

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.  
Santa Fe, NM 87505

Form C-144  
July 21, 2008

For temporary pits, closed-loop systems, 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-Grade Tank, or  
Proposed Alternative Method Permit or Closure Plan Application

9455

- 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.

1  
Operator: Burlington Resources Oil & Gas Company, LP OGRID#: 14538  
Address: PO Box 4289, Farmington, NM 87499  
Facility or well name: Sadie West 2M  
API Number: 30-045-35305 OCD Permit Number: \_\_\_\_\_  
U/L or Qtr/Qtr: N(SE/SW) Section: 21 Township 31N Range: 12W County: San Juan  
Center of Proposed Design: Latitude: 36.8809119 °N Longitude: 108.1055881 °W NAD:  ###  1983  
Surface Owner:  Federal  State  Private  Tribal Trust or Indian Allotment

2  
 **Pit:** Subsection F or G of 19.15.17.11 NMAC  
Temporary:  Drilling  Workover  
 Permanent  Emergency  Cavitation  P&A **Pre-Set**  
 Lined  Unlined Liner type: Thickness \_\_\_\_\_ mil  LLDPE  HDPE  PVC  Other \_\_\_\_\_  
 String-Reinforced  
Liner Seams:  Welded  Factory  Other \_\_\_\_\_ Volume: \_\_\_\_\_ bbl Dimensions L \_\_\_\_\_ x W \_\_\_\_\_ x D \_\_\_\_\_

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

3  
 **Closed-loop System:** Subsection H of 19.15.17.11 NMAC  
Type of Operation:  P&A  Drilling a new well  Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)  
 Drying Pad  Above Ground Steel Tanks  Haul-off Bins  Other \_\_\_\_\_  
 Lined  Unlined Liner type: Thickness \_\_\_\_\_ mil  LLDPE  HDPE  PVD  Other \_\_\_\_\_  
Liner Seams:  Welded  Factory  Other \_\_\_\_\_

4  
 **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 lift and automatic overflow shut-off  
 Visible sidewalls and liner  Visible sidewalls only  Other \_\_\_\_\_  
Liner Type: Thickness \_\_\_\_\_ mil  HDPE  PVC  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.

6

**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 or church*)
- Four foot height, four strands of barbed wire evenly spaced between one and four feet
- Alternate. Please specify \_\_\_\_\_

7

**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*)

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
- Signed in compliance with 19.15.3.103 NMAC.

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**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:*

- Administrative approval(s): Requests must be submitted to the appropriate division district of the Santa Fe Environmental Bureau office for consideration of approval. (Fencing/BGT Liner)
- Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

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**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.**

*(Applies to temporary, emergency, or cavitation pits and below-grade tanks)*

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

Yes  No

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)*

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

Yes  No

NA

**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 feet of any other fresh water well or spring, in existence at the time of initial application.**

- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site.

Yes  No

**Within 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  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

11  
**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 \_\_\_\_\_

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 \_\_\_\_\_

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  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

**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 / IFJ Landfarm % IEI Disposal Facility Permit #: NM-01-0011 / NM-01-0010B

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 not* be used for future service and  
 Yes (If yes, please provide the information)  No

*Required for impacted areas which will not be used for future service and operations:*

- Soil Backfill and Cover Design Specification - 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

**Siting Criteria (Regarding on-site closure methods only:** 19.15.17.10 NMAC

*Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria 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. 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. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> 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 feet 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	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within 500 feet of a wetland - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input type="checkbox"/> No

**On-Site Closure Plan Checklist:** (19.15.17.13 NMAC) *Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.*

- Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
- Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection 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 of 19.15.17.11 NMAC
- Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
- Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
- Waste Material Sampling Plan - 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 or in case on-site closure standards cannot be achieved)
- Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
- Re-vegetation Plan - based upon the appropriate requirements of Subsection 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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**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)  Closure Plan (only)  OCD Conditions (sec attachment)

OCD Representative Signature: Jonathan Kelly Approval Date: 7/2/2013  
Title: Compliance Officer OCD Permit Number: \_\_\_\_\_

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**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: 2/23/2012

22

**Closure Method:**

Waste Excavation and Removal  On-site Closure Method  Alternative Closure Method  Waste Removal (Closed-loop systems only)  
 If different from approved plan, please explain.

#

**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 compliance to the items below)  No

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

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**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

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**Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): Kenny Davis Title: Staff Regulatory Technician  
Signature: [Signature] Date: 6/26/2013  
e-mail address: kenny.r.davis@conocophillips.com Telephone: 505-599-4045

This Closure for the Cavitation Pit of the Sadie West 2M is again, for a Pre-Set Cavitation Pit.

The cuttings were stock piled in one corner on location while the 5 point sample testing was being done. After the sample results were returned and the test passed, the cuttings were then bladed back into the topsoil. This was confirmed by Robert Thompson with MOTE Drilling.

Due to changes in Regulatory personnel, the NMOCD email to notify that the cuttings would be bladed into the soil, could not be located.



