1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 1301 W. Grand Ave., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505	State of New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505	Form C-144 July 21, 2008 For temporary pits, closed-loop sytems, and below-grade tanks, submit to the appropriate NMOCD District Office. For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.
•	Pit, Closed-Loop System, Below-Grad	
Propo	osed Alternative Method Permit or Clos	sure Plan Application
Type of action:	Permit of a pit, closed-loop system, below-grade ta	ank, or proposed alternative method
	X Closure of a pit, closed-loop system, below-grade t	tank, or proposed alternative method
	Modification to an existing permit	
•	Closure plan only submitted for an existing permit below-grade tank, or proposed alternative method	ted or non-permitted pit, closed-loop system,
Instructions: Please submit one ap	pplication (Form C-144) per individual pit, closed-loo	pp system, below-grade tank or alternative request
	this request does not relieve the operator of liability should operations reve the operator of its responsibility to comply with any other applicable	
		OGRID#: <b>14538</b>
Operator: Burlington Resources Oil		OGRID#: <u>14538</u>
Address: PO Box 4289, Farmington		······
Facility or well name: SAN JUAN 2		·····
	0-039-31105 OCD Permit Numbe	
U/L or Qtr/Qtr: K(NE/SW) Section		4W County: Rio Arriba
Center of Proposed Design: Latitude:		107.260541 °W NAD: 1927 X 1983
Surface Owner: X Federal	State Private Tribal Trust or India	n Anothent
2		OIL CONS. DIV DIST. 3
X Pit: Subsection F or G of 19.15.17		
	kover	JAN 3 0 2013
	avitation P&A (Pre-set)	
	ner type: Thickness mil LLDPE	HDPE PVC Other
String-Reinforced		
Liner Seams: Welded Fa	actory Other Volume:	bbl Dimensions L x W x D
3       3         1       Closed-loop System:       Subsect         Type of Operation:       P&A         1       Drying Pad       Above Grou         1       Lined       Unlined       Line	notice of intent)	o activities which require prior approval of a permit or
3       Closed-loop System:       Subsect         Type of Operation:       P&A       Image: Subsect of Operation:         Image: Drying Pad       Above Grout       Above Grout         Image: Drying Pad       Unlined       Lined         Image: Liner Seams:       Welded       Fat         4       Below-grade tank:       Subsection	Drilling a new well Workover or Drilling (Applies to notice of intent) nd Steel Tanks Haul-off Bins Other r type: Thicknessmil LLDPE actory Other I of 19.15.17.11 NMAC bl Type of fluid:	HDPE PVD Other
3       Closed-loop System:       Subsect         Type of Operation:       P&A       P         Drying Pad       Above Grou         Lined       Unlined       Line         Liner Seams:       Welded       Fa         4       Below-grade tank:       Subsection         Volume:      b         Tank Construction material:      b         Visible sidewalls and liner	Drilling a new well Workover or Drilling (Applies to notice of intent)  md Steel Tanks Haul-off Bins Other  r type: Thicknessmil LLDPE actory Other  for 19.15.17.11 NMAC  bl Type of fluid:  tetection Visible sidewalls, liner, 6-inch lift and auto Visible sidewalls only Other	HDPE PVD Other
3       Closed-loop System:       Subsect         Type of Operation:       P&A       Image: Closed-loop System:       Subsect         Image: Drying Pad       Above Grouter       Above Grouter       Image: Closed-loop System:       Subsection         Image: Drying Pad       Image: Drying Pad       Above Grouter       Image: Drying Pad       Image: Drying Pad	Drilling a new well Workover or Drilling (Applies to notice of intent)  md Steel Tanks Haul-off Bins Other  r type: Thicknessmil LLDPE actory Other  for 19.15.17.11 NMAC  bl Type of fluid:  tetection Visible sidewalls, liner, 6-inch lift and auto Visible sidewalls only Other	HDPE PVD Other

