District I

1625 N French Dr , Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd, 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.

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

Form C-144

July 21, 2008

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the

Santa Fe, NM 87505 appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application
Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
Modification to an existing permit
Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method
Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request
Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the
environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances
Operator: ConocoPhillips Company OGRID#: 217817
Address: PO Box 4289, Farmington, NM 87499
Facility or well name: SAN JUAN 32-8 UNIT 10A
API Number: 30-045-34605 OCD Permit Number:
U/L or Qtr/Qtr: O(SW/SE) Section: 24 Township: 31N Range: 8W County: San Juan
Center of Proposed Design: Latitude: 36.87796 °N Longitude: 107.62319 °W NAD: 1927 X 1983 Surface Owner: Federal State X Private Tribal Trust or Indian Allotment
Suitace Owner. Federal State A Filvate Tribal Flast of Indian Atlocation
Note
Below-grade tank: Subsection I of 19.15.17.11 NMAC Volumebbl
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

Form C-144

Oil Conservation Division

Page 1 of 5

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, institution of the light, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify	ution or church	h)
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 consideration pit for Pre-set) Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.	deration of app	roval.
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)	□NA	
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	_	
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	Yes	No
 Written confirmation or verification from the municipality; Written approval obtained from the municipality 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	No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Yes	No
Within a 100-year floodplain - FEMA map	Yes	No

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
Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15 17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API or 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
String 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
13
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
14
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)
15 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 H 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
1 1 1 Date recommendate that a proper the appropriate requirements of Subsection C of 17 13.17.13 PHYMC

Form C-144 Oil Conservation Division Page 3 of 5

North Demonstration for Charles Systems That Hitling About Crowned Stant Tembra on Hard off Direc Onto/10 15 17 12 D NMAC()	
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground 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, drilling fluids and drill cuttings. Use attachment if more than two	
facilities are required.	
Disposal Facility Name: Envirotech / JFJ Landfarm % IEI Disposal Facility Permit # NM-01-0011 / NM-01-0	0108
Disposal Facility Name: Basin Disposal Facility Disposal Facility Permit #: NM-01-005	
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will nbe used for future Yes (If yes, please provide the information No	service and
Required for impacted areas which will not be used for future service and operations.	MAC
Soil Backfill and Cover Design Specification - based upon the appropriate requirements of Subsection H of 19.15.17.13 N Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC	WIAC
Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19 15 17 13 NMAC	
Siting Criteria (Regarding on-site closure methods only: 19.15.17 10 NMAC Instructions Each siting criteria requires a demonstration of compliance in the closure plan Recommendations of acceptable source material are provided below certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Sci office for consideration of approval Justifications and/or demonstrations of equivalency are required Please refer to 19 15 17.10 NMAC for guidance	
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 waste	☐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.	
- NM Office of the State Engineer - 1WATERS database search; USGS; Data obtained from nearby wells	∐Yes ∐No □N/A
-	
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).	YesNo
- Topographic map, Visual inspection (certification) of the proposed site	
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site, Aerial photo, satellite image	∐Yes ∐No
Visual hispection (certification) of the proposed site, Nertal photo, saterific image	□Yes □No
Within 500 horizontal 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 fee 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, 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	☐Yes ☐No
- Written confirmation or verification from the municipality, Written approval obtained from the municipality	
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.	☐Yes ☐No
- Written confirantion or venification or map from the NM EMNRD-Mining and Mineral Division	
Within an unstable area.	Yes No
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS, NM Geological Society,	
Topographic map Within a 100-year floodplain.	∏Yes ∏No
- FEMA map	
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must bee attached to the clo	sure plan. Please indicate,
Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC	
Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19 15.17.13 NMAC	
Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC	
Construction/Design Plan of Temporary Pit (for in place burial of a drying pad) - based upon the appropriate requirements	s of 19.15.17 11 NMAC
X 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 NM	IAC
X Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC	
X Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standard	ds cannot be achieved)
Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC	
Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	

19 Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Title:
Signature Date:
e-mail address: Telephone:
OCD Approval: Permit Application (including closure plan) Och Conditions (see attachment) OCD Representative Signature: Approval Date: 2/6/20)2 Title: OCD Permit Number:
Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17 13 NMAC Instructions. Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed. Closure Completion Date: 6/25/2009
22 Closure Method: Waste Excavation and Removal On-site Closure Method X Alternative Closure Method Waste Removal (Closed-loop systems only)
If different from approved plan, please explain
Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized. Disposal Facility Name: Disposal Facility Permit Number: Disposal Facility Name: Disposal Facility Permit Number: Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations? Yes (If yes, please demonstrate compliane to the items below) Required for impacted areas which will not be used for future service and operations Site Reclamation (Photo Documentation)
Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique
Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) Proof of Deed Notice (required for on-site closure) 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: Longitude: NAD 1927 1983
Operator Cleaning Cartification:
Operator Closure Certification: I hereby certify that the information and attachments submixed with this closure report is ture, 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) Marie 5. Jaramillo / Title: Staff Regulator Technician
Signature Date: 9910
c-mail address: Telephone: 505-326-9865

