District III

State of New Mexico Energy Minerals and Natural Resources

Form C-144 July 21, 2008

District II 1301 W. Grand Ave., Artesia, NM 88210

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

For temporary pits, closed-loop sytems, and below-grade tanks, submit to the appropriate NMOCD District Office.

1000 Rio Brazos Rd., Aztec, NM 87410

For permanent pits and exceptions submit to the Santa Fe

| District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 | Environmental Bureau office and provide a copy to the appropriate NMOCD District Office. |
|--|--|
| Pit, Closed-Loop System, Belo | w-Grade Tank, or |
| Proposed Alternative Method Permit | or Closure Plan Application |
| X Closure of a pit, closed-loop system, bel Modification to an existing permit Closure plan only submitted for an exist below-grade tank, or proposed alternative | |
| Instructions: Please submit one application (Form C-144) per individual pit, Please be advised that approval of this request does not relieve the operator of liability should environment. Nor does approval relieve the operator of its responsibility to comply with any oth | d operations result in pollution of surface water, ground water or the |
| i Operator: ConocoPhillips Company | OGRID#: <u>217817</u> |
| Address: PO Box 4289, Farmington, NM 87499 | |
| Facility or well name: SAN JUAN 28-7 UNIT 182N | |
| API Number: 30-039-30635 OCD Per | rmit Number: |
| Center of Proposed Design: Latitude: 36.6005 °N Longit | rude: 7W County: RIO ARRIBA rude: 107.55747 °W NAD: ### X 1983 st or Indian Allotment |
| X Pit: Subsection F or G of 19.15.17.11 NMAC Temporary: Drilling Workover Permanent Emergency X Cavitation P&A (AIR Pre-set) Lined Unlined Liner type: Thickness mil LI String-Reinforced Liner Seams: Welded Factory Other Volume | RCVD NOV 20 '13 OIL CONS. DIV. DIST. 3 C bbl Dimensions L x W x D |
| notice of intent) Drying Pad Above Ground Steel Tanks Haul-off Bins Other | (Applies to activities which require prior approval of a permit or |
| Below-grade tank: Subsection I of 19.15.17.11 NMAC Volume: bbl Type of fluid: Tank Construction material: Secondary containment with leak detection Visible sidewalls, liner, 6-inch lead of the contained of t | lift and automatic overflow shut-off Other |
| 5 Alternative Method: Submittal of an exception request is required. Exceptions must be submitted to the Santa | Fe Environmental Bureau office for consideration of approval. |

| Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pit, 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, inst Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify | itution or chur | ch) |
|--|-----------------|---------|
| 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 X Signed in compliance with 19.15.3.103 NMAC | | |
| Administrative Approvals 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: X Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for cons (Cavitation pit for Pre-set) Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. | ideration of ap | proval. |
| 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. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau Office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above grade-tanks associated with a closed-loop system. | | |
| Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | Yes | No |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other 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. | Yes | No |
| (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | □NA | |
| Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applied to permanent pits) | ☐Yes ☐NA | No |
| Visual inspection (certification) of the proposed site; Aerial photo; Satellite image Within 500 horizonal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. | Yes | □No |
| NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site. 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 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | Yes | □No |
| Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD - Mining and Mineral Division | Yes | |
| 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 |

| 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 Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 |
| 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) APIor Permit |
| Closed-loop Systems 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. Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - 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 |
| Previously Approved Operating and Maintenance Plan API |
| 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 (I) of Subsection B of 19.15.17.9 NMAC |
| Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC |
| Climatological Factors Assessment |
| Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC |
| Dike Protection and Structural Integrity Design: based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC |
| Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC |
| Quality Control/Quality Assurance Construction and Installation Plan |
| Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC |
| Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC |
| Nuisance or Hazardous Odors, including H2S, Prevention Plan |
| Emergency Response Plan |
| Oil Field Waste Stream Characterization |
| Monitoring and Inspection Plan Erosion Control Plan |
| Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC |
| |
| 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 X Cavitation P&A Permanent Pit Below-grade Tank Closed-loop System 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 |
| Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration) |
| 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 F 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 14 of 19.15.17.13 NMAC |
| Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC |
| Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC |

