2:25:00 PM

 Lab ID:
 1310A82-001
 Matrix: MEOH (SOIL)
 Received Date: 10/23/2013 10:00:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS			2		Anal	yst: JRR
Chloride	39	30	mg/Kg	20	10/23/2013 12:42:15	5 PM 9973
EPA METHOD 8260B: VOLATILES	SHORT LIST				Anal	yst: cadg
Benzene	ND	0.050	mg/Kg	1	10/23/2013 11:59:59	AM R14280
Toluene	ND	0.050	mg/Kg	1	10/23/2013 11:59:59	AM R14280
Ethylbenzene	ND	0.050	mg/Kg	1	10/23/2013 11:59:59	AM R14280
Xylenes, Total	ND	0.10	mg/Kg	1	10/23/2013 11:59:59	AM R14280
Surr: 1,2-Dichloroethane-d4	101	70-130	%REC	1	10/23/2013 11:59:59	AM R14280
Surr: 4-Bromofluorobenzene	100	70-130	%REC	1	10/23/2013 11:59:59	AM R14280
Surr: Dibromofluoromethane	105	70-130	%REC	1	10/23/2013 11:59:59	AM R14280
Surr: Toluene-d8	89.0	70-130	%REC	1	10/23/2013 11:59:59	AM R14280

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

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	В	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 Page 1 of 3
	0	RSD is greater than RSDlimit	Р	Sample pH greater than 2 for VOA and TOC only.
	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#: 1310A82 24-Oct-13

Client: Project:		s Environmental ardie 4E						
Sample ID		SampType: M			tCode: EPA Metho	od 300.0: Anions		1997 - 19
Client ID:	PBS	Batch ID: 99	73	F	RunNo: 14308			
Prep Date:	10/23/2013	Analysis Date: 10	0/23/2013	S	SeqNo: 410687	Units: mg/Kg		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC LowLim	it HighLimit %RPD	RPDLimit	Qual
Chloride		ND 1.5						
Sample ID	LCS-9973	SampType: LC	s	Tes	Code: EPA Metho	od 300.0: Anions		
Client ID:	LCSS	Batch ID: 99	73	F	RunNo: 14308			
Prep Date:	10/23/2013	Analysis Date: 10	0/23/2013	S	SeqNo: 410688	Units: mg/Kg		
Analyte		Result PQL	SPK value	SPK Ref Val	%REC LowLim	it HighLimit %RPD	RPDLimit	Qual
Chloride		14 1.5	5.000	0	280 9	0 110		S

#### Qualifiers:

- \* Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- 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
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 2 of 3

# QC SUMMARY REPORT

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Client: Animas	Environme	ental								
Project: CoP Ha	ardie 4E									
Sample ID mb-9907	Samp	Туре: МЕ	BLK	Tes	tCode: E	PA Method	8260B: Volat	tiles Short	List	
Client ID: PBS	Batc	h ID: R1	4280	F	RunNo: 1	4280				
Prep Date:	Analysis [	Date: 10	0/23/2013	5	SeqNo: 4	10558	Units: mg/M	(g		
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	0.49		0.5000		97.2	70	130			
Surr: 4-Bromofluorobenzene	0.46		0.5000		91.1	70	130			
Surr: Dibromofluoromethane	0.53		0.5000		107	70	130			
Surr: Toluene-d8	0.44		0.5000		88.1	70	130			5
Sample ID LCS-9907	Samp	Type: LC	S	Tes	tCode: El	PA Method	8260B: Volat	tiles Short	List	
Client ID: LCSS	Batc	h ID: R1	4280	F	RunNo: 1	4280				
Prep Date:	Analysis E	Date: 10	0/23/2013	5	SeqNo: 4	10563	Units: mg/K	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	1.000	0	105	70	130			2
Toluene	0.95	0.050	1.000	0	95.3	69.9	139			
Ethylbenzene	0.99	0.050	1.000	0	99.1	70	130			
Xylenes, Total	3.0	0.10	3.000	0	100	70	130			
Surr: 1,2-Dichloroethane-d4	0.53		0.5000		106	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.6	70	130			
Surr: Dibromofluoromethane	0.55		0.5000		110	70	130			
Surr: Toluene-d8	0.45		0.5000		89.7	70	130			

