District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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 August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: **ConocoPhillips**	Contact: **Philip Lee**
Address**: 3695 Highway 285, Orla TX**	Telephone No. **432-238-1050**
Facility Name: **Red Hills West State 16 W2 CTB**	Facility Type: **Central Tank Battery**

Surface Owner: NMOCD	Mineral Owner: NMOCD	API No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	16	26S	32E		North		West	**LEA**

Latitude N32º2'50" Longitude W103º40'30"

NATURE OF RELEASE

Type of Release: **Spill**	Volume of Release: 25 BBLS	Volume Recovered: 20 BBLS
Source of Release: Ruptured hose off of a de-oiler unit (see Lat/Long above).	Date and Hour of Occurrence **04/14/2016 03:45 am**	Date and Hour of Discovery **04/14/2016 03:45 am**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Jamie Keyes, NMOCD**	
By Whom? **Philip Lee**	Date and Hour: **04/14/2016 09:10 am**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*

A 25 BBL Produced Water release occurred on the ConocoPhillips Red Hills W2 CTB located in Lea County, New Mexico: During de-oiler operations our MSO noticed steam coming from the pumps on the de-oiler skid. Upon closer inspection noticed that water that was leaking from one of the hoses. The water was leaking into the containment but some of the water was splashing out onto the ground. MSO contacted de-oiler operators then shut down the pumps. Once the pumps were off and the area deemed safe, the water hauler on location recovered the produced water in containment. The leak resulted in approximately 20 BBLs of produced water spilled to lined containment (with all recovered) and 5 BBLs of produced water spilled to ground. Location will be remediated in accordance with NMOCD and COPC policies with confirmation soil samples.

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:	OIL CONSERVATION DIVISION	
Printed Name: Philip Lee	Approved by Environmental Specialist:	
Title: HSE	Approval Date:	Expiration Date:
E-mail Address: ***philip.p.lee@conocophillips.com***	Conditions of Approval:	Attached ☐
Date: 04/18/2016 Phone:432-238-1050		

* Attach Additional Sheets If Necessary

Analytical Report 534667

for

Conoco Phillips-Goldsmith

Project Manager: Bryan Clay

Red Hills WF2

11-AUG-16

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)
Xenco-San Antonio: Texas (T104704534)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Table of Contents

11-AUG-16

Project Manager: **Bryan Clay**
Conoco Phillips-Goldsmith
302 Plant Rd

Goldsmith, TX 79741

Reference: XENCO Report No(s): **534667**
Red Hills WF2
Project Address: Red Hills WF2

Bryan Clay:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 534667. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 534667 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 534667

Conoco Phillips-Goldsmith, Goldsmith, TX

Red Hills WF2

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-1	S	08-05-16 12:13	- 4 In	534667-001
SP-2	S	08-05-16 12:23	- 4 In	534667-002
SP-3	S	08-05-16 12:30	- 4 In	534667-003

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:
Batch: LBA-999604 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Hits Summary 534667

Conoco Phillips-Goldsmith, Goldsmith, TX

Red Hills WF2

Sample Id : **SP-1** Matrix : Soil % Moisture :
Lab Sample Id : 534667-001 Date Collected : 08.05.16 12.13 Basis : Wet Weight
Sample Depth : 4 In Date Received : 08.08.16 16.55

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 999528 Date Prep: 08.09.16 17.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	263	mg/kg	08.10.16 01.05		1

Sample Id : **SP-2** Matrix : Soil % Moisture :
Lab Sample Id : 534667-002 Date Collected : 08.05.16 12.23 Basis : Wet Weight
Sample Depth : 4 In Date Received : 08.08.16 16.55

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 999528 Date Prep: 08.09.16 17.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	72.4	mg/kg	08.10.16 01.17		1

Sample Id : **SP-3** Matrix : Soil % Moisture :
Lab Sample Id : 534667-003 Date Collected : 08.05.16 12.30 Basis : Wet Weight
Sample Depth : 4 In Date Received : 08.08.16 16.55

Analytical Method : Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Seq Number 999528 Date Prep: 08.09.16 17.00

Parameter	Cas Number	Result	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	45.7	mg/kg	08.10.16 01.29		1