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| 16 Waste Removal Closu <u>re For Closed-loop Systems That Utilize Above Ground</u> | Steel Tanks or Haul-off Bins Only: (19 |) 15.17.13.D NMAC) | | |
|--|---|---------------------------|-----------------|-----------|
| Instructions: Please identify the facility or facilities for the disposal of liquids, drift facilities are required. | | | | |
| Disposal Facility Name: Envirotech / JFJ Landfarm % IEI | Disposal Facility Permit #: NM- | -01-0011 / NM-01-00 | 10B | |
| Disposal Facility Name: Basin Disposal Facility | Disposal Facility Permit #: NM- | | | |
| Will any of the proposed closed-loop system operations and associated acti Yes (If yes, please provide the information No | vities occur on or in areas that will no | of be used for future s | ervice and | |
| Required for impacted areas which will not be used for future service and operation. Soil Backfill and Cover Design Specification - based upon the appropriate requirements of Su Site Reclamation Plan - based upon the appropriate requirements of | opriate requirements of Subsection H bsection I of 19.15.17.13 NMAC | | С | |
| 17 | 440 | | | |
| Siting Criteria (Regarding on-site closure methods only: 19.15.17.10 Nt Instructions: Each siting criteria requires a demonstration of compliance in the closure p certain siting criteria may require administrative approval from the appropriate district office for consideration of approval. Justifications and/or demonstrations of equivalency | olan. Recommendations of acceptable source office or may be considered an exception wh | nich must be submitted to | | |
| Ground water is less than 50 feet below the bottom of the buried waste. | | | Yes | No |
| - NM Office of the State Engineer - iWATERS database search; USGS: Data | obtained from nearby wells | | ∐N/A | |
| Ground water is between 50 and 100 feet below the bottom of the buried w | | | Yes | No |
| - NM Office of the State Engineer - iWATERS database search; USGS; Data | obtained from nearby wells | | ∐N/A | |
| Ground water is more than 100 feet below the bottom of the buried waste. | | | Yes | No |
| - NM Office of the State Engineer - iWATERS database search; USGS; Data | obtained from nearby wells | | ∐N/A | |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other sig (measured from the ordinary high-water mark). | nificant watercourse or lakebed, sinkhole | , or playa lake | Yes | No |
| - Topographic map; Visual inspection (certification) of the proposed site | | | | |
| Within 300 feet from a permanent residence, school, hospital, institution, or church - Visual inspection (certification) of the proposed site; Aerial photo; satellite in | • • • | lion. | Yes | No |
| The state of the s | o- | | Yes | No |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less purposes, or within 1000 horizontal fee of any other fresh water well or spring, in e - NM Office of the State Engineer - iWATERS database; Visual inspection (ce | xistence at the time of the initial applicati | ~ | | |
| Within incorporated municipal boundaries or within a defined municipal fresh water pursuant to NMSA 1978, Section 3-27-3, as amended. | · | dinance adopted | Yes | No |
| Written confirmation or verification from the municipality; Written approval Within 500 feet of a wetland | obtained from the municipality | | Yes | No |
| - US Fish and Wildlife Wetland Identification map; Topographic map; Visual i | nspection (certification) of the proposed | site | L | |
| Within the area overlying a subsurface mine. | | | Yes | No |
| - Written confirantion or verification or map from the NM EMNRD-Mining an | d Mineral Division | | | ا ا |
| Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & | · Mineral Resources: USGS: NM Geolog | rical Society: | ∐Yes [| No |
| Topographic map | | , our source, | | _ |
| Within a 100-year floodplain FEMA map | | | Yes | No |
| 18 | | | | |
| On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Edby a check mark in the box, that the documents are attached. | ach of the following items must bee | attached to the closu | re plan. Please | indicate, |
| Siting Criteria Compliance Demonstrations - based upon the approp | • | | | |
| Proof of Surface Owner Notice - based upon the appropriate require | | | | |
| Construction/Design Plan of Burial Trench (if applicable) based upo | , | | | |
| Construction/Design Plan of Temporary Pit (for in place burial of a X Protocols and Procedures - based upon the appropriate requirements | | rate requirements of 1 | 9.15.17.11 NM | IAC |
| X Protocols and Procedures - based upon the appropriate requirements Confirmation Sampling Plan (if applicable) - based upon the approp | | 19 15 17 13 NMAC | | |
| X Waste Material Sampling Plan - based upon the appropriate requirer | · | | | |
| X Disposal Facility Name and Permit Number (for liquids, drilling flui | | | nnot be achieve | ed) |
| Soil Cover Design - based upon the appropriate requirements of Substitution | _ | | | <i>,</i> |
| Re-vegetation Plan - based upon the appropriate requirements of Su | | | | |
| Site Reclamation Plan - based upon the appropriate requirements of | Subsection G of 19.15.17.13 NMAC | | | l. |

