

District I
1635 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

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company	Contact	Kelsi Harrington
Address	3401 E. 30 th St., Farmington, NM 87402	Telephone No.	505-599-3403
Facility Name	San Juan 28-4 Unit 20	Facility Type	Gas Well API# 3003907281
Surface Owner	Forest	Mineral Owner	Federal
		Lease No.	USA NM-03862

LOCATION OF RELEASE

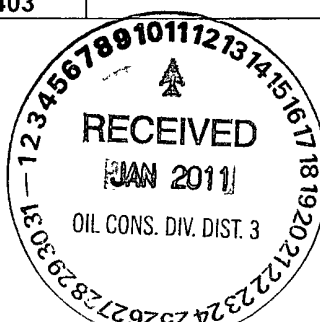
Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	30	28N	04W	567'	South	660'	West	Rio Arriba

Latitude 36.62487° N Longitude -107.29754° W

NATURE OF RELEASE

Type of Release – Unknown	Volume of Release – Unknown	Volume Recovered –
Source of Release: Above Ground Storage Tank	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 10/20/10
Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour –	
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.* During facility reset, historical staining was noted. Upon discovery, Envirotech Inc. was sent to location to complete sampling and excavation proceeded.		
Describe Area Affected and Cleanup Action Taken.* Approximately 40 cu/yds of hydrocarbon impacted soil were removed. Initial confirmation sampling results of the bottom and North wall, both of which were sandstone, were above the regulatory closure limit of 100 ppm total petroleum hydrocarbons. Due to the presence of sandstone, the bottom & North wall were then sprayed with Potassium Permanganate and re-sampled. The bottom results were under NMOCD risk ranking for the site; however the North wall returned results above the closure limit at 174 ppm. The NMOCD approved the excavation for backfill as the maximum extents were reached; 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>Jonathan D. Kelly</i>	
Title: Environmental Consultant	Approval Date: <i>12/06/2011</i> Expiration Date:	
E-mail Address: kelsi.g.harrington@conocophillips.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 11/22/10 Phone: 505-599-3403		

* Attach Additional Sheets If Necessary



nJK1134034601



November 11, 2010

Project Number 92115-1472

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

Phone: (505) 599-3403
Fax: (505) 599-4005

RE: SPILL ASSESSMENT AND CONFIRMATION SAMPLING DOCUMENTATION FOR THE SAN JUAN 28-4 #20 (hBr) WELL SITE, RIO ARRIBA COUNTY, NEW MEXICO

Dear Ms. Harrington,

Enclosed please find the field notes and analytical results for spill assessment and confirmation sampling activities performed at the San Juan 28-4 #20 (hBr) well site located in Section 30, Township 28 North, Range 4 West, Rio Arriba County, New Mexico. Upon Envirotech's arrival on October 20, 2010, a brief site assessment was conducted. Because distance to surface water was less than 200 feet from the well site and the depth to groundwater less than 100 feet below ground surface (BGS), the regulatory standard for the site was determined to be 100 parts per million (ppm) total petroleum hydrocarbons (TPH) and 100 ppm organic vapors, pursuant to New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases.

Upon the removal of the above ground storage tank (AST), one (1) five (5)-point composite sample was collected from directly beneath the AST at one (1) foot below ground surface (BGS). The sample was analyzed in the field for TPH using USEPA Method 418.1 and for organic vapors using a photoionization detector (PID). The sample returned results above regulatory standards for TPH and organic vapors. One (1) composite sample was then collected from directly beneath the AST at two (2) feet BGS. The sample was analyzed in the field for TPH using USEPA Method 418.1 and for organic vapors using a PID. The sample returned results above regulatory standards for TPH and organic vapors. The contaminated soil was then excavated using a backhoe with final excavation dimensions measuring 15 by 15 by four feet deep with sandstone encountered on the bottom and along the north wall. One (1) composite sample was collected from the bottom of the excavation at four (4) feet BGS. One (1) composite sample was collected from each of the four (4) walls of the excavation designated as the north wall, south wall, east wall, and west wall samples. All samples were analyzed in the field for TPH using USEPA Method 418.1 and for organic vapors using a photoionization detector (PID). The south, east, and west wall samples returned results below regulatory standards for TPH and organic vapors. The bottom and north wall samples returned results above regulatory standards for TPH and organic vapors. The bottom and north wall samples were each placed into a four (4)-ounce glass jar, capped head space free, and transported on ice under chain of custody, to


Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015 and for benzene and BTEX using USEPA Method 8021. The south wall sample was placed into a four (4)-ounce glass jar, capped head space free, and transported on ice under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015. The bottom and north wall samples returned results above regulatory standards for TPH and below standards for benzene and BTEX. The south wall sample returned results below regulatory standards for TPH; see enclosed *Analytical Results*.