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1310A82 24-Oct-13

Value exceeds Maximum Contaminant Level. Value above quantitation range Analyte detected below quantitation limits

O RSD is greater than RSDlimit

Qualifiers:

E J

- 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
- P Sample pH greater than 2 for VOA and TOC only.
- RL Reporting Detection Limit

Page 3 of 3

HALL ENVIRONMENTAL ANALYSIS LABORATORY	nau Environmeniai Analysis 4901 Albuquerque TEL: 505-345-3975 FAX: 50 Website: www.hallenviron	Hawkins NE , NM 87105 S 95-345-4107	ample	e Log-In Cł	neck List
Client Name: Animas Environmental W	Vork Order Number: 1310A	82		RcptNo:	1
Received by/date:	10/23/13	min			
	23/2013 10:00:00 AM	poe	U Genue U Genue		
Completed By: Michelle/SayCia 10/2 Reviewed By:	23/2013 10:06:35 AM	Mich	U Ganue		
Chain of Custody	12/12			5	2
1. Custody seals intact on sample bottles?	Yes	No No		Not Present	
2. Is Chain of Custody complete?	Yes	No No		Not Present	
3. How was the sample delivered?	Courie	<u>ər</u>			
Log In					
4. Was an attempt made to cool the samples?	Yes	✓ No			
5. Were all samples received at a temperature of >	>0° C to 6.0°C Yes	✓ No			
6. Sample(s) in proper container(s)?	Yes	No No			ч 1
7. Sufficient sample volume for indicated test(s)?	Yes	V No			
8. Are samples (except VOA and ONG) properly pr	eserved? Yes	No No			
9. Was preservative added to bottles?	Yes	No No		NA 🗆	
10.VOA vials have zero headspace?	Yes	No		lo VOA Vials 🗹	
11. Were any sample containers received broken?	Yes	No No			
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes	No No	b	of preserved ottles checked or pH: (<2 or	>12 unless noted)
13 Are matrices correctly identified on Chain of Cus	tody? Yes	V No		Adjusted?	
14. Is it clear what analyses were requested?		No No			
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes	✓ No		Checked by:	
Special Handling (if applicable)					
16. Was client notified of all discrepancies with this of	order? Yes	No		NA 🗹	
Person Notified:	Date:		_		

17. Additional remarks:

18. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.2	Good	Yes			

Page 1 of 1

Client: Animas Environmental Client: Animas Environmental Services UC Mailing Address: 624 E Comanche Farmington N n 87401 Phone #: 505 564 2281 email or Fax#:				Turn-Around Time:															
				□ Standard	💶 🗖 🗖 ANALYSIS LABORATORY -														
				Di Standard A Rush Same day. Project Name: CoP Hardie Mar AE				www.hallenvironmental.com											
				CoP Hardie Man AE Project #:				4901 Hawkins NE - Albuquerque, NM 87109											
								Tel	. 505-	3 <b>4</b> 5-3	975	F	ax	505-	345-	4107	,		
											A	naly	/sis	Req	uest				
				Project Manager:				(8021) Gas only) O / MRO) PO4, SO4) PCB's											
QA/QC Package:				D-Watson				(Gas ol	RO/ MI	8	SIMS)	1 I I I	,PO4,SI	PCB's			0		
Accreditation				Sampler: D. Watson				H		= e		10 E	NO2	3082			chlorides		
NELAP     Other				On Ice:	WYes			+	SR0	504	r 82	s	03,1	3 / Se		(Y	S		
	(Type)			Sample Tem	<b>vertature</b> a. / , j			TBE	B 2		10 0	letal	CIN	icide	(A	-V-	3		2
Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEALTNO	BTEX + R	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	EDB (Method 504.1)	PAH's (8310 or 8270	<b>RCRA 8 Metals</b>	Anions (F,CI,NO <sub>3</sub> ,NO <sub>2</sub> ,PO <sub>4</sub> ,SO <sub>4</sub> )	8081 Pesticides / 8082	8260B (VOA)	8270 (Semi-VOA)	300.00		Air Bubbles (V or N)
10-22-13	1425	Sori	Sc-2	NeoH+Kut-	Heott	-001	X	ш		- Ш		<u> </u>	4	<b>00</b>	8		X		
N <u>v o io</u>	1.1																		
2 									+	-					8				
														5					
							_									-			
					0.0		- 4		-								0 N		
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