EPA METHOD 8015 Modified  
Nonhalogenated Volatile Organics  
Total Petroleum Hydrocarbons

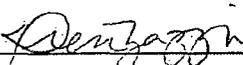
Client:	ConocoPhillips	Project #:	96052-1706
Sample ID:	Air Preset Cuttings	Date Reported:	02-24-12
Laboratory Number:	61205	Date Sampled:	02-23-12
Chain of Custody No:	09547	Date Received:	02-23-12
Sample Matrix:	Soil	Date Extracted:	02-23-12
Preservative:	Cool	Date Analyzed:	02-24-12
Condition:	Intact	Analysis Requested:	8015 TPH

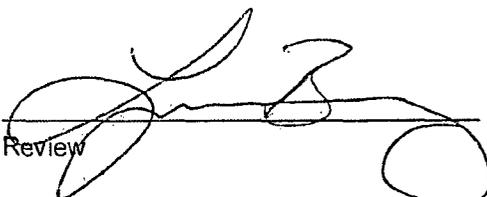
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	

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: **Sadie West #2M**

  
\_\_\_\_\_  
Analyst

  
\_\_\_\_\_  
Review



EPA Method 8015 Modified  
 Nonhalogenated Volatile Organics  
 Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	0224TCAL QA/QC	Date Reported:	02-24-12
Laboratory Number:	61205	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	02-24-12
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF:	C-Cal RF:	% Difference	Accept. Range
Gasoline Range C5 - C10	02-24-12	9.9960E+02	1.0000E+03	0.04%	0 - 15%
Diesel Range C10 - C28	02-24-12	9.9960E+02	1.0000E+03	0.04%	0 - 15%

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	

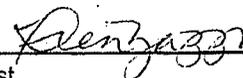
Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	ND	ND	0.0%	0 - 30%
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%

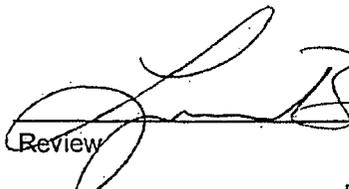
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	ND	250	283	113%	75 - 125%
Diesel Range C10 - C28	ND	250	275	110%	75 - 125%

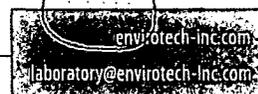
ND - Parameter not detected at the stated detection limit.

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

Comments: QA/QC for Samples 61205

  
 Analyst

  
 Review



Client:	ConocoPhillips	Project #:	96052-1706
Sample ID:	Air Preset Cuttings	Date Reported:	02-24-12
Laboratory Number:	61205	Date Sampled:	02-23-12
Chain of Custody:	09547	Date Received:	02-23-12
Sample Matrix:	Soil	Date Analyzed:	02-24-12
Preservative:	Cool	Date Extracted:	02-23-12
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	10.0
Toluene	ND	10.0
Ethylbenzene	ND	10.0
p,m-Xylene	72.5	10.0
o-Xylene	21.2	10.0
<b>Total BTEX</b>	<b>93.7</b>	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	98.9 %
	1,4-difluorobenzene	98.6 %
	Bromochlorobenzene	103 %

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: Sadie West #2M



EPA METHOD 8021  
AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	0224BCAL QA/QC	Date Reported:	02-24-12
Laboratory Number:	61205	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	02-24-12
Condition:	N/A	Analysis:	BTEX
		Dilution:	10

Calibration and Detection Limits (ug/L)	I-Cal RF:	C-Cal RF:	%Diff:	Blank Conc	Detect Limit:
		Accept. Range 0-15%			
Benzene	49.8	49.9	0.002	ND	1
Toluene	49.9	50.0	0.002	ND	1
Ethylbenzene	50.3	50.4	0.002	ND	1
p,m-Xylene	99.5	99.7	0.002	ND	1
o-Xylene	49.9	50.0	0.002	ND	1

Duplicate Conc.: (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect Limit
Benzene	ND	ND	0.0	0 - 30%	10
Toluene	ND	ND	0.0	0 - 30%	10
Ethylbenzene	ND	ND	0.0	0 - 30%	10
p,m-Xylene	72.5	40.4	0.4	0 - 30%	10
o-Xylene	21.2	11.4	0.5	0 - 30%	10

Spike Conc.: (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	500	505	101	39 - 150
Toluene	ND	500	505	101	46 - 148
Ethylbenzene	ND	500	532	106	32 - 160
p,m-Xylene	72.5	1000	1110	104	46 - 148
o-Xylene	21.2	500	523	100	46 - 148

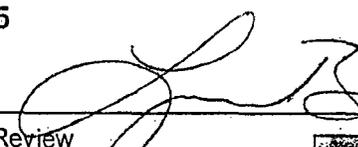
ND - Parameter not detected at the stated detection limit.

Dilution: Spike and spiked sample concentration represent a dilution proportional to sample dilution.

