

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

30-039-20723

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company	Contact	Kelsi Harrington
Address	3401 E. 30th St., Farmington, NM 87402	Telephone No.	505-599-3403
Facility Name	San Juan 27-4 Unit 69	Facility Type	Gas Well
Surface Owner	Forest	Mineral Owner	Federal
		Lease No.	NMSF-080675
API # 3003920723			

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	34	27N	04W	1500'	North	835'	West	Rio Arriba

Latitude **36.53281° N** Longitude **-107.2439° W**

NATURE OF RELEASE

Type of Release – Produced Water & Crude Oil	Volume of Release – 35 BBL (17.5 BBL PW & 17.5 Crude Oil)	Volume Recovered – 35 BBL
Source of Release: Pit Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 8/11/10 10:00 a.m.
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Brandon Powell (NMOCD)- verbal & email Mark Catron (Forest) – verbal & email	
By Whom? Kelsi Harrington	Date and Hour – 8/12/2010 11:20 a.m.	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		

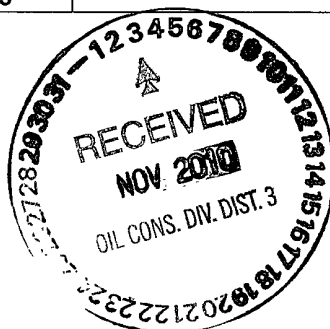
Describe Cause of Problem and Remedial Action Taken.* **On August 11, 2010, it was discovered that pit tank had overflowed as a result of a separator malfunction. A water truck was called to location.**

Describe Area Affected and Cleanup Action Taken.* **All fluid remained within the berm and approximately 35 BBL of fluid were recovered. Excavation and confirmation sampling occurred. Analytical results were below the regulatory standards set forth in the NMOCD Guidelines for Remediation of Leaks, Spills and Releases; therefore no further action is needed.**

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: <i>Kelsi Harrington</i>	OIL CONSERVATION DIVISION	
Printed Name: Kelsi Harrington	Approved by District Supervisor: <i>[Signature]</i>	
Title: Environmental Consultant	Approval Date: 12/02/2011	Expiration Date:
E-mail Address: kelsi.g.harrington@conocophillips.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 12/1/10 Phone: 505-599-3403		

* Attach Additional Sheets If Necessary



nJK1133648567



November 10, 2010

Project Number 92115-1459

Ms. Kelsi Harrington
ConocoPhillips
3401 East 30th Street
Farmington, New Mexico 87401

Phone: (505) 599-3403
Cell: (505) 320-2461

RE: CONFIRMATION SAMPLING DOCUMENTATION FOR THE SAN JUAN 27-4 #69 (hBr) WELL SITE, RIO ARRIBA COUNTY, NEW MEXICO

Dear Ms. Harrington,

Attached please find the field notes and analytical results for confirmation sampling activities performed at the San Juan 27-4 #69 (hBr) well site located in Section 34, Township 27N, Range 4W, Rio Arriba County, New Mexico.


On October 8, 2010, Envirotech personnel were on-site to conduct confirmation sampling activities due to a leaking below-grade tank (BGT). Upon Envirotech's arrival, a brief site assessment was conducted and the regulatory standards for this site were determined to be 1,000 parts per million (ppm) total petroleum hydrocarbons (TPH) and 100 ppm organic vapors, due to surface water being between 200 and 1,000 feet from the well site. The spill area was excavated prior to Envirotech's arrival by M&M Trucking to the extents of approximately 40 feet by 26 feet by 15 feet deep. Five (5) composite samples were collected from the excavation. One (1) sample was collected from each of the four (4) walls, and one (1) sample was collected from the bottom of the excavation. All samples were analyzed in the field for TPH using USEPA Method 418.1 and for organic vapors using a photoionization detector (PID). The sample collected from the bottom of the excavation, the sample collected from the north wall, and the sample collected from the east wall returned results above the regulatory standards for TPH and for organic vapors. The sample collected from the south wall returned results below the regulatory standard for TPH but above the regulatory standard for organic vapors. The sample collected from the west wall returned results below the regulatory standards for TPH and organic vapors. Additionally, the sample from the south wall was collected into a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory for analysis for TPH using USEPA Method 8015 and for benzene and BTEX using USEPA Method 8021. The sample returned results below the regulatory standards for this site.