The reasonable extents of excavation had been reached on the bottom and north wall of the excavation due to sandstone. Envirotech personnel returned to the site on October 26, 2010, to apply a potassium permanganate solution to the bottom and north wall of the excavation to aid in the break down of the remaining hydrocarbon contamination.

On October 28, 2010, Envirotech personnel returned to the site and collected one (1) composite sample from the bottom and one (1) composite sample from the north wall. The bottom and north wall samples were each placed into a four (4)-ounce glass jar, capped head space free, and transported on ice under chain of custody, to Envirotech's Analytical Laboratory to be analyzed for TPH using USEPA Method 8015 and for benzene and BTEX using USEPA Method 8021. The bottom sample returned results below regulatory standards for TPH, benzene and BTEX. The north wall returned results below regulatory standards for benzene and BTEX but above regulatory standards for TPH. Reasonable extents of excavation had been reached; therefore Envirotech, Inc. recommends no further action in regards to this incident.

We appreciate the opportunity to be of service. If you have 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:

C.0000


 (505) 632-0615 (800) 362-1879
 5796 U.S. Hwy 64, Farmington, NM 87401

Location No:

C.O.C. No:

FIELD REPORT: SPILL CLOSURE VERIFICATION

PAGE NO: 1 OF 1

DATE STARTED: 10-20-10

DATE FINISHED: 10-20-10

LOCATION: NAME: SAN JUAN 28-4 WELL #: 2-0

QUAD/UNIT: M SEC: 36 TWP: 28 N RNG: 4 N PM NMPM CNTY: RA ST: NM

QTR/FOOTAGE: SURFSL 10110 FUL CONTRACTOR:

ENVIRONMENTAL

SPECIALIST: SG

EXCAVATION APPROX: 15 FT. X 15 FT. X 4 FT. DEEP CUBIC YARDAGE:

DISPOSAL FACILITY: FET

REMEDATION METHOD: Landfill

LAND USE:

LEASE: NM03862

LAND OWNER:

CAUSE OF RELEASE: NST Leaking

MATERIAL RELEASED: produced water / incidental oil

SPILL LOCATED APPROXIMATELY: 39 FT. 10° FROM Wellhead

DEPTH TO GROUNDWATER: <100' NEAREST WATER SOURCE: 7100' NEAREST SURFACE WATER: <100'

NMOCD RANKING SCORE: 20

NMOCD TPH CLOSURE STD: 100 PPM

SOIL AND EXCAVATION DESCRIPTION:

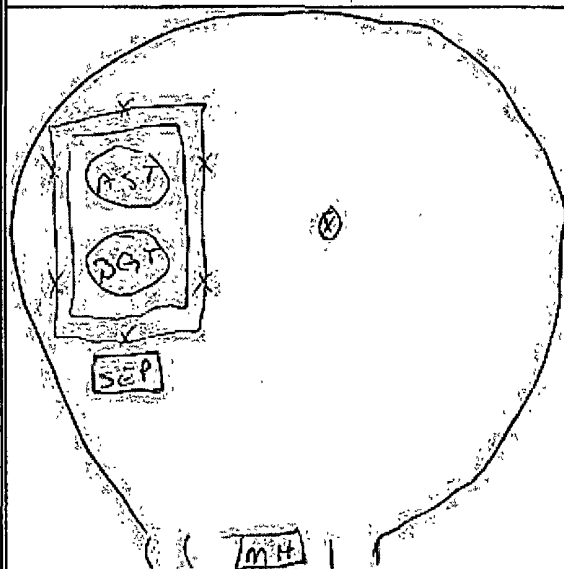
 Spill w/ kerosene she. soil to 1000 NW, Bottom, and South wall into 1st
 South wall T. only