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| 19 Operator Application Certification: | | |
|--|---|--|
| I hereby certify that the information submitted with this application is true, accu | rate and complete to the best | of my knowledge and belief. |
| Name (Print): | Title: | |
| Signature: | Date: | |
| e-mail address: | Telephone: | |
| # OCD Approval: Permit Application (including closure plan) OCD Representative Signature: Title: Compliance | Closurg Plan (only) CD Permit | OCD Conditions (see attachment) Approval Date: 12/4/2013 Number: |
| Closure Report (required within 60 days of closure completion): Sub- Instructions: Operators are required to obtain an approved closure plan prior report is required to be submitted to the division within 60 days of the completic approved closure plan has been obtained and the closure activities have been c | to implementing any closure on of the closure activities. F ompleted. | |
| 22 Closure Method: Waste Excavation and Removal On-site Closure Method If different from approved plan, please explain. | X Alternative Closure Me | thod Waste Removal (Closed-loop systems only) |
| # Closure Report Regarding Waste Removal Closure For Closed-loop System Instructions: Please identify the facility or facilities for where the liquids, drill | | |
| were utilized. Disposal Facility Name: | Disposal Facility Per | mit Number: |
| Disposal Facility Name: | Disposal Facility Per | |
| Were the closed-loop system operations and associated activities performed of | on or in areas that will not be | used for future service and opeartions? |
| | No | |
| Required for impacted areas which will not be used for future service and of Site Reclamation (Photo Documentation) | perations: | |
| Soil Backfilling and Cover Installation | | |
| Re-vegetation Application Rates and Seeding Technique | | |
| Closure Report Attachment Checklist: Instructions: Each of the folional the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure) Plot Plan (for on-site closures and temporary pits) Confirmation Sampling Analytical Results (if applicable) Waste Material Sampling Analytical Results (if applicable) 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: | lowing items must be attache | NAD 1927 1983 |
| | | |
| Operator Closure Certification: I hereby certify that the information and attachments submitted with this closure the closure complies with all applicable closure requirements and conditions sp | | |
| Name (Print): Kenny Davis | Title: | Staff Regulatory Technician |
| Signature: | Date: | 11/14/2013 |
| e-mail address: <u>kenny.r.davis@conocophillips.com</u> | Telephone: | 505-599-4045 |

To: Jonathan Kelly (NMOCD)

Re: San Juan 28-7 Unit 182N

Preset Closure, Closure Report Correction

RCVD NOV 27'13 OIL CONS. DIV. DIST. 3

Jonathan, Please see the attached Closure report Summary top page that has been corrected to show the correct location and API # to amend the original report that was submitted on 11/18/13.

Thank You,

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Keneuth Davis

ConocoPhillips Company

SJBU Regulatory Dept.

ConocoPhillips Company Cavitation Pit for Closed-Loop Locations

Design: San Juan 28-7 Unit 182N API# 30-039-30635

ConocoPhillips Company will use a cavitation pit plan when the surface casing will be pre-set on closed-loop locations. The drill cuttings will be stockpiled on the surface.