On October 14, 2010, Envirotech personnel returned to the San Juan 27-4 #69 (hBr) well site to continue confirmation sampling activities. Prior to Envirotech's arrival, the excavation had been extended to approximately 54 feet by 45 feet by 17 feet deep where sandstone was encountered. Three (3) samples were collected from the excavation. One (1) composite sample was collected from the bottom of the excavation; one (1) composite sample was collected from the north wall; and one (1) composite sample was collected from the east wall. All samples were analyzed in

the field for TPH using USEPA Method 418.1 and for organic vapors using a PID. The bottom sample returned results above the regulatory standards for TPH and for organic vapors. The north wall sample returned results below the regulatory standards for TPH but above the regulatory standards for organic vapors. The east wall sample returned results below the regulatory standards for TPH and for organic vapors. Sandstone was encountered at the bottom of the excavation; therefore maximum reasonable extents were reached, and no further excavation was required. The bottom sample was collected into a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory for analysis for TPH using USEPA Method 8015 and for benzene and BTEX using USEPA Method 8021. The north wall sample was collected in a four (4)-ounce glass jar, capped headspace free, and transported on ice, under chain of custody, to Envirotech's Analytical Laboratory for analysis for benzene and BTEX using USEPA Method 8021. Both samples returned results below the regulatory standards determined for this site; see attached *Analytical Results*. Envirotech, Inc, recommends no further action in regards to this incident.

We appreciate the opportunity to be of service. Should you have any questions or require additional information, please contact our office at (505) 632-0615.

Respectfully Submitted,
ENVIROTECH, INC.



Scott Gonzales
Senior Environmental Field Technician
sgonzales@envirotech-inc.com

Enclosure(s): Field Notes
Analytical Results

Cc: Client File 92115

Client: Conoco



Location No:

C.O.C. No:

FIELD REPORT: SPILL CLOSURE VERIFICATION

PAGE NO: 1 OF 1

LOCATION: NAME: SAN JUAN 27-4 WELL #: 69
 QUAD/UNIT: E SEC: 34 TWP: 27N RNG: 4W PM: NMPM CNTY: RA ST: NM
 QTR/FOOTAGE: 1500' N, 835' W CONTRACTOR: M+M Trucking

DATE STARTED: 10-8-10

DATE FINISHED: 10-8-10

ENVIRONMENTAL SPECIALIST: SG

EXCAVATION APPROX: 40 FT. X 26 FT. X 15 FT. DEEP CUBIC YARDAGE:

DISPOSAL FACILITY: JET REMEDIATION METHOD: Land farm

LAND USE: Agri. LEASE: 3-11-83 SF 0 806.75 LAND OWNER:

CAUSE OF RELEASE: BGT Leak MATERIAL RELEASED: produced water / incidental oil

SPILL LOCATED APPROXIMATELY: 60 FT. 185° FROM

DEPTH TO GROUNDWATER: 7100' NEAREST WATER SOURCE: 7100' NEAREST SURFACE WATER: 200-1000'

NMOCD RANKING SCORE: 10 NMOCD TPH CLOSURE STD: 1000 PPM

SOIL AND EXCAVATION DESCRIPTION:

7520050 - Work order #

GPS pt. of excavation - N 36.532939°
W 107.243806°

Spoke w/ Gurn Frost w/ Conoco, equip will have to be moved to continue excavation. Samples from the south wall turned into lab