SAMPLE DESCRIPTION	TIME	SAMPLE I.D.	LAB NO.	WEIGHT (g)	mL FREON	DILUTION	READING	CALC. ppm
2ND STP	13:30	20050					208	
Sp. Comp 1 deep	14:48	Comp 1 deep	1	5	2.0	4	74.3	2977
Comp Sample 2 deep	15:15	2 deep	2	5	2.0	4	16.4	1.56
Bottom Comp Sandstone	16:25	Bottom	3	5	2.0	4	48.7	1948
North wall Comp		N wall	4	5	2.0	4	3.39	1356
South wall Comp		S wall	5	5	2.0	4	2.4	96
East wall Comp		E wall	6	5	2.0	4	2.1	84
West wall Comp		W wall	7	5	2.0	4	1.6	64

SPILL PERIMETER

OVM
RESULTS

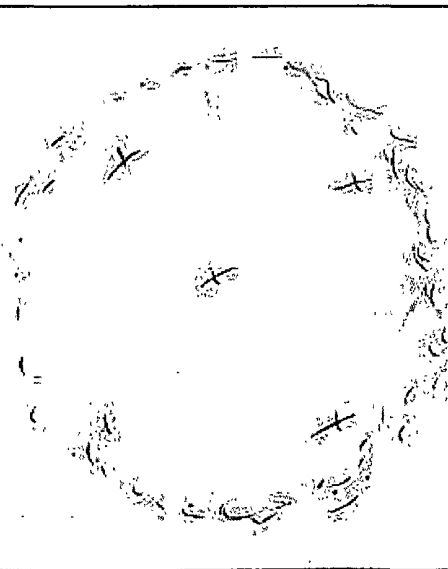
SPILL PROFILE



SAMPLE ID	FIELD HEADSPACE PID (ppm)
Sp. Comp	252.9
Comp 2 deep	DVR RANGE
N wall	3000 +
Bottom	3000 +
E wall	16.8
S wall	11.9
W wall	32.1

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME



TRAVEL NOTES:

CALLED OUT:

ONSITE:



**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1472
Sample No.:	1	Date Reported:	11/9/2010
Sample ID:	5 Pt. Comp. 1' Deep	Date Sampled:	10/20/2010
Sample Matrix:	Soil	Date Analyzed:	10/20/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

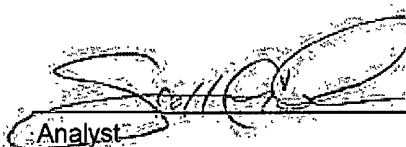
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	2,970	5.0

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 28-4 Unit 20 (hBr)**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Scott Gonzales
Printed


Review

Sarah Rowland, EIT
Printed



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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1472
Sample No.:	2	Date Reported:	11/9/2010
Sample ID:	Comp. Sample 2' Deep	Date Sampled:	10/20/2010
Sample Matrix:	Soil	Date Analyzed:	10/20/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		


Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	656	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.

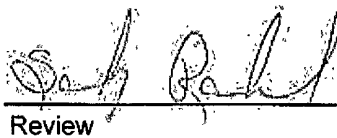
Comments: **San Juan 28-4 Unit 20 (hBr)**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



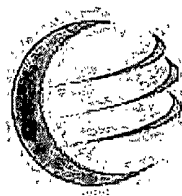
Analyst

Scott Gonzales
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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1472
Sample No.:	3	Date Reported:	11/9/2010
Sample ID:	Bottom Composite Sandstone	Date Sampled:	10/20/2010
Sample Matrix:	Soil	Date Analyzed:	10/20/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

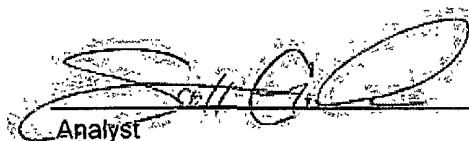
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	1,950	5.0

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 28-4 Unit 20 (hBr)**

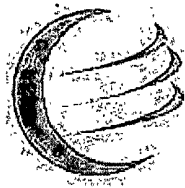
Instrument calibrated to 200 ppm standard. Zeroed before each sample


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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1472
Sample No.:	4	Date Reported:	11/9/2010
Sample ID:	North Wall Composite	Date Sampled:	10/20/2010
Sample Matrix:	Soil	Date Analyzed:	10/20/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		


Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	1,360	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 28-4 Unit 20 (hBr)**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1472
Sample No.:	5	Date Reported:	11/9/2010
Sample ID:	South Wall Composite	Date Sampled:	10/20/2010
Sample Matrix:	Soil	Date Analyzed:	10/20/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
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Total Petroleum Hydrocarbons	96	5.0
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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: **San Juan 28-4 Unit 20 (hBr)**


Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1472
Sample No.:	6	Date Reported:	11/9/2010
Sample ID:	East Wall Composite	Date Sampled:	10/20/2010
Sample Matrix:	Soil	Date Analyzed:	10/20/2010
Preservative:	Cool	Analysis Needed:	TPH-418.1
Condition:	Cool and Intact		

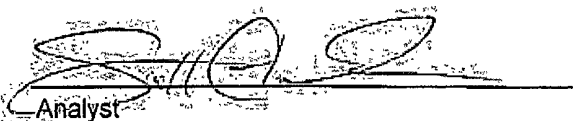
Parameter	Concentration (mg/kg)	Det. Limit (mg/kg)
Total Petroleum Hydrocarbons	84	5.0

ND = Parameter not detected at the stated detection limit.

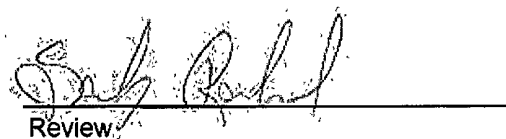
References: Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No. 4551, 1978.

Comments: **San Juan 28-4 Unit 20 (hBr)**

Instrument calibrated to 200 ppm standard. Zeroed before each sample


Analyst

Scott Gonzales
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**EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS**

Client:	ConocoPhillips	Project #:	92115-1472
Sample No.:	7	Date Reported:	11/9/2010
Sample ID:	West Wall Composite	Date Sampled:	10/20/2010
Sample Matrix:	Soil	Date Analyzed:	10/20/2010
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 28-4 Unit 20 (hBr)**

Instrument calibrated to 200 ppm standard. Zeroed before each sample



Analyst

Scott Gonzales

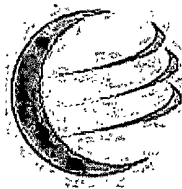
Printed



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Sarah Rowland, EIT

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CONTINUOUS CALIBRATION
EPA METHOD 418.1
TOTAL PETROLEUM
HYDROCARBONS

Cal. Date: 20-Oct-10

Parameter	Standard Concentration mg/L	Concentration Reading mg/L
TPH	100	208
	200	
	500	
	1000	

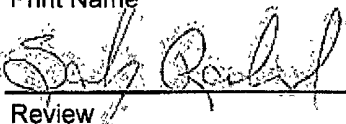
The accepted percent relative deviation (%RSD) of the calibration factor is less than 20% over the working range.



Analyst

Scott Gonzales

Print Name



Review

Sarah Rowland, EIT

Print Name

11/9/2010

Date

11/9/2010

Date



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Analytical Laboratory

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


Client:	ConocoPhillips	Project #:	92115-1472
Sample ID:	Bottom Comp Sandstone	Date Reported:	10-22-10
Laboratory Number:	56261	Date Sampled:	10-20-10
Chain of Custody No:	10568	Date Received:	10-21-10
Sample Matrix:	Soil	Date Extracted:	10-21-10
Preservative:	Cool	Date Analyzed:	10-21-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	324	0.2
Diesel Range (C10 - C28)	39.4	0.1
Total Petroleum Hydrocarbons	363	

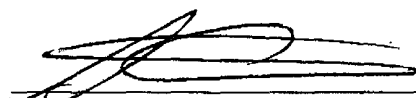
ND - Parameter not detected at the stated detection limit.

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

Comments: **San Juan 28-4 #20**



Analyst



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Analytical Laboratory

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


Client:	ConocoPhillips	Project #:	92115-1472
Sample ID:	North Wall Comp Sandstone	Date Reported:	10-22-10
Laboratory Number:	56262	Date Sampled:	10-20-10
Chain of Custody No:	10568	Date Received:	10-21-10
Sample Matrix:	Soil	Date Extracted:	10-21-10
Preservative:	Cool	Date Analyzed:	10-21-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	221	0.2
Diesel Range (C10 - C28)	43.9	0.1
Total Petroleum Hydrocarbons	265	