6 <u>Fencing:</u> 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	itution or chur	ch)
Four foot height, four strands of barbed wire evenly spaced between one and four feet		í
Alternate Please specify		
7	<u></u>	
<u>Netting:</u> Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks) Screen Netting Other		
Screen Netting Other Monthly inspections (If netting or screening is not physically feasible)	· .	
8		
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:		
<ul> <li>X Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for consi (Cavitation pit for Pre-set)</li> </ul>	deration of apj	proval.
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.		
10		·
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		<b></b> 1
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes	No
(Applied to permanent pits) - 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.	∏Yes	No
- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site		
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 man	Yes	No
Society; Topographic map Within a 100-year floodplain - FEMA map	Yes	No

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11 <u>Temporary Pits, Emergency Pits and Below-grade Tanks Permit Application Attachment 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 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
12         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
<sup>13</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 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
<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> </ul>
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
<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 X Cavitation P&A Permanent Pit Below-grade Tank Closed-loop System
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

16 <u>Waste Removal Closure For Closed-Ioop Systems That Utilize Above Ground Stee</u> Instructions: Please identify the facility or facilities for the disposal of liquids, drilling facilities are required.	I Tanks or Haul-off Bins Only: (19 fluids and drill cuttings. Use attach	.15.17.13.D NMAC) ment if more than two	
· ·	Disposal Facility Permit #: <u>NM-</u>	01-0011 / NM-01-0010B	•
Disposal Facility Name: Basin Disposal Facility	Disposal Facility Permit #: <u>NM-</u>	01-005	
Will any of the proposed closed-loop system operations and associated activitie Yes (If yes, please provide the information No	s occur on or in areas that will no	<i>t</i> be used for future service	and
Required for impacted areas which will not be used for future service and operations:         Soil Backfill and Cover Design Specification - based upon the appropriate Re-vegetation Plan - based upon the appropriate requirements of Subsect         Site Reclamation Plan - based upon the appropriate requirements of Subsect	tion I of 19.15.17.13 NMAC		· · · ·
17 <u>Siting Criteria (Regarding on-site closure methods only:</u> 19.15.17.10 NMAO Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. certain siting criteria may require administrative approval from the appropriate district office office for consideration of approval. Justifications and/or demonstrations of equivalency are	Recommendations of acceptable source or may be considered an exception wh	ich must be submitted to the Sant	
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 obta	ined 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 obta			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 obta	ined from nearby wells		N/A
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other signific (measured from the ordinary high-water mark).	ant 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 in e - Visual inspection (certification) of the proposed site; Aerial photo; satellite image		ion.	Yes No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less that purposes, or within 1000 horizontal fee of any other fresh water well or spring, in exist - NM Office of the State Engineer - iWATERS database; Visual inspection (certific	ence at the time of the initial application of the proposed site	ion.	Yes No
Within incorporated municipal boundaries or within a defined municipal fresh water we pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obta	-	dinance adopted	Yes No
Within 500 feet of a wetland			Yes No
<ul> <li>US Fish and Wildlife Wetland Identification map; Topographic map; Visual insp</li> <li>Within the area overlying a subsurface mine.</li> </ul>	ection (certification) of the proposed	sne	Yes No
- Written confiramtion or verification or map from the NM EMNRD-Mining and M	fineral Division		
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & M	meral Resources: USGS: NM Geolog		Yes No
Topographic map Within a 100-year floodplain.			Yes No
- FEMA map		<b>L</b>	
<sup>18</sup> <u>On-Site Closure Plan Checklist:</u> (19.15.17.13 NMAC) Instructions: Each by a check mark in the box, that the documents are attached.	of the following items must bee	attached to the closure pla	n. Please indicate,
Siting Criteria Compliance Demonstrations - based upon the appropria	te requirements of 19.15.17.10 NR	MAC	
Proof of Surface Owner Notice - based upon the appropriate requireme	nts of Subsection F of 19.15.17.1	3 NMAC	
Construction/Design Plan of Burial Trench (if applicable) based upon t	he appropriate requirements of 19	9.15.17.11 NMAC	
Construction/Design Plan of Temporary Pit (for in place burial of a dry		riate requirements of 19.15.	7.11 NMAC
X Protocols and Procedures - based upon the appropriate requirements of		£10 15 17 12 NMAAC	
Confirmation Sampling Plan (if applicable) - based upon the appropria	•		
X Waste Material Sampling Plan - based upon the appropriate requirement			a cobious 4
<ul> <li>Disposal Facility Name and Permit Number (for liquids, drilling fluids</li> <li>Soil Cover Design - based upon the appropriate requirements of Subse</li> <li>Re-vegetation Plan - based upon the appropriate requirements of Subse</li> </ul>	ction H of 19.15.17.13 NMAC	le closure standards cannot t	e achieved)
I I I i i i i i i i i i i i i i i i i i	Such rol 17.15.17.15 INM/AC		