Operations and Maintenance:

The cavitation pit will be operated and maintained as follows:

- 1. Only Fresh water and air will be used in the drilling of the surface casing.
- 2. The Cement used will be: Neat Cement with no additives.
- 3. All of the fluids will be removed within 48hrs after drilling.
- 4. A representative five point composite sample will be taken of the drill cuttings, after the setting of the surface casing is complete, using sampling tools and all samples will be tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the testing criteria is not met, all contents will be dug and hauled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e.

| 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 | 2500 |
| GRO/DRO | EPA SW-846 8015M | 500 |
| Chlorides | EPA 300.1 | 500 |

The NMOCD will be notified via email of the test results of the cavitation surface as follows:

| Components | Tests Method | Limit (mg/Kg) | Results |
|------------|---------------------------|---------------|---------|
| Benzene | EPA SW-846 8021B or 8260B | 0.2 | ND |
| BTEX | EPA SW-846 8021B or 8260B | 50 | ND |
| TPH | EPA SW-846 418.1 | 2500 | ND |
| GRO/DRO | EPA SW-846 8015M | 500 | 34.3 |
| Chlorides | EPA 300.1 | 500 | ND |

Closure Plan:

- The NMOCD will be notified of the sample results and the intent to start the closure process 3-7 days prior to the drill cuttings being transported, moved, or distributed on location.
- 2. In the event the criteria are not met, all solids and liquids will be removed and disposed of at Envirotech (Permit #NM-01-0011) and/or Basin Disposal Facility (Permit #NM-01-005) and/or JFJ Landfarm % Industrial Ecosystem Inc. (Permit # NM-01-0010B).
- 3. Testing results will be submitted with the Closure Report of the well locations Closed-Loop Permit on Form C-144.

ConocoPhillips is aware that approval of this plan does not relieve ConocoPhillips of liability should operations result in pollution of surface water, ground water, or the environment. Nor does approval relieve ConocoPhillips of its responsibility to comply with any other applicable governmental authority's rules and regulations.

ConocoPhillips Company Cavitation Pit for Closed-Loop Locations

Design: MOORE COM LS 3P / 30-045-35207

ConocoPhillips Company will use a cavitation pit plan when the surface casing will be pre-set on closed-loop locations. The drill cuttings will be stockpiled on the surface.

Operations and Maintenance:

The cavitation pit will be operated and maintained as follows:

- 1. Only Fresh water and air will be used in the drilling of the surface casing.
- 2. The Cement used will be: Neat Cement with no additives.
- 3. All of the fluids will be removed within 48hrs after drilling.
- 4. A representative five point composite sample will be taken of the drill cuttings, after the setting of the surface casing is complete, using sampling tools and all samples will be tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the testing criteria is not met, all contents will be dug and hauled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e.

| 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 | 2500 |
| GRO/DRO | EPA SW-846 8015M | 500 |
| Chlorides | EPA 300.1 | 500 |

5. The NMOCD will be notified via email of the test results of the cavitation surface as follows:

| Components | Tests Method | Limit (mg/Kg) | Results |
|------------|---------------------------|---------------|---------|
| Benzene | EPA SW-846 8021B or 8260B | 0.2 | ND |
| BTEX | EPA SW-846 8021B or 8260B | 50 | ND |
| TPH | EPA SW-846 418.1 | 2500 | ND |
| GRO/DRO | EPA SW-846 8015M | 500 | 34.3 |
| Chlorides | EPA 300.1 | 500 | ND |

Closure Plan:

- 1. The NMOCD will be notified of the sample results and the intent to start the closure process 3-7 days prior to the drill cuttings being transported, moved, or distributed on location.
- 2. In the event the criteria are not met, all solids and liquids will be removed and disposed of at Envirotech (Permit #NM-01-0011) and/or Basin Disposal Facility (Permit #NM-01-005) and/or JFJ Landfarm % Industrial Ecosystem Inc. (Permit # NM-01-0010B).
- 3. Testing results will be submitted with the Closure Report of the well locations Closed-Loop Permit on Form C-144.

ConocoPhillips is aware that approval of this plan does not relieve ConocoPhillips of liability should operations result in pollution of surface water, ground water, or the environment. Nor does approval relieve ConocoPhillips of its responsibility to comply with any other applicable governmental authority's rules and regulations.