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 28-4 #20**



Analyst



Review



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Analytical Laboratory

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

Client:	ConocoPhillips	Project #:	92115-1472
Sample ID:	South Wall Comp	Date Reported:	10-22-10
Laboratory Number:	56263	Date Sampled:	10-20-10
Chain of Custody No:	10568	Date Received:	10-21-10
Sample Matrix:	Soil	Date Extracted:	10-21-10
Preservative:	Cool	Date Analyzed:	10-21-10
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 28-4 #20**

Analyst

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Analytical Laboratory

EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	10-21-10 QA/QC	Date Reported:	10-22-10
Laboratory Number:	56261	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-21-10
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept Range
Gasoline Range C5 - C10	10-21-10	9.9960E+002	1.0000E+003	0.04%	0 - 15%
Diesel Range C10 - C28	10-21-10	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

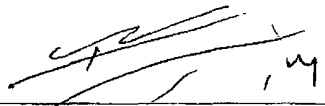
Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept Range
Gasoline Range C5 - C10	324	312	3.7%	0 - 30%
Diesel Range C10 - C28	39.4	36.7	6.9%	0 - 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
Gasoline Range C5 - C10	324	250	478	83.3%	75 - 125%
Diesel Range C10 - C28	39.4	250	308	106%	75 - 125%

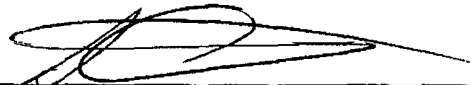
ND - Parameter not detected at the stated detection limit.

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

Comments: QA/QC for Samples 56261-56263, 56265-56267, 56269-56272



Analyst



Review



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Analytical Laboratory

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	ConocoPhillips	Project #:	92115-1472
Sample ID:	Bottom Comp Sandstone	Date Reported:	10-22-10
Laboratory Number:	56261	Date Sampled:	10-20-10
Chain of Custody:	10568	Date Received:	10-21-10
Sample Matrix:	Soil	Date Analyzed:	10-21-10
Preservative:	Cool	Date Extracted:	10-21-10
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	6.8	0.9
Toluene	1,210	1.0
Ethylbenzene	757	1.0
p,m-Xylene	12,100	1.2
o-Xylene	2,930	0.9
Total BTEX	17,000	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	101 %
	1,4-difluorobenzene	102 %
	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 28-4 #20

Analyst

Review



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EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	ConocoPhillips	Project #:	92115-1472
Sample ID:	North Wall Comp Sandstone	Date Reported:	10-22-10
Laboratory Number:	56262	Date Sampled:	10-20-10
Chain of Custody:	10568	Date Received:	10-21-10
Sample Matrix:	Soil	Date Analyzed:	10-21-10
Preservative:	Cool	Date Extracted:	10-21-10
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	5.0	0.9
Toluene	383	1.0
Ethylbenzene	508	1.0
p,m-Xylene	8,800	1.2
o-Xylene	2,020	0.9
Total BTEX	11,700	


ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	97.9 %
	1,4-difluorobenzene	99.0 %
	Bromochlorobenzene	114 %


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 28-4 #20



Analyst



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EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	1021BBLK QA/QC	Date Reported:	10-22-10
Laboratory Number:	56261	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-21-10
Condition:	N/A	Analysis:	BTEX
		Dilution:	10

Calibration and Detection Limits (ug/L)	PCalIRF	CCalIRF	%Diff. Accept Range 0 - 15%	Blank Conc	Detect Limit
Benzene	5.6833E+005	5.6947E+005	0.2%	ND	0.1
Toluene	6.3277E+005	6.3404E+005	0.2%	ND	0.1
Ethylbenzene	5.6677E+005	5.6790E+005	0.2%	ND	0.1
p,m-Xylene	1.3748E+006	1.3776E+006	0.2%	ND	0.1
o-Xylene	5.3241E+005	5.3348E+005	0.2%	ND	0.1

Duplicate Conc (ug/Kg)	Sample	Duplicate	%Diff.	Accept Range	Detect Limit
Benzene	6.8	5.8	14.7%	0 - 30%	0.9
Toluene	1,210	1,240	2.4%	0 - 30%	1.0
Ethylbenzene	757	780	3.1%	0 - 30%	1.0
p,m-Xylene	12,100	12,100	0.0%	0 - 30%	1.2
o-Xylene	2,930	3,060	4.4%	0 - 30%	0.9