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:
c-mail address:	Telephone:
	· · · · · · · · · · · · · · · · · · ·
20 OCD Approval: Permit Application (including clost re plan)	(Chooping Blan (only) DOCD Conditions (see attachment)
OCD Approval.	
OCD Representative Signature:	LILAApproval Date: 207/2013
Pk	
Title: (GMPlance Office	OCD Permit Number:
21	
Closure Report (required within 60 days of closure completion): Sub	
	to implementing any closure activities and submitting the closure report. The closure on 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 c	
	Closure Completion Date: 6/26/2012
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.	
23	
Closure Report Regarding Waste Removal Closure For Closed-loop System	ns That Utilize Above Ground Steel Tanks or Haul-off Bins Only:
	ling 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	
Yes (If yes, please demonstrate complilane to the items below)	No
Required for impacted areas which will not be used for future service and op	perations:
Site Reclamation (Photo Documentation)	·
Soil Backfilling and Cover Installation	
Re-vegetation Application Rates and Seeding Technique	
24	•
	lowing 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
25 Operator Closure Certification:	
VIDELAND VAINIELV CERTIFICATION.	
	e report is ture, accurate and complete to the best of my knowledge and belief. I also certify that

Name (Print):	Jamie Goodwin	Title:	Regulatory Technician	
Signature:	mie Goodwa	Date:	1/29/13	
e-mail address:	jamie.l.goodwin@conocophillips.com	Telephone:	505-326-9784	

# Burlington Resources Oil & Gas Company, LP Cavitation Pit for Closed-Loop Locations

### Design:

Burlington Resources Oil & Gas Company, LP 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	36.0
TPH	EPA SW-846 418.1	2500	25.9
GRO/DRO	EPA SW-846 8015M	500	ND
Chlorides	EPA 300.1	500	90

#### **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.
- 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.

Burlington Resources is aware that approval of this plan does not relieve Burlington Resources 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. SAN JUAN 27-4 UNIT 56N 30-039-31105 Permit # 9923 (Pre Set)

The SAN JUAN 27-4 UNIT 56N was approved for a Closed Loop permit # 9363 on 12/22/2011. Due to COPC change in plans to Air Pre Set. Pre Set application permit # 9923 was submitted and approved on 4/19/2012. According to Cavitation Pit for a Closed Loop Locations 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 cutting being transported, moved or distributed on location). COPC is notifying the NMOCD after the fact. Pre Set was conducted on 2/26/2012 and Environmental Samples are attached to this closure report. In the future COPC will comply with closure procedure #1 via: e-mail of move on date, environmental test samples and will be followed by the Pre Set closure report.

Thank you,

Jamie Goodwin ConocoPhillips Regulatory Tech.



## **Report Summary**

Client: ConocoPhillips Chain of Custody Number: 9556 Samples Received: 06-27-12 Job Number: 96052-1706 Sample Number(s): 62475 Project Name/Location: San Juan 27-4 #56N

6/28/12 Date:

Entire Report Reviewed By:

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865 Ph (970) 259-0615 Fr (800) 362-1879



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

# envirotech Analytical Laboratory

# EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	ConocoPhillips	Project #:	96052-1706
Sample ID:	Air Preset Cutting	Date Reported:	06-28-12
Laboratory Number:	62475	Date Sampled:	06-27-12
Chain of Custody No:	9556	Date Received:	06-27-12
Sample Matrix:	Soil	Date Extracted:	06-27-12
Preservative:	Cool	Date Analyzed:	06-28-12
Condition:	Intact	Analysis Requested:	8015 TPH