Arrived @ 10:15

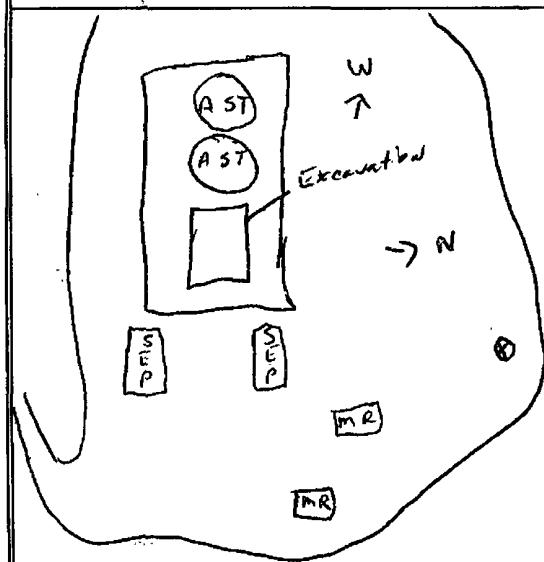
left site @ 13:00

SAMPLE DESCRIPTION	TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm
<u>200 std</u>	<u>10:25</u>	<u>200 std</u>					<u>195</u>	
<u>Bottom Comp</u>	<u>10:50</u>	<u>Bottom</u>	<u>1</u>	<u>5</u>	<u>20</u>	<u>4</u>	<u>2124</u>	<u>8496</u>
<u>North Wall Comp</u>	<u>10:53</u>	<u>North Wall</u>	<u>2</u>	<u>5</u>	<u>20</u>	<u>4</u>	<u>3132</u>	<u>12528</u>
<u>South Wall Comp</u>	<u>10:56</u>	<u>South Wall</u>	<u>3</u>	<u>5</u>	<u>20</u>	<u>4</u>	<u>83</u>	<u>332</u>
<u>East Wall Comp</u>	<u>10:59</u>	<u>East Wall</u>	<u>4</u>	<u>5</u>	<u>20</u>	<u>4</u>	<u>3724</u>	<u>14896</u>
<u>West Wall Comp</u>	<u>11:03</u>	<u>West Wall</u>	<u>5</u>	<u>5</u>	<u>20</u>	<u>4</u>	<u>90</u>	<u>360</u>

SPILL PERIMETER

OVM RESULTS

SPILL PROFILE

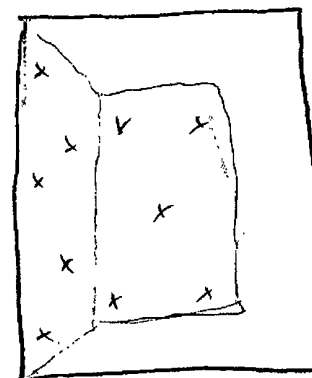


SAMPLE ID	FIELD HEADSPACE PID (ppm)
<u>Bottom</u>	<u>1979</u>
<u>North</u>	<u>188</u>
<u>South</u>	<u>122</u>
<u>East</u>	<u>2793</u>
<u>West</u>	<u>8.3</u>

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME

40' x 26' x 15' deep



TRAVEL NOTES: _____ CALLED OUT: _____ ONSITE: _____

Location No:

C.O.C. No:

FIELD REPORT: SPILL CLOSURE VERIFICATION

PAGE NO: 1 OF 1

DATE STARTED: 10-8-10

DATE FINISHED: 10-14-10

LOCATION: NAME: SAN JUAN 27-4 WELL #: 69

QUAD/UNIT: E SEC: 34 TWP: 27N RNG: 4W PM: NM PM: PM CNTY: RA ST: NM

QTR/FOOTAGE: 1500' N. 835' W. CONTRACTOR: M + M Trucking

ENVIRONMENTAL

SPECIALIST: SG

EXCAVATION APPROX: 54 FT. X 45 FT. X 17 FT. DEEP CUBIC YARDAGE:

DISPOSAL FACILITY: IEI REMEDIATION METHOD: Landfill

LAND USE: LEASE: SEP 80675 LAND OWNER:


CAUSE OF RELEASE: BGT leak MATERIAL RELEASED: pentium water / incidental oil

SPILL LOCATED APPROXIMATELY: 100 FT. 185° FROM wellhead

DEPTH TO GROUNDWATER: 7' 100' NEAREST WATER SOURCE: 7' 100' NEAREST SURFACE WATER: 200-1000'

NMOCD RANKING SCORE: 10 NMOCD TPH CLOSURE STD: 1000 PPM

SOIL AND EXCAVATION DESCRIPTION:

 Samples collected from Bottom, North wall, & East wall

West wall passed w/ 418 and PID
South wall passed in lab

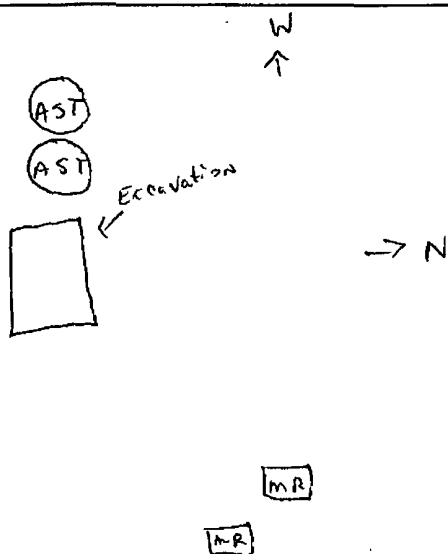
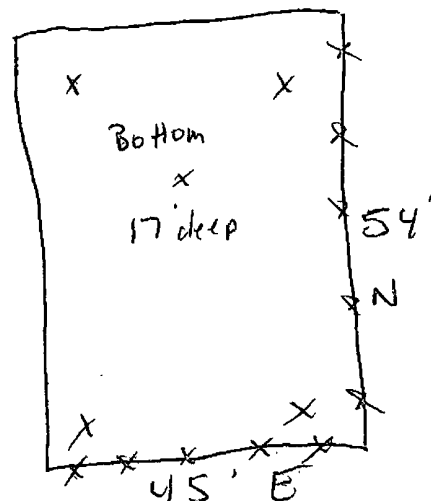
Onsite @ 13:00 Left site @ 14:00

[illegible]

SPILL PERIMETER

OVM RESULTS

SPILL PROFILE

[illegible]

TRAVEL NOTES:	CALLED OUT:	ONSITE:
---------------	-------------	---------



envirotech

**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1459
Sample No.:	1	Date Reported:	10/21/2010
Sample ID:	Bottom Composite	Date Sampled:	10/8/2010
Sample Matrix:	Soil	Date Analyzed:	10/8/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

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

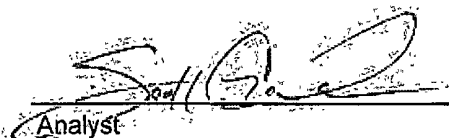
Total Petroleum Hydrocarbons	8,500	5.0
-------------------------------------	--------------	------------

ND = Parameter not detected at the stated detection limit.

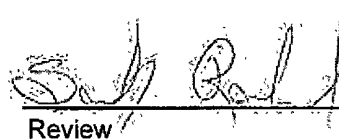
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **San Juan 27-4 #69 (hBr)**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Scott Gonzales
Printed


Review

Sarah Rowland, EIT
Printed



envirotech

**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1459
Sample No.:	2	Date Reported:	10/21/2010
Sample ID:	North Wall Composite	Date Sampled:	10/8/2010
Sample Matrix:	Soil	Date Analyzed:	10/8/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

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


Total Petroleum Hydrocarbons	12,500	5.0
-------------------------------------	---------------	------------

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 27-4 #69 (hBr)**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Scott Gonzales
Printed


Review

Sarah Rowland, EIT
Printed



envirotech

**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1459
Sample No.:	3	Date Reported:	10/21/2010
Sample ID:	South Wall Composite	Date Sampled:	10/8/2010
Sample Matrix:	Soil	Date Analyzed:	10/8/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

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

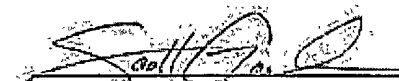
Total Petroleum Hydrocarbons	332	5.0
-------------------------------------	------------	------------

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 27-4 #69 (hBr)**


Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

Printed



Review

Sarah Rowland, EIT

Printed



envirotech

**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1459
Sample No.:	4	Date Reported:	10/21/2010
Sample ID:	East Wall Composite	Date Sampled:	10/8/2010
Sample Matrix:	Soil	Date Analyzed:	10/8/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		


Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	14,900	5.0

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 27-4 #69 (hBr)**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

Printed



Review

Sarah Rowland, EIT

Printed



envirotech

**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1459
Sample No.:	5	Date Reported:	10/21/2010
Sample ID:	West Wall Composite	Date Sampled:	10/8/2010
Sample Matrix:	Soil	Date Analyzed:	10/8/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

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

Total Petroleum Hydrocarbons	360	5.0
-------------------------------------	------------	------------

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 27-4 #69 (hBr)**


Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

Printed



Review

Sarah Rowland, EIT

Printed




envirotech

CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 8-Oct-10

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	195
	200	
	500	
	1000	


The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.