ConocoPhillips Company Cavitation Pit for Closed-Loop Locations

Design:

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	10.7	
TPH	EPA SW-846 418.1	2500	178	
GRO/DRO	EPA SW-846 8015M	500	ND	
Chlorides	EPA 300.1	500	20	

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.

RCVD FEB 3'12 OIL CONS. DIV. DIST. 3

DATE: 2/01/12

WELL NAME: SAN JUAN 32-8 UNIT 10A

API# 30-045-34605 PERMIT #: 6943

MISSING DATA: ANALYTICAL RESULTS W/DETAILED REPORT

COPY OF CLOSURE NOTIFICATION – NOT NEEDED CL ATTACHED ANALYTICAL RESULTS W/DETAILED REPORT

ConocoPhillips Company Cavitation Pit for Closed-Loop Locations

Design:

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)	/Kg) Results	
Benzene	EPA SW-846 8021B or 8260B	0.2	ŅD	
BTEX	EPA SW-846 8021B or 8260B	50	10.7	
TPH	EPA SW-846 418.1	2500	178:	
GRO/DRO	EPA SW-846 8015M	500	ND	
Chlorides	EPA,300.1	500	20	

Closure Pláń:

- 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.



EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Air / C/Loop Preset Cuttings	Date Reported:	06-29-09
Laboratory Number:	50670	Date Sampled:	06-24-09
Chain of Custody No:	6737	Date Received:	06-24-09
Sample Matrix:	Soil	Date Extracted:	06-25-09
Preservative:	Cool	Date Analyzed:	06-26-09
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

ND - Parameter not detected at the stated detection limit.

References:

Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, December 1996.

Comments:

San Juan 32-8 #10A.

Analyst

Mother Waster



EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC		Project #:		N/A
Sample ID:	06-26-09 QA/0	ac	Date Reported:		06-29-09
Laboratory Number:	50650		Date Sampled:		N/A
Sample Matrix:	Methylene Chlor	ride	Date Received:		N/A
Preservative:	N/A		Date Analyzed:		06-26-09
Condition:	N/A		Analysis Reques	ted:	TPH
	I-Cal Date	- I-Cal RF:	C-Cal RF	% Difference	# Accept Rang
Gasoline Range C5 - C10	05-07-07	1.0948E+003	1.0952E+003	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	1.0811E+003	1.0815E+003	0.04%	0 - 15%
Blank Conc. (mg/Lmg/Kg)		Concentration		Detection Lim	it
Gasoline Range C5 - C10	igen "Marie (1945) and "Marie (1945) and Marie (1945) and	ND		0.2	urule.
Diesel Range C10 - C28		ND		0.1	
Total Petroleum Hydrocarbons		ND		0.2	
Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept Range	
Gasoline Range C5 - C10	5.4	5.2	3.7%	0 - 30%	en en
Diesel Range C10 - C28	108	103	5.3%	0 - 30%	
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Ran
Gasoline Range C5 - C10	5.4	250	251	98.4%	75 - 125%
Diesel Range C10 - C28	108	250	352	98.3%	75 - 125%

ND - Parameter not detected at the stated detection limit.

References:

Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste,

SW-846, USEPA, December 1996.

Comments:

QA/QC for Samples 50650 - 50655, 50670, 50676 and 50679.

Analyst

Mustu m Walles
Review



EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Air / C/Loop Preset Cuttings	Date Reported:	06-29-09
Laboratory Number:	50670	Date Sampled:	06-24-09
Chain of Custody:	6737	Date Received:	06-24-09
Sample Matrix:	Soil	Date Analyzed:	06-26-09
Preservative:	Cool	Date Extracted:	06-25-09
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)	
Benzene	ND	0.9	
Toluene	3.4	1.0	
Ethylbenzene	1.0	1.0	
p,m-Xylene	4.6	1.2	
o-Xylene	1.7	0.9	
Total BTEX	10.7		

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	96.0 %
	1,4-difluorobenzene	96.0 %
	Bromochlorobenzene	96.0 %

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA,

December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846,

USEPA, December 1996.