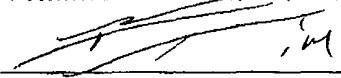
Spike Conc (ug/Kg)	Sample	Amount Spiked	Spiked Sample	% Recovery	Accept Range
Benzene	6.8	500	528	104%	39 - 150
Toluene	1,210	500	1,880	110%	46 - 148
Ethylbenzene	757	500	1,430	114%	32 - 160
p,m-Xylene	12,100	1000	13,700	105%	46 - 148
o-Xylene	2,930	500	3,810	111%	46 - 148

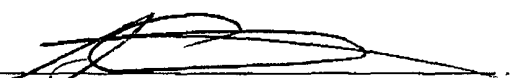
ND - Parameter not detected at the stated detection limit.

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 56261-56262, 56267


Analyst


Review

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CHAIN OF CUSTODY RECORD

10568

Client: <u>ConocoPhillips</u>			Project Name / Location: <u>SAN JUAN 28-U #20</u>			ANALYSIS / PARAMETERS																
Client Address:			Sampler Name: <u>Scott G.</u>			<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH (Method 8015)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">BTEX (Method 8021)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">VOC (Method 8260)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">RCRA 8 Metals</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Cation / Anion</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">RCI</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TCLP with H/P</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">PAH</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">TPH (418.1)</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">CHLORIDE</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Sample Cool</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Sample Intact</div> </div>																
Client Phone No.:			Client No.: <u>92115-1472</u>																			
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative																
						HgCl ₂	HCl	ICF														
<u>Bottom Camp Sandstone</u>	<u>10-20-10</u>	<u>17:00</u>	<u>56261</u>	Soil Sludge Aqueous	<u>1-402</u>			✓	✓	✓										Y	Y	
<u>North well Camp Sandstone</u>	<u>10-20-10</u>	<u>17:00</u>	<u>56262</u>	Soil Sludge Aqueous	<u>1-402</u>			✓	✓	✓										Y	Y	
<u>South well Camp</u>	<u>10-20-10</u>	<u>17:00</u>	<u>56263</u>	Soil Sludge Aqueous	<u>1-402</u>			✓	✓											Y	Y	
				Soil Sludge Aqueous																		
				Soil Sludge Aqueous																		
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<u>[Signature]</u>	<u>10-21-10</u>	<u>7:15</u>	<u>[Signature]</u>	<u>10/21/10</u>	<u>7:15</u>
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received by: (Signature)		

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

Client:	ConocoPhillips	Project #:	92115-1472
Sample ID:	North Wall	Date Reported:	10-29-10
Laboratory Number:	56330	Date Sampled:	10-28-10
Chain of Custody No:	10624	Date Received:	10-28-10
Sample Matrix:	Soil	Date Extracted:	10-28-10
Preservative:	Cool	Date Analyzed:	10-28-10
Condition:	Intact	Analysis Requested:	8015 TPH

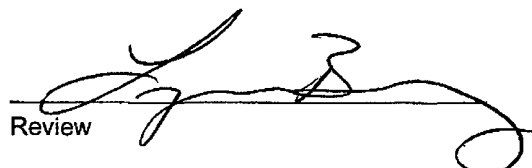
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	35.8	0.2
Diesel Range (C10 - C28)	139	0.1
Total Petroleum Hydrocarbons	174	

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 28-4 #20**


Analyst


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

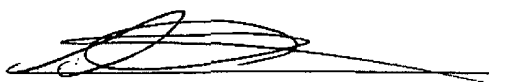
Client:	ConocoPhillips	Project #:	92115-1472
Sample ID:	Bottom	Date Reported:	10-29-10
Laboratory Number:	56331	Date Sampled:	10-28-10
Chain of Custody No:	10624	Date Received:	10-28-10
Sample Matrix:	Soil	Date Extracted:	10-28-10
Preservative:	Cool	Date Analyzed:	10-28-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	25.3	0.2
Diesel Range (C10 - C28)	14.1	0.1
Total Petroleum Hydrocarbons	39.4	

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 28-4 #20**


Analyst


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EPA Method 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	10-28-10 QA/QC	Date Reported:	10-28-10
Laboratory Number:	56324	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-28-10
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept Range
Gasoline Range C5 - C10	10-28-10	9.9960E+002	1.0000E+003	0.04%	0 - 15%
Diesel Range C10 - C28	10-28-10	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