Analytical Report

Report Summary

Client: ConocoPhillips

Chain Of Custody Number: 6284

Samples Received: 4/16/2013 7:20:00AM

Job Number: 96052-1706 Work Order: P304046

Project Name/Location: San Juan 28-7 Unit #182

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Entire Report Reviewed By:

Date: 4/17/13

Tim Cain, Laboratory Manager

The results in this report apply to the samples submitted to Envirotech's Analytical Laboratory and were analyzed in accordance with the chain of custody document supplied by you, the client, and as such are for your exclusive use only. The results in this report are based on the sample as received unless otherwise noted. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc. If you have any questions regarding this analytical report, please don't hesitate to contact Envirotech's Laboratory Staff.





Bartlesville OK, 74005

Project Name:

San Juan 28-7 Unit #182 N

PO Box 2200

Project Number:

96052-1706

Reported: 17-Apr-13 12:51

Project Manager: Jamie L Goodwin

Analyical Report for Samples

| Client Sample ID | Lab Sample ID | Matrix | Sampled | Received | Container | |
|------------------|---------------|--------|----------|----------|------------------|--|
| Pre Set Cuttings | P304046-01A | Soil | 04/15/13 | 04/16/13 | Glass Jar, 4 oz. | |





Project Name:

San Juan 28-7 Unit #182 N

PO Box 2200

Bartlesville OK, 74005

Project Number: Project Manager: 96052-1706

Jamie L Goodwin

Reported: 17-Apr-13 12:51

Pre Set Cuttings P304046-01 (Solid)

| | | Reporting | | | | | | | |
|---------------------------------------|--|-----------|-------|----------|---------|-----------|-----------|-----------|-------|
| Analyte | Result | Limit | Units | Dilution | Batch | Prepared | Analyzed | Method | Notes |
| Volatile Organics by EPA 8021 | | | | | | | | | |
| Benzene | ND | 49.9 | ng/L | J | 1316006 | 16-Apr-13 | 16-Apr-13 | EPA 8021B | |
| Toluene | ND | 49.9 | ug/L | 1 | 1316006 | 16-Apr-13 | 16-Apr-13 | EPA 8021B | |
| Ethylbenzene | ND | 49.9 | ug/L | 1 | 1316006 | 16-Apr-13 | 16-Apr-13 | EPA 8021B | |
| p,m-Xylene | ND | 49.9 | ug/L | 1 | 1316006 | 16-Apr-13 | 16-Apr-13 | EPA 8021B | |
| o-Xylene | ND | 49.9 | ug/L | 1 | 1316006 | 16-Apr-13 | 16-Apr-13 | EPA 8021B | |
| Total BTEX | ND | 49.9 | ug/L | 1 | 1316006 | 16-Apr-13 | 16-Apr-13 | EPA 8021B | |
| Surrogate: Bromochlorobenzene | · - · · · · · · · · · · · · · · · · · · · | 93.8 % | 80- | 120 | 1316006 | 16-Apr-13 | 16-Apr-13 | EPA 8021B | |
| Surrogate: 1,4-Difluorobenzene | | 93.0 % | 80- | 120 | 1316006 | 16-Apr-13 | 16-Apr-13 | EPA 8021B | |
| Surrogate: Fluorobenzene | | 91.2 % | 80- | 120 | 1316006 | 16-Apr-13 | 16-Apr-13 | EPA 8021B | |
| Nonhalogenated Organics by 8015 | | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 5.00 | mg/kg | 1 | 1316007 | 16-Apr-13 | 17-Apr-13 | EPA 8015D | |
| Diesel Range Organics (C10-C28) | ND | 5.00 | mg/kg | 1 | 1316007 | 16-Apr-13 | 17-Apr-13 | EPA 8015D | |
| GRO and DRO Combined Fractions | ND | 5.00 | mg/kg | 1 | 1316007 | 16-Apr-13 | 17-Apr-13 | EPA 8015D | |
| Total Petroleum Hydrocarbons by 418.1 | | | | | | | | | |
| Total Petroleum Hydrocarbons | ND | 20.0 | mg/kg | 1 | 1316009 | 16-Apr-13 | 16-Apr-13 | EPA 418.1 | |
| Cation/Anion Analysis | | | | | | | | | |
| Chloride | ND | 9.96 | mg/kg | 1 | 1316010 | 16-Apr-13 | 16-Apr-13 | EPA 300.0 | |





Project Name:

San Juan 28-7 Unit #182 N

PO Box 2200

Project Number:

96052-1706

Reported:

Bartlesville OK, 74005

Project Manager:

Jamie L Goodwin

17-Apr-13 12:51

Volatile Organics by EPA 8021 - Quality Control

Envirotech Analytical Laboratory

| | | Reporting | | Spike | Source | | %REC | | RPD | |
|--------------------------------------|--------|-------------|-------|------------|-------------|--------------|--------|-----|-------|-------|
| Analyte | Result | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
| Batch 1316006 - Purge and Trap EPA 5 | 5030A | _ | | | | | | | | |
| Blank (1316006-BLK1) | | | | Prepared & | . Analyzed: | 16-Apr-13 | | | | |
| Benzene | ND | 49.9 | ug/L | | | | | | | |
| Toluene | ND | 49.9 | • | | | | | | | |
| Ethylbenzene | ND | 49.9 | ** | | | | | | | |
| p,m-Xylene | ND | 49.9 | • | | | | | | | |
| o-Xylene | ND | 49.9 | н | | | | | | | |
| Total BTEX | ND | 49.9 | н | | | | | | | |
| Surrogate: Bromochlorobenzene | 47.5 | | " | 50.0 | | 95.1 | 80-120 | | | |
| Surrogate: 1,4-Difluorohenzene | 50.2 | | " | 50.0 | | 100 | 80-120 | | | |
| Surrogate: Fluorobenzene | 49.4 | | # | 50.0 | | 98.8 | 80-120 | | (| |
| Duplicate (1316006-DUP1) | Source | e: P304045- | 01 | Prepared & | Analyzed: | 16-Apr-13 | | | | |
| Benzene | ND | 49.9 | ug/L | | ND | | | | 30 | |
| Toluene | ND | 49.9 | er e | | ND | | | | 30 | |
| Ethylbenzene | ND | 49.9 | u | | ND | | | | 30 | |
| p,m-Xylene | ND | 49.9 | • | | ND | | | | 30 | |
| o-Xylene | ND | 49.9 | 10 | | ND | | | | 30 | |
| Surrogate: Bromochlorobenzene | 48.4 | | " | 50.0 | | 96.8 | 80-120 | | | |
| Surrogate: 1,4-Difluorobenzene | 48.4 | | " | 50.0 | | 96.9 | 80-120 | | | |
| Surrogate: Fluorobenzene | 47.5 | | " | 50.0 | | 95.1 | 80-120 | | | |
| Matrix Spike (1316006-MS1) | Sourc | e: P304045- | 01 | Prepared & | Analyzed: | 16-Apr-13 | | | | |
| Benzene | 2400 | 49,9 | ug/L | 2500 | ND | 96.0 | 39-150 | | | |
| Toluene | 2390 | 49.9 | 11 | 2500 | ND | 95.8 | 46-148 | | | |
| Ethylbenzene | 2370 | 49.9 | n | 2500 | ND | 94.9 | 32-160 | | | |
| p,m-Xylenc | 4770 | 49.9 | n | 4990 | ND | 95.5 | 46-148 | | | |
| o-Xylene | 2400 | 49.9 | " | 2500 | ND | 96.0 | 46-148 | | | |
| Surrogate: Bromochlorobenzene | 47.2 | | " | 50.0 | | 94.4 | 80-120 | | | |
| Surrogate: 1,4-Difluorobenzene | 48.9 | | " | 50.0 | | 97.9 | 80-120 | | | |
| Surrogate: Fluorobenzene | 48.7 | | " | 50.0 | | 97. 4 | 80-120 | | | |

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5796 US Highway 64, Farmington, NM 87401

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Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (970) 259-0615 Fr (800) 362-1879





Project Name:

San Juan 28-7 Unit #182 N

PO Box 2200

Bartlesville OK, 74005

Project Number:

96052-1706

Reported:

Project Manager:

Jamie L Goodwin

17-Apr-13 12:51

Nonhalogenated Organics by 8015 - Quality Control

Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes | | | |
|------------------------------------|--------------|--------------------|-------|----------------|--------------------------------|-----------|----------------|------|--------------|-------|--|--|--|
| Batch 1316007 - GRO/DRO Extraction | on EPA 3550C | | | | | | | | | _ | | | |
| Blank (1316007-BLK1) | | | | Prepared & | 2 Analyzed: | 16-Apr-13 | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 4.99 | mg/kg | | | | | | | | | | |
| Diesel Range Organics (C10-C28) | ND | 4.99 | u | | | | | | | | | | |
| GRO and DRO Combined Fractions | ND | 4.99 | H | | | | | | | | | | |
| Duplicate (1316007-DUP1) | Sou | rce: P304045- | -01 | Prepared & | Prepared & Analyzed: 16-Apr-13 | | | | | | | | |
| Gasoline Range Organics (C6-C10) | ND | 5.00 | mg/kg | | ND | | | | 30 | | | | |
| Diesel Range Organics (C10-C28) | 34.3 | 5.00 | 11 | | 30.2 | | | 12.6 | 30 | | | | |
| Matrix Spike (1316007-MS1) | Sou | Source: P304045-01 | | | | 16-Apr-13 | | | | | | | |
| Gasoline Range Organics (C6-C10) | 259 | 5.26 | mg/kg | 263 | ND | 98.4 | 75-125 | | | | | | |
| Diesel Range Organics (C10-C28) | 260 | 5.26 | | 263 | 30.2 | 87.5 | 75-125 | | | | | | |





Project Name:

San Juan 28-7 Unit #182 N

PO Box 2200

Project Number: Project Manager: 96052-1706

Reported:

Bartlesville OK, 74005

Jamie L Goodwin

17-Apr-13 12:51

Total Petroleum Hydrocarbons by 418.1 - Quality Control

Envirotech Analytical Laboratory

| | Reporting | | | Spike | Source | | %REC | | RPD | |
|--------------------------------------|--------------------|------------|-------------|------------|-------------|-----------|--------|-----|-------|-------|
| Analyte | Result | Limit | Units | Level | Result | %REC | Limits | RPD | Limit | Notes |
| Batch 1316009 - 418 Freon Extraction | | | | | | | | | | |
| Blank (1316009-BLK1) | | | | Prepared & | : Analyzed: | 16-Apr-13 | | | | |
| Total Petroleum Hydrocarbons | ND | 20.0 | mg/kg | | | | | | | |
| Duplicate (1316009-DUP1) | Source: P304046-01 | | | Prepared & | Analyzed: | 16-Apr-13 | | | | |
| Total Petroleum Hydrocarbons | ND | 20.0 | mg/kg | | ND | | | | 30 | |
| Matrix Spike (1316009-MS1) | Source | Prepared & | : Analyzed: | 16-Apr-13 | | | | | | |
| Total Petroleum Hydrocarbons | 1730 | 20.0 | mg/kg | 2000 | ND | 86,8 | 80-120 | | | |





Project Name:

San Juan 28-7 Unit #182 N

PO Box 2200

Bartlesville OK, 74005

Project Number: Project Manager: 96052-1706

Jamie L Goodwin

Reported:

17-Apr-13 12:51

Cation/Anion Analysis - Quality Control

Envirotech Analytical Laboratory

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|--|--------|--------------------|-------|----------------|------------------|-----------|----------------|-----|--------------|-------|
| Batch 1316010 - Anion Extraction EPA 300.0 | | | | | | | | | | |
| Blank (1316010-BLK1) | | | | Prepared & | Analyzed: | 16-Apr-13 | | | | |
| Chloride | ND | 9.96 | mg/kg | | | | | | | |
| Duplicate (1316010-DUP1) | Sour | ce: P304046- | 01 | Prepared & | Analyzed: | 16-Apr-13 | | | | |
| Chloride | ND | 10.0 | mg/kg | | ND | | | | 30 | |





Bartlesville OK, 74005

Project Name:

San Juan 28-7 Unit #182 N

PO Box 2200

Project Number:

96052-1706

Project Manager:

Jamie L Goodwin

Reported: 17-Apr-13 12:51

Notes and Definitions

DET

Analyte DETECTED

ND

Analyte NOT DETECTED at or above the reporting limit

NR

Not Reported

dry

Sample results reported on a dry weight basis

RPD Relative Percent Difference



| Client: Project Name / Location: | | | | | | | | ANALYSIS / PARAMETERS | | | | | | | | | | | | | | | |
|---|---------|-------------|--------------------------------|---------------|-------------------------|------------------|-------------------|-----------------------|--------|--------------------|-------------------|----------|---------------|----------|-------------|-----------|---------------|-------------|---|----------|---------------|-------------|----------|
| Conoca Ph | 1105 | S | San Juan | 28- | 7 Unit | #182 | M | ı | | | | | | , ,, ,, | | | | | | | | | |
| Client Address: Regulatory Sampler Name: | | | | | | | | | 5) | 21) | ĝ | | | | | | | | | | | | |
| Conoco Philips San Juan 28- Client Address: Regulatory Sampler Name: 30#54/ Dep+ Tim Not Client Phone No.: Water | | | | Nok | obi's VAN. CDR. 8114 | | | | | BTEX (Method 8021) | VOC (Method 8260) | <u>8</u> | _ | | | | | | | | | | L |
| | | | NAN. CDR. 8114 | | | | TPH (Method 8015) | atho | thod | RCRA 8 Metals | Cation / Anion | | TCLP with H/P | | 3.1 | 쁘 | | | | 000 | Sample Intact | | |
| 505-326-9537 Charge# 108 | | | Sample No./Volume Preservative | | | | Met | Ž | (Me | 181 | ۱۳ A / ۲ | | with | | TPH (418.1) | CHLORIDE | | | | le C | le lr | | |
| Sample No./ | Sample | Sampl | Lab Mo. | | | No./Volume of | Pres | ervative | Ŧ | <u>~</u> | 8 | CR/ | CR. | 낊 | C. | PAH | 표 | 크 | i | | | Sample Cool | amb |
| Identification | Date | Time | | | Matrix Sludge | of Containers | nyuz | HgC ₂ HCl | | | > | <u> </u> | 0 | ш. | <u> </u> | <u>a:</u> | - | | | | | S | <u>~</u> |
| Pre Set Cuttings | 4/15/13 | alod Pm | P304046-01 | Solid | Aqueous | 402 jac | - | | X | X | | | | | | | X | X | | | | \angle | |
| , | | | | Soil Solid | Sludge Aqueous | 1 | | | | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | | | | | |
| | | | | Soil | Sludge | | | | | | | | | | | 1 | | | | | | | |
| | | | | Solid Soil | Aqueous Sludge | | | | - | | | | | | | | | - | | | | \dashv | |
| | | | | Solid | Aqueous Sludge | | | | ļ | | | _ | - | | | | | | | | | 1 | |
| | | | <u> </u> | Solid | Aqueous | | | | | | | | | | | | | | | · | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | | | | | |
| | | | | Soil Solid | Sludge Aqueous | | | | | | | | | | | | | | | | | | |
| | | | | Soil | Sludge | <u></u> | 1-1 | _ - | - | | | | <u> </u> | - | - | | | - | | | | | \dashv |
| Relinquished by: (Signa | iture) | | <u></u> | Solid | Aqueous | Time | | Receive | ed pv. | (Sign | ature | <u> </u> | | <u> </u> | İ | L | <u> </u> | <u> </u> | | D | ate | Tir | ne |
| | | 7. | Nobis | | 4/15/13 | | 1 | | _ | | a | | | ÀD | 0 | | | | | 4/10 | | 7:2 | |
| Relinquished by: (Signa | iture) | <u>-) M</u> | NONIS | | 7/2/10 | 7 77 | R | eceive | ed by: | (Sign | ature |) | | | | | | | | 11.0 | 410 | | |
| / | | | | | | | | _ | | | | | _ | | | | • | · | | | | | |
| Relinquished by: (Signa | iture) | | | | | | R | leceive | ed by: | (Sign | ature) |) | | | | | | | | | | | |
| | Resul | | | | ENV | | | | | | <u> </u> | | | • | - | | | | | <u> </u> | - | | |
| jamie | :.1.90 | odwir | a conoco phil | lips.com | | | | | | | * | | | | | | | | | | | | |
| | 6-978 | | | - ' | way 64 | Farming | iton | , NM | 8740 | 01 • | Tel | 505- | 632- | 0615 | 5 | | | | | | | | |