Analyst

Scott Gonzales

Print Name



Review

Sarah Rowland, EIT

Print Name

10/21/2010

Date

10/21/2010

Date



envirotech
Analytical Laboratory

**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

Client:	ConocoPhillips	Project #:	92115-1459
Sample ID:	South Wall Comp	Date Reported:	10-11-10
Laboratory Number:	56122	Date Sampled:	10-08-10
Chain of Custody No:	10500	Date Received:	10-08-10
Sample Matrix:	Soil	Date Extracted:	10-08-10
Preservative:	Cool	Date Analyzed:	10-11-10
Condition:	Intact	Analysis Requested:	8015 TPH

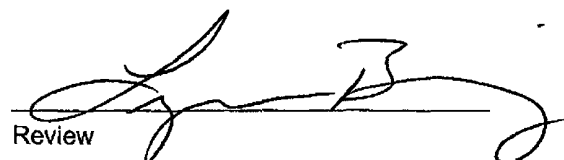
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	ND	

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 #69**


Analyst


Review



envirotech

Analytical Laboratory

EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	10-11-10 QA/QC	Date Reported:	10-11-10
Laboratory Number:	56109	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-11-10
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept Range
Gasoline Range C5 - C10	10-11-10	9.9960E+002	1.0000E+003	0.04%	0 - 15%
Diesel Range C10 - C28	10-11-10	9.9960E+002	1.0000E+003	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

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%

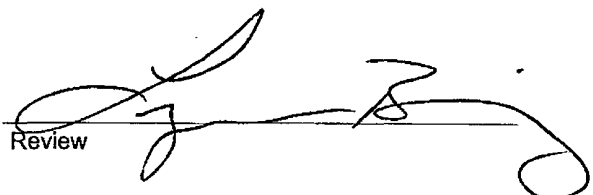
Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
Gasoline Range C5 - C10	ND	250	232	92.7%	75 - 125%
Diesel Range C10 - C28	ND	250	240	96.0%	75 - 125%

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 56109, 56113, 56115-56116, 56122


Analyst


Review



envirotech

Analytical Laboratory

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	ConocoPhillips	Project #:	92115-1459
Sample ID:	South Wall Comp	Date Reported:	10-11-10
Laboratory Number:	56122	Date Sampled:	10-08-10
Chain of Custody:	10500	Date Received:	10-08-10
Sample Matrix:	Soil	Date Analyzed:	10-11-10
Preservative:	Cool	Date Extracted:	10-08-11
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	1.3	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	ND	1.2
o-Xylene	4.6	0.9
Total BTEX	5.9	

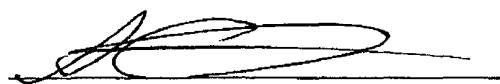
ND - Parameter not detected at the stated detection limit.


Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	110 %
	1,4-difluorobenzene	103 %
	Bromochlorobenzene	109 %

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 27-4 #69


Analyst


Review



envirotech

Analytical Laboratory

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	1011BBLK QA/QC	Date Reported:	10-11-10
Laboratory Number:	56120	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-11-10
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	3.6566E+005	3.6639E+005	0.2%	ND	0.1
Toluene	4.3456E+005	4.3543E+005	0.2%	ND	0.1
Ethylbenzene	3.9461E+005	3.9540E+005	0.2%	ND	0.1
p,m-Xylene	9.3605E+005	9.3793E+005	0.2%	ND	0.1
o-Xylene	3.5110E+005	3.5181E+005	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff	Accept Range	Detect Limit
Benzene	ND	ND	0.0%	0 - 30%	0.9
Toluene	3.6	3.5	2.8%	0 - 30%	1.0
Ethylbenzene	ND	ND	0.0%	0 - 30%	1.0
p,m-Xylene	276	292	5.9%	0 - 30%	1.2
o-Xylene	82.5	81.4	1.3%	0 - 30%	0.9

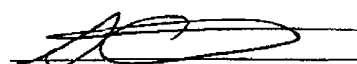
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	ND	500	585	117%	39 - 150
Toluene	3.6	500	554	110%	46 - 148
Ethylbenzene	ND	500	592	118%	32 - 160
p,m-Xylene	276	1000	1,510	118%	46 - 148
o-Xylene	82.5	500	663	114%	46 - 148