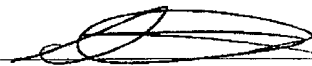
Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept Range
Gasoline Range C5 - C10	ND	ND	0.0%	0 - 30%
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept Range
Gasoline Range C5 - C10	ND	250	248	99.4%	75 - 125%
Diesel Range C10 - C28	ND	250	250	100%	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 56324-56326, 56330-56333


Analyst


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EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	ConocoPhillips	Project #:	92115-1472
Sample ID:	North Wall	Date Reported:	10-29-10
Laboratory Number:	56330	Date Sampled:	10-28-10
Chain of Custody:	10624	Date Received:	10-28-10
Sample Matrix:	Soil	Date Analyzed:	10-28-10
Preservative:	Cool	Date Extracted:	10-28-10
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	ND	1.0
Ethylbenzene	ND	1.0
p,m-Xylene	281	1.2
o-Xylene	83.6	0.9
Total BTEX	365	

ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	101 %
	1,4-difluorobenzene	105 %
	Bromochlorobenzene	88.9 %

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 28-4 #20


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Review



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EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	ConocoPhillips	Project #:	92115-1472
Sample ID:	Bottom	Date Reported:	10-29-10
Laboratory Number:	56331	Date Sampled:	10-28-10
Chain of Custody:	10624	Date Received:	10-28-10
Sample Matrix:	Soil	Date Analyzed:	10-28-10
Preservative:	Cool	Date Extracted:	10-28-10
Condition:	Intact	Analysis Requested:	BTEX
		Dilution:	10

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	14.2	1.0
Ethylbenzene	18.6	1.0
p,m-Xylene	948	1.2
o-Xylene	195	0.9
Total BTEX	1,180	

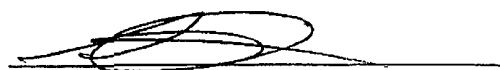
ND - Parameter not detected at the stated detection limit.


Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	97 %
	1,4-difluorobenzene	99 %
	Bromochlorobenzene	94.3 %

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 28-4 #20


Analyst


Review



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EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	N/A	Project #:	N/A
Sample ID:	1028BBLK QA/QC	Date Reported:	10-28-40
Laboratory Number:	56324	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	10-28-10
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	5.3261E+005	5.3367E+005	0.2%	ND	0.1
Toluene	6.2054E+005	6.2179E+005	0.2%	ND	0.1
Ethylbenzene	5.5195E+005	5.5305E+005	0.2%	ND	0.1
p,m-Xylene	1.3075E+006	1.3101E+006	0.2%	ND	0.1
o-Xylene	5.1016E+005	5.1118E+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	ND	ND	0.0%	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	ND	ND	0.0%	0 - 30%	0.9

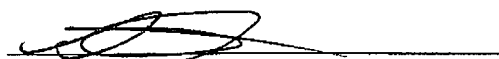
Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	%Recovery	Accept Range
Benzene	ND	500	508	102%	39 - 150
Toluene	ND	500	503	101%	46 - 148
Ethylbenzene	ND	500	503	101%	32 - 160
p,m-Xylene	ND	1000	1,000	100%	46 - 148
o-Xylene	ND	500	515	103%	46 - 148

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 56324-56327, 56330-56331


Analyst


Review

CHAIN OF CUSTODY RECORD

10624

Client: COPC			Project Name / Location: San Juan 28-4#20			ANALYSIS / PARAMETERS																	
Client Address:			Sampler Name: Rene Garcia Reyes			<div style="display: flex; justify-content: space-between;"> <div> <div>X</div> <div>X</div> </div> <div> <div>X</div> <div>X</div> </div> </div>																	
Client Phone No.:			Client No.: 92115-1472																				
Sample No./ Identification	Sample Date	Sample Time	Lab No.	Sample Matrix	No./Volume of Containers	Preservative HgCl ₂ HCl			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	
North Wall	10-28-10	10:15	56330	Soil Solid	402				X	X	X											X	X
Bottom	10-28-10	10:20	56331	Soil Solid	402				X	X	X											X	X
				Soil Solid	Sludge Aqueous																		
				Soil Solid	Sludge Aqueous																		
				Soil Solid	Sludge Aqueous																		
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