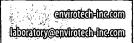
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	

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 27-4 #56N

5796 US Highway 64, Farmington, NM 87401 Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301 Ph (505) 632-0615 Fx (505) 632-1865 Ph (970) 259-0615 Fr (800) 362-1879



envirotech Analytical Laboratory

EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

## **Quality Assurance Report**

Client:	QA/QC		Project #:		N/A
Sample ID:	0628TCAL QA	OC	Date Reported:		03-20-12
Laboratory Number:	62475		Date Sampled:		N/A
Sample Matrix:	Methylene Chlo	oride	Date Received:		N/A
Preservative:	N/A		Date Analyzed:		03-19-12
Condition:	N/A		Analysis Reques	sted:	ТРН
	I-Cál Date	I-Cal RF	C-Cal RF	% Difference	Accept: Range
Gasoline Range C5 - C10	03-19-12	9.9960E+02	1.0000E+03	0.04%	0 - 15%
Diesel Range C10 - C28	03-19-12	9.9960E+02	1.0000E+03	0.04%	0 - 15%
Blank Conc: (mg/L = mg	/Kġ)	Concentration	C C	Detection Lim	it
Gasoline Range C5 - C10		ND		0.2	
Diesel Range C10 - C28		ND		0.1	
Total Petroleum Hydrocarbo	ons	ND			
Duplicate Conc: (mg/Kg	I) Sample	Duplicate	% Difference. /	Accept: Rang	e;
Gasoline Range C5 - C10	ND	ND	0.0%	0 - 30%	
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%	
Spike Conc. (mg/Kg)	Sample	Spiké Ádded	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	ND	250	282	113%	75 - 125%
Diesel Range C10 - C28	ND	250	268	107%	75 - 125%
				N N	
	•				

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Was SW-846, USEPA, December 1996.

Comments: QA/QC for Samples 62475.

5796 US Highway 64, Farmington, NM 87401

Ph (505) 632-0615 Fx (505) 632-1865 Ph (970) 259-0615 Fr (800) 362-1879



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



Client:	ConocoPhillips	Project #:		96052-1706
Sample ID:	Air Preset Cutting	Date Reported	l:	06-28-12
Laboratory Number:	62475	Date Sampled	:	06-27-12
Chain of Custody:	9556	Date Received	<b>1</b> :	06-27-12
Sample Matrix:	Soil	Date Analyzed	J:	06-28-12
Preservative:	Cool	Date Extracted	d:	06-27-12
Condition:	Intact	Analysis Requ	ested:	BTEX
		Dilution:		50
			Det.	
		Concentration	Limit	
Parameter		(ug/Kg)	(ug/Kg)	• •
				· · · · · · · · · · · · · · · · · · ·
Benzene		ND	10.0	
Toluene		19.8	10.0	
Ethylbenzene		ND	10.0	
p,m-Xylene		ND	10.0	
o-Xylene		16.2	10.0	
0-Aylene		10.2	10.0	

ND - Parameter not detected at the stated detection limit.

Surrogate Rec	coveries: Parameter	Percent Recovery				
	Fluorobenzene	83.3 %				
	1,4-difluorobenzene	93.1 %				
	Bromochlorobenzene	88.3 %				
References:	Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.					
	Method 8021B, Aromatic Volatile Organics, Te USEPA, December 1996.	st Methods for Evaluating Solid Waste, SW-846.				
Comments:	San Juan 27-4 #56N					