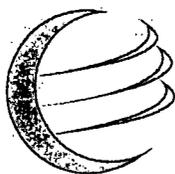
References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.  
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 61199 and 61205

  
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Analyst

  
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EPA METHOD 418.1

TOTAL PETROLEUM HYDROCARBONS

Client:	ConocoPhillips	Project #:	96052-1706
Sample ID:	Air-Priset Cuttings	Date Reported:	02-24-12
Laboratory Number:	61205	Date Sampled:	02-23-12
Chain of Custody No:	09547	Date Received:	02-23-12
Sample Matrix:	Soil	Date Extracted:	02-23-12
Preservative:	Cool	Date Analyzed:	02-23-12
Condition:	Intact	Analysis Needed:	TPH-418:1

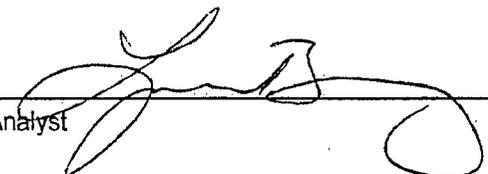
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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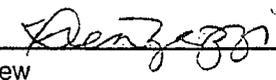
<b>Total Petroleum Hydrocarbons</b>	<b>25.7</b>	<b>6.4</b>
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ND = Parameter not detected at the stated detection limit.

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

Comments: **Sadie West #2M**

  
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 Analyst

  
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EPA METHOD 418.1

TOTAL PETROLEUM HYDROCARBONS

QUALITY ASSURANCE REPORT

Client:	QA/QC	Project #:	N/A
Sample ID:	QA/QC	Date Reported:	02-24-12
Laboratory Number:	02-23-TPH.QA/QC 61201	Date Sampled:	N/A
Sample Matrix:	Freon-113	Date Analyzed:	02-23-12
Preservative:	N/A	Date Extracted:	02-23-12
Condition:	N/A	Analysis Needed:	TPH

Calibration	I-Cal Date	C-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept Range
	01-17-12	02-23-12	1,610	1,720	6.8%	+/- 10%

Blank Conc. (mg/Kg)	Concentration	Detection Limit
TPH	ND	6.4

Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept Range
TPH	77.0	96.3	25.1%	+/- 30%

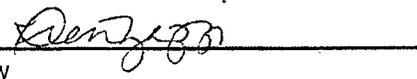
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
TPH	77.0	2,000	1,730	83.3%	80 - 120%

ND = Parameter not detected at the stated detection limit.

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

Comments: QA/QC for Samples 61201-61203, 61205.

Analyst 

Review 

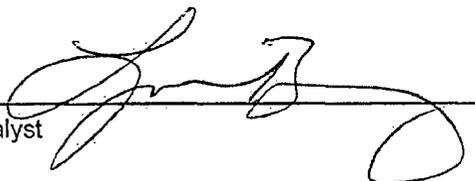


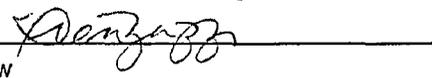
Client:	ConocoPhillips	Project #:	96052-1706
Sample ID:	Air Preset Cuttings	Date Reported:	02-24-12
Lab ID#:	61205	Date Sampled:	02-23-12
Sample Matrix:	Soil	Date Received:	02-23-12
Preservative:	Cool	Date Analyzed:	02-24-12
Condition:	Intact	Chain of Custody:	09547

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: **Sadie West #2M**

Analyst 

Review 

# CHAIN OF CUSTODY RECORD

09547

Client: <i>CONOCOPHILLIPS</i>			Project Name / Location: <i>SADIE WEST # 217</i>				ANALYSIS / PARAMETERS															
Client Address: <i>REGULATORY 30 STREET / DEPT</i>			Sampler Name: <i>DAVID GREEN</i>				TPH (Method 8015)	BTEX (Method 8021)	VOC (Method 8260)	RCRA 8 Metals	Cation / Anion	RCI	TCLP with H/P	PAH	TPH (418.1)	CHLORIDE					Sample Cool	Sample Intact
Client Phone No.: <i>505-326-9537</i>			Client No.: <i>96052-1700</i> <i>CHARGE # 10330987</i>																			
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative HgCl <sub>2</sub> HCl																
<i>(RIP) PRESET CUTTINGS</i>	<i>02/23/12</i>	<i>PM 12:30</i>	<i>61205</i>	<i>Soil Sludge</i> <i>Solid Aqueous</i>	<i>1/52</i> <i>JAR</i>			<i>X</i>	<i>X</i>											<i>X</i>	<i>X</i>	
				<i>Soil Sludge</i> <i>Solid Aqueous</i>																		
				<i>Soil Sludge</i> <i>Solid Aqueous</i>																		
				<i>Soil Sludge</i> <i>Solid Aqueous</i>																		
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				<i>Soil Sludge</i> <i>Solid Aqueous</i>																		
				<i>Soil Sludge</i> <i>Solid Aqueous</i>																		
Relinquished by: (Signature) <i>David Green</i>			Date <i>2/23/12</i>	Time <i>PM 1:25</i>	Received by: (Signature) <i>Christina Hammer</i>						Date <i>2-23-12</i>	Time <i>1:38</i>										
Relinquished by: (Signature)					Received by: (Signature)																	
Relinquished by: (Signature)					Received by: (Signature)																	



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