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 56109, 56113, 56115-56116, 56118, 56120-56122

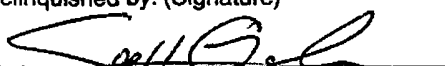
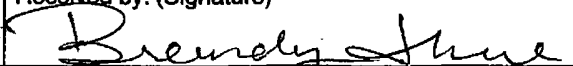

Analyst


Review

CHAIN OF CUSTODY RECORD

10500

Client: Conoco Phillips			Project Name / Location: SAN JUAN 27-4 #69				ANALYSIS / PARAMETERS															
Client Address:			Sampler Name: Scott G.				<div style="display: flex; justify-content: space-between; font-size: small;"> <div> TPH (Method 8015) BTEX (Method 8021) VOC (Method 8260) RCRA 8 Metals Cation / Anion RCI TCLP with H/P PAH TPH (418.1) CHLORIDE </div> <div> Sample Cool Sample Intact </div> </div>															
Client Phone No.:			Client No.: 92115-1459																			
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative HgCl ₂ HCl ICC			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
South Well Comp	10-8-10	12:40	5002	Soil Solid	1-402			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	10-8-10	15:20		10/8/10	15:20
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		



5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com



envirotech

**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1459
Sample No.:	1	Date Reported:	10/21/2010
Sample ID:	Bottom Composite Sandstone	Date Sampled:	10/14/2010
Sample Matrix:	Soil	Date Analyzed:	10/14/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

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

Total Petroleum Hydrocarbons	8,820	5.0
-------------------------------------	--------------	------------

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 27-4 #69 (hBr)**


Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

Printed



Review

Sarah Rowland, EIT

Printed



envirotech

**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1459
Sample No.:	2	Date Reported:	10/21/2010
Sample ID:	North Wall Composite	Date Sampled:	10/14/2010
Sample Matrix:	Soil	Date Analyzed:	10/14/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

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

Total Petroleum Hydrocarbons	164	5.0
-------------------------------------	------------	------------

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 27-4 #69 (hBr)**


Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

Printed



Review

Sarah Rowland, EIT

Printed



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1459
Sample No.:	3	Date Reported:	10/21/2010
Sample ID:	East Wall Composite	Date Sampled:	10/14/2010
Sample Matrix:	Soil	Date Analyzed:	10/14/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

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

Total Petroleum Hydrocarbons	64	5.0
-------------------------------------	-----------	------------

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 27-4 #69 (hBr)**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

Printed



Review

Sarah Rowland, EIT

Printed



envirotech

CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 14-Oct-10

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	203
	200	
	500	
	1000	

The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.



Analyst

Scott Gonzales

Print Name



Review

Sarah Rowland, EIT

Print Name

10/21/2010

Date

10/21/2010

Date



envirotech
Analytical Laboratory

**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

Client:	ConocoPhillips	Project #:	92115-1459
Sample ID:	Bottom Comp Sandstone	Date Reported:	10-18-10
Laboratory Number:	56199	Date Sampled:	10-14-10
Chain of Custody No:	10541	Date Received:	10-14-10
Sample Matrix:	Soil	Date Extracted:	10-15-10
Preservative:	Cool	Date Analyzed:	10-18-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	652	0.2
Diesel Range (C10 - C28)	131	0.1
Total Petroleum Hydrocarbons	783	

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 #69**



Analyst



Review



envirotech

Analytical Laboratory

EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	10-18-10 QA/QC	Date Reported:	10-18-10
Laboratory Number:	56198	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-18-10
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept Range
Gasoline Range C5 - C10	10-18-10	9.9960E+002	1.0000E+003	0.04%	0 - 15%
Diesel Range C10 - C28	10-18-10	9.9960E+002	1.0000E+003	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

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	248	99.1%	75 - 125%
Diesel Range C10 - C28	ND	250	257	103%	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 56198-56199, 56212, 56218-56223