Client:	N/A		roject #:	N/A				
ample ID:	0628BCAL QA/QC		ate Reported:		-06-12			
aboratory Number:	62475		ate Sampled:	N/A				
ample Matrix:	Soil		ate Received:		N/A 03-06-12 <sup>.</sup> BTEX 50			
Preservative: Condition:	N/A N/A		ate Analyzed: nalysis:					
onation:	N/A		lution:	50				
alibration and	I-Cal RF:	C-Cal RE	%Diff.	Blank	Détêct			
Detection Limits (ug/L)	Ac	cept. Range 0-15%.		Conc	Limit			
Benzene	5.8690E-06	5.8690E-06	0.000	ND	0.2			
oluene	5.9743E-06	5.9743E-06	0.000	ND	0.2			
Ethylbenzene	6.8254E-06	6.8254E-06	0.000	ND	0.2			
o,m-Xylene	5.0568E-06	5.0568E-06	0.000	ND	0.2			
o-Xylene	7.2817E-06	7.2817E-06	0.000	ND	0.2			
Benzene Foluene Ethylbenzene	ND 19.8 ND	ND 18.7 ND	0.00 0.06 0.00	0 - 30% 0 - 30% 0 - 30%	10 10 10			
p,m-Xylene p-Xylene	ND 16.2	ND 12.0	0.00 0.26	0 - 30% 0 - 30%	10 10			
o,m-Xylene o-Xylene Spike Conc. (ug/Kg)	16.2 Sample A	12.0	0.26 Spiked Sample	0 - 30% % Recovery	10 Accept Range			
o,m-Xylene o-Xylene Spike Conc. (ug/Kg)	16.2 Sample A ND	12.0 mount Špikėd S 2500	0.26 Spiked Sample 2550	0 - 30% % Recovery 102	10			
p,m-Xylene p-Xylene	16.2 Sample A ND 19.8	12.0	0.26 Spiked Sample	0 - 30% % Recovery	10 Accept Range			
o,m-Xylene o-Xylene Spike Conc. (ug/Kg) Benzene	16.2 Sample A ND	12.0 mount Špikėd S 2500	0.26 Spiked Sample 2550	0 - 30% % Recovery 102	10 Accèpt Range 39 - 150			
o,m-Xylene o-Xylene Spike Conc. (ug/Kg) Benzene Toluene	16.2 Sample A ND 19.8	12.0 Amount Spiked S 2500 2500	0.26 Spiked Sample 2550 2570	0 - 30% % Recovery	10 Accept Range 39 - 150 46 - 148			
o,m-Xylene o-Xylene Spike Conc. (ug/Kg) Benzene Toluene Ethylbenzene	16.2 Sample A ND 19.8 ND	12.0 Mount Spiked S 2500 2500 2500	0.26 Spiked Sample 2550 2570 2530	0 - 30% % Recovery 102 102 101	10 Accept Range 39 - 150 46 - 148 32 - 160			
o,m-Xylene o-Xylene Spike Conc. (ug/Kg) Benzene Toluene Ethylbenzene p,m-Xylene o-Xylene	16.2 Sample A ND 19.8 ND ND 16.2	12.0 mount Spiked S 2500 2500 2500 5000 2500	0.26 Spiked Sample 2550 2570 2530 5060	0 - 30% % Recovery 102 102 101 101	10 Accept Range 39 - 150 46 - 148 32 - 160 46 - 148			
p,m-Xylene p-Xylene Spike Conc. (ug/Kg) Benzene Toluene Ethylbenzene p,m-Xylene	16.2 Sample A ND 19.8 ND ND 16.2	12.0 mount Spiked S 2500 2500 2500 5000 2500	0.26 Spiked Sample 2550 2570 2530 5060	0 - 30% % Recovery 102 102 101 101	10 Accept Range 39 - 150 46 - 148 32 - 160 46 - 148			

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

 December 1996.
 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 62428, 62448, 62454-62546 and 62475.