Comments:

San Juan 32-8 #10A.

Analyst

Review



EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client;	N/A	Project #:	N/A
Sample ID:	06-26-BTEX QA/QC	Date Reported:	06-29-09
Laboratory Number:	50650	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	06-26-09
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	2000年1月15日,在新闻的1955年中心,例如果自然是特别的1955年1954年,他是	化物性性相对 化多种相性的现在分词	%Dlff je:0⊆/15%; ↓	Charles and the second of the second	Detect: Limit
Benzene	6.2666E+006	6.2792E+006	0.2%	ND	0.1
Toluene	5.8265E+006	5.8382E+006	0.2%	ND	0.1
Ethylbenzene	5.1886E+006	5.1990E+006	0.2%	ND	0.1
p,m-Xylene	1.3489E+007	1.3516E+007	0.2%	ND	0.1
o-Xylene	5.0100E+006	5.0200E+006	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample D	uplicate	%Diff	Accept Range	Detect:Limit
Benzene	12.1	11.8	2.5%	0 - 30%	0.9
Toluene	20.5	20.1	2.0%	0 - 30%	1.0
Ethylbenzene	15.2	15.1	0.7%	0 - 30%	1.0
p,m-Xylene	34.2	34.1	0.3%	0 - 30%	1.2
o-Xylene	15.1	14.5	4.0%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample Amo	ount(Spiked) / Spik	(ed Sample	% Recovery	Accept Range
Benzene	12.1	50.0	61.6	99.2%	39 - 150
Toluene	20.5	50.0	65.5	92.9%	46 - 148
Ethylbenzene	15.2	50.0	63.2	96.9%	32 - 160
p,m-Xylene	34.2	100	132	98.4%	46 - 148
o-Xylene	15.1	50.0	58.1	89.2%	46 - 148

ND - Parameter not detected at the stated detection limit.

References:

Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA.

Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments:

QA/QC for Samples 50650 - 50655, 50670, 50676 and 50679.

Analyst



EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	ConocoPhillips	Project #:	96052-0026
Sample ID:	Air / C/Loop Preset Cuttings	Date Reported:	06-29-09
Laboratory Number:	50670	Date Sampled:	06-24-09
Chain of Custody No:	6737	Date Received:	06-24-09
Sample Matrix:	Soil	Date Extracted:	06-26-09
Preservative:	Cool	Date Analyzed:	06-26-09
Condition:	Intact	Analysis Needed:	TPH-418.1

			Det.
İ		Concentration	Limit
Į	Parameter	(mg/kg)	(mg/kg)

Total Petroleum Hydrocarbons

178

14.2

ND = Parameter not detected at the stated detection limit.

References:

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water

and Waste, USEPA Storet No. 4551, 1978.

Comments:

San Juan 32-8 #10A.

Analyst



EPA METHOD 418.1 TOTAL PETROLEUM HYROCARBONS QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	QA/QC	Date Reported:	06-29-09
Laboratory Number:	06-26-TPH.QA/QC 50622	Date Sampled:	N/A
Sample Matrix:	Freon-113	Date Analyzed:	06-26-09
Preservative:	N/A	Date Extracted:	06-26-09
Condition:	N/A	Analysis Needed:	TPH

Calibration	I-Cal Date	C-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
	06-26-09	06-26-09	1,480	1,500	1.3%	+/- 10%

Blank Conc. (mg/Kg)	Concentration	Detection Limit
TPH	ND	14.2

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
ТРН	202	213	5.9%	+/- 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
TPH	202	2,000	1,780	80.9%	80 - 120%

ND = Parameter not detected at the stated detection limit.

References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water

and Waste, USEPA Storet No. 4551, 1978.

Comments: QA/QC for Samples 50622, 50628, 50670, 50679, 50686 and 50678.

Analyst

Review Note



Chloride

Client: ConocoPhillips Project #: 96052-0026 Air / C/Loop Preset Cuttings Sample ID: Date Reported: 06-26-09 Lab ID#: 50670 Date Sampled: 06-24-09 Sample Matrix: Soil Date Received: 06-24-09 Preservative: Cool Date Analyzed: 06-26-09 Condition: Intact Chain of Custody: 6737

Parameter Concentration (mg/Kg)

Total Chloride

20

Reference:

U.S.E.P.A., 4500B, "Methods for Chemical Analysis of Water and Wastes", 1983.

Standard Methods For The Examination of Water And Waste Water", 18th ed., 1992.

Comments:

San Juan 32-8 #10A.

Analyst

Mustum Western Review