Analyst

Review



envirotech

Analytical Laboratory

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	ConocoPhillips	Project #:	92115-1459
Sample ID:	Bottom Comp Sandstone	Date Reported:	10-19-10
Laboratory Number:	56199	Date Sampled:	10-14-10
Chain of Custody:	10541	Date Received:	10-14-10
Sample Matrix:	Soil	Date Analyzed:	10-18-10
Preservative:	Cool	Date Extracted:	10-15-10
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	747	0.9
Toluene	9,520	1.0
Ethylbenzene	1,430	1.0
p,m-Xylene	17,500	1.2
o-Xylene	4,130	0.9
Total BTEX	33,300	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	90.8 %
	1,4-difluorobenzene	112 %
	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: San Juan 27-4 #69

Analyst

Review

**envirotech**

Analytical Laboratory

**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	ConocoPhillips	Project #:	92115-1459
Sample ID:	North Wall Comp	Date Reported:	10-19-10
Laboratory Number:	56200	Date Sampled:	10-14-10
Chain of Custody:	10541	Date Received:	10-14-10
Sample Matrix:	Soil	Date Analyzed:	10-18-10
Preservative:	Cool	Date Extracted:	10-15-10
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	3.8	0.9
Toluene	21.5	1.0
Ethylbenzene	5.8	1.0
p,m-Xylene	68.2	1.2
o-Xylene	20.5	0.9
Total BTEX	120	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	88.3 %
	1,4-difluorobenzene	88.4 %
	Bromochlorobenzene	106 %

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 27-4 #69

Analyst

Review



envirotech

Analytical Laboratory

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	1018BBLK QA/QC	Date Reported:	10-18-10
Laboratory Number:	56198	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-18-10
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	5.0027E+005	5.0128E+005	0.2%	ND	0.1
Toluene	5.6595E+005	5.6709E+005	0.2%	ND	0.1
Ethylbenzene	5.0992E+005	5.1094E+005	0.2%	ND	0.1
p,m-Xylene	1.2110E+006	1.2135E+006	0.2%	ND	0.1
o-Xylene	4.5612E+005	4.5704E+005	0.2%	ND	0.1

Duplicate Conc (ug/Kg)	Sample	Duplicate	%Diff	Accept. Range	Detect. Limit
Benzene	ND	ND	0.0%	0 - 30%	0.9
Toluene	1.6	1.5	6.3%	0 - 30%	1.0
Ethylbenzene	ND	ND	0.0%	0 - 30%	1.0
p,m-Xylene	ND	ND	0.0%	0 - 30%	1.2
o-Xylene	2.8	3.3	17.9%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept. Range
Benzene	ND	500	555	111%	39 - 150
Toluene	1.6	500	563	112%	46 - 148
Ethylbenzene	ND	500	559	112%	32 - 160
p,m-Xylene	ND	1000	1,120	112%	46 - 148
o-Xylene	2.8	500	572	114%	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.

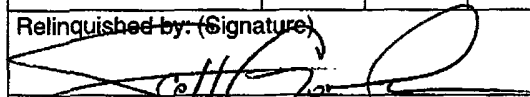
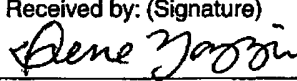
Comments: QA/QC for Samples 56198-56200, 56204-56205, 56212, 56218


Analyst

Review

CHAIN OF CUSTODY RECORD

10541

Client: ConocoPhillips			Project Name / Location: SAN JUAN 27-4 # 69			ANALYSIS / PARAMETERS																
Client Address:			Sampler Name: Scott G.			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.:			Client No.: 92115-1459																			
Sample No/ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative HgCl ₂ HCl ICE			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
Bottom Comp Sandstone	10-14-10	13:45	56199	Soil Solid	Sludge Aqueous	1-402			✓	✓	✓										Y	Y
North Wall Comp	10-14-10	13:45	56200	Soil Solid	Sludge Aqueous	1-402			✓	✓											Y	Y
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
				Soil Solid	Sludge Aqueous																	
Relinquished by: (Signature) 						Date	Time	Received by: (Signature) 										Date	Time			
Relinquished by: (Signature)						10-14-10	16:20											10/14/10	16:20			
Relinquished by: (Signature)																						
Relinquished by: (Signature)																						



envirotech
Analytical Laboratory

5796 US Highway 64 • Farmington, NM 87401 • 505-632-0615 • lab@envirotech-inc.com

ACCENT Printing • Form 28-0807