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envirotech Analytical Laboratory

## EPA METHOD 418.1 TOTAL PETROLEUM HYDROCARBONS

Client:	ConocoPhillips	Project #:	96052-1706
Sample ID:	Air Préset Cutting	Date Reported:	06-28-12
Laboratory Number:	62475	Date Sampled:	06-27-12
Chain of Custody No:	9556	Date Received:	06-27-12
Sample Matrix:	Soil	Date Extracted:	06-28-12
Preservative:	Cool	Date Analyzed:	06-28-12
Preservative:	Cool	Date Analyzed:	06-28-12
Condition:	Intact	Analysis Needed:	TPH-418.1

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

25.9

## **Total Petroleum Hydrocarbons**

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:

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# envirotech Analytical Laboratory TOTAL PETROLEUM HYDROCARBONS QUALITY ASSURANCE REPORT

Client:		QA/QC		Project #:	Ν	I/A
Sample ID:		QA/QC		Date Reported:	C	6-28-12
Laboratory Number	:	06-28-TPH.QA/Q	C 62475	Date Sampled:	Ņ	1/A
Sample Matrix:		Freon-113		Date Analyzed:	C	6-28-12
Preservative:		N/A		Date Extracted:	C	6-28-12
Condition:		N/A		Analysis Neede	d: 7	PH
		······································		i		والمكارب والمحكون والمحارفة و
Calibration	I-Cal Date	🚓 C-Cal Date	I-Cal RF:	C-Cal RF: 9	والمتحدث والمتحدث والمحافظ والمحافظ والمحافظ	Accept Range
	01-17-12	06-28-12	1,850	1,750	5.4%	+/- 10%
Blank Conc. (n	ng/Kg)		Concentration	[	Detection Lim	it
TPH	an an an ann an an an an an an an an an		ND		7.4	
Duplicate Cone	c. (mg/Kg)		Sample	Duplicate	6 Difference	Accept Range
TPH			25.9	22.2	14.3%	+/- 30%
Spike Conc. (n	ng/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
TPH	R . , , , , , , , , , , , , , , , , , ,	25.9	2,000	1,850	91.3%	80 - 120%
ND = Parameter	not detected a	at the stated detec	tion limit.		•	

Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water References: and Waste, USEPA Storet No. 4551, 1978.

Comments: QA/QC for Samples 62475.



## Chloride

Client:	ConocoPhillips	Project #:	96052-1706
Sample ID:	Air Preset Cutting	Date Reported:	06-28-12
Lab ID#:	62475	Date Sampled:	06-27-12
Sample Matrix:	Soil	Date Received:	06-27-12
Preservative:	Cool	Date Analyzed:	06-28-12
Condition:	Intact	Chain of Custody:	9556

#### Parameter

## Concentration (mg/Kg)

Total Chloride

90

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:

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KRUSHK	CHA N	IOF	<b>C</b> , S	STC	)D'	YI	RE	EC	0	RI	<b>)</b> .			l	09	55,6	5	
Client:	Project Name / Location	:			1	· · · · ·				ANAL	YSIS	/ PAR	AME	TERS	<u></u> -			
Client Address: REGULATORY 30 TH STREET DEPT	SAN TUAN	27-4	<u>1                                    </u>	éN_		- <b>,</b>		· ·				·		,				
Client Address: REGULATERS V	Sampler Name:	•			2)	21)	(c)		}	1								
30 STREET / DEDT	DAVIC 6	REEL	V		801	d 80	82(	sl			L .							
Client Phone No.:	Client No.:	P REEL 940	52-171	OLP	[윤    TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion		TCLP with H/P		<u>(1</u> )	Ш				Sample Cool Sample Intact
505-326-9537	ChARGE #	<u> </u>	5048	) 	(Wet	N.	(Me	<b>A</b> 8 I	u/⊅		wit		TPH (418.1)	CHLORIDE				Sample Cool Sample Intac
Sample No./ Sample Samp Coldentification Date Time					Ve H	Ê	8	СĤ	atio	BCI	5	PAH	Н	E E				am am
		Matrix Sludge	Containers				<u>  &gt;</u>	<u>م</u>	0	<u> </u>		<u> </u>		0				
PRESET CUTTING 1211:3	0 62475 solid	Aqueous	JAR		X	X							X	X				XX
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	Soil Solid	Sludge Aqueous																
	Soil	Sludge		<u> </u>   -														
	Solid	Aqueous																
Rush ORDER	Soil Solid	Sludge Aqueous																
BRAJER HARRIS	Soil 326-9877 Solid	Sludge Aqueous																_
E-1771711	Soil Solid	Sludge Aqueous																
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