Certificate of Analysis Summary 534667

Conoco Phillips-Goldsmith, Goldsmith, TX

Project Name: Red Hills WF2

Project Id:
Contact: Bryan Clay
Project Location: Red Hills WF2

Date Received in Lab: Mon Aug-08-16 04:55 pm
Report Date: 11-AUG-16
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	534667-001		534667-002		534667-003					
	Field Id:	SP-1		SP-2		SP-3					
	Depth:	4 In		4 In		4 In					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Aug-05-16 12:13		Aug-05-16 12:23		Aug-05-16 12:30					
BTEX by EPA 8021B	***Extracted:***	Aug-09-16 18:30		Aug-09-16 18:30		Aug-09-16 18:30					
	Analyzed:	Aug-10-16 09:28		Aug-10-16 09:44		Aug-10-16 10:01					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Benzene		ND	0.00150	ND	0.00150	ND	0.00150				
Toluene		ND	0.00200	ND	0.00200	ND	0.00200				
Ethylbenzene		ND	0.00200	ND	0.00200	ND	0.00200				
m_p-Xylenes		ND	0.00200	ND	0.00200	ND	0.00200				
o-Xylene		ND	0.00300	ND	0.00299	ND	0.00299				
Total Xylenes		ND	0.00200	ND	0.00200	ND	0.00200				
Total BTEX		ND	0.00150	ND	0.00150	ND	0.00150				
Inorganic Anions by EPA 300/300.1	***Extracted:***	Aug-09-16 17:00		Aug-09-16 17:00		Aug-09-16 17:00					
	Analyzed:	Aug-10-16 01:05		Aug-10-16 01:17		Aug-10-16 01:29					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		263	10.0	72.4	10.0	45.7	10.0				
TPH by Texas1005	***Extracted:***	Aug-09-16 10:00		Aug-09-16 10:00		Aug-09-16 10:00					
	Analyzed:	Aug-10-16 01:03		Aug-10-16 01:28		Aug-10-16 01:52					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
C6-C12 Gasoline Range Hydrocarbons		ND	25.0	ND	24.9	ND	24.9				
C12-C28 Diesel Range Hydrocarbons		ND	25.0	ND	24.9	ND	24.9				
C28-C35 Oil Range Hydrocarbons		ND	25.0	ND	24.9	ND	24.9				
Total TPH 1005		ND	25.0	ND	24.9	ND	24.9				

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: Red Hills WF2

Work Orders : 534667,

Project ID:

Lab Batch #: 999538 **Sample:** 534667-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/10/16 01:03

SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.9	99.8	95	70-135	
o-Terphenyl	42.9	49.9	86	70-130	

Lab Batch #: 999538 **Sample:** 534667-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/10/16 01:28

SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	99.7	92	70-135	
o-Terphenyl	40.5	49.9	81	70-130	

Lab Batch #: 999538 **Sample:** 534667-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/10/16 01:52

SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.0	99.6	91	70-135	
o-Terphenyl	40.3	49.8	81	70-130	

Lab Batch #: 999604 **Sample:** 534667-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/10/16 09:28

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0296	0.0300	99	80-120	
4-Bromofluorobenzene	0.0293	0.0300	98	80-120	

Lab Batch #: 999604 **Sample:** 534667-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/10/16 09:44

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	80-120	
4-Bromofluorobenzene	0.0263	0.0300	88	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Red Hills WF2

Work Orders : 534667,

Project ID:

Lab Batch #: 999604 **Sample:** 534667-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/10/16 10:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	80-120	
4-Bromofluorobenzene	0.0265	0.0300	88	80-120	

Lab Batch #: 999538 **Sample:** 711891-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/16 15:18

SURROGATE RECOVERY STUDY

TPH by Texas1005

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.1	100	93	70-135	
o-Terphenyl	44.2	50.0	88	70-130	

Lab Batch #: 999604 **Sample:** 711916-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/10/16 08:55

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0266	0.0300	89	80-120	

Lab Batch #: 999538 **Sample:** 711891-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/16 15:45

SURROGATE RECOVERY STUDY

TPH by Texas1005

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	57.2	50.0	114	70-130	

Lab Batch #: 999604 **Sample:** 711916-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/10/16 07:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0307	0.0300	102	80-120	
4-Bromofluorobenzene	0.0292	0.0300	97	80-120	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Red Hills WF2

Work Orders : 534667,

Project ID:

Lab Batch #: 999538 **Sample:** 711891-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/08/16 16:11

SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	100	117	70-135	
o-Terphenyl	52.6	50.0	105	70-130	

Lab Batch #: 999604 **Sample:** 711916-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 08/10/16 07:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	80-120	
4-Bromofluorobenzene	0.0289	0.0300	96	80-120	

Lab Batch #: 999538 **Sample:** 534645-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/16 22:15

SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	115	100	115	70-135	
o-Terphenyl	44.8	50.0	90	70-130	

Lab Batch #: 999604 **Sample:** 534668-003 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/10/16 11:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0306	0.0300	102	80-120	
4-Bromofluorobenzene	0.0302	0.0300	101	80-120	

Lab Batch #: 999538 **Sample:** 534645-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/09/16 22:38

SURROGATE RECOVERY STUDY

TPH by Texas1005 Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	47.3	50.0	95	70-130	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Red Hills WF2

Work Orders : 534667,

Project ID:

Lab Batch #: 999604 **Sample:** 534668-003 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 08/10/16 08:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0303	0.0300	101	80-120	
4-Bromofluorobenzene	0.0300	0.0300	100	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Red Hills WF2

Work Order #: 534667 **Project ID:**

Analyst: PJB **Date Prepared:** 08/09/2016 **Date Analyzed:** 08/10/2016

Lab Batch ID: 999604 **Sample:** 711916-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.100	0.0958	96	0.100	0.0972	97	1	70-130	35	
Toluene	<0.00200	0.100	0.0973	97	0.100	0.0989	99	2	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0990	99	0.100	0.101	101	2	71-129	35	
m_p-Xylenes	<0.00200	0.200	0.196	98	0.200	0.199	100	2	70-135	35	
o-Xylene	<0.00300	0.100	0.0974	97	0.100	0.0993	99	2	71-133	35	

Analyst: MNR **Date Prepared:** 08/09/2016 **Date Analyzed:** 08/09/2016

Lab Batch ID: 999528 **Sample:** 711879-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	268	107	250	259	104	3	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Red Hills WF2

Work Order #: 534667 **Project ID:**

Analyst: ARM **Date Prepared:** 08/08/2016 **Date Analyzed:** 08/08/2016

Lab Batch ID: 999538 **Sample:** 711891-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by Texas1005 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<25.0	1000	916	92	1000	902	90	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<25.0	1000	947	95	1000	928	93	2	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Red Hills WF2

Work Order # : 534667 **Project ID:**

Lab Batch ID: 999604 **QC- Sample ID:** 534668-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/10/2016 **Date Prepared:** 08/09/2016 **Analyst:** PJB

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00150	0.0998	0.0676	68	0.0998	0.0661	66	2	70-130	35	X
Toluene	<0.00200	0.0998	0.0644	65	0.0998	0.0605	61	6	70-130	35	X
Ethylbenzene	<0.00200	0.0998	0.0575	58	0.0998	0.0527	53	9	71-129	35	X
m_p-Xylenes	<0.00200	0.200	0.112	56	0.200	0.101	51	10	70-135	35	X
o-Xylene	<0.00299	0.0998	0.0570	57	0.0998	0.0486	49	16	71-133	35	X

Lab Batch ID: 999528 **QC- Sample ID:** 534642-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/09/2016 **Date Prepared:** 08/09/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	243	97	250	252	101	4	90-110	20	

Lab Batch ID: 999528 **QC- Sample ID:** 534643-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/09/2016 **Date Prepared:** 08/09/2016 **Analyst:** MNR

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	250	223	89	250	252	101	12	90-110	20	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Red Hills WF2

Work Order # : 534667 **Project ID:**

Lab Batch ID: 999538 **QC- Sample ID:** 534645-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 08/09/2016 **Date Prepared:** 08/08/2016 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by Texas1005 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	66.1	1000	1000	93	1000	1040	97	4	70-135	35	
C12-C28 Diesel Range Hydrocarbons	358	1000	1330	97	1000	1380	102	4	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Conoco Phillips-Goldsmith

Date/ Time Received: 08/08/2016 04:55:00 PM

Work Order #: 534667

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.7
#2 *Shipping container in good condition?	**N/A**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seal present on shipping container/ cooler?	**N/A**
#5 *Custody Seals intact on shipping container/ cooler?	**N/A**
#6 Custody Seals intact on sample bottles?	**N/A**
#7 *Custody Seals Signed and dated?	**N/A**
#8 *Chain of Custody present?	**Yes**
#9 Sample instructions complete on Chain of Custody?	**Yes**
#10 Any missing/extra samples?	**No**
#11 Chain of Custody signed when relinquished/ received?	**Yes**
#12 Chain of Custody agrees with sample label(s)?	**Yes**
#13 Container label(s) legible and intact?	**Yes**
#14 Sample matrix/ properties agree with Chain of Custody?	**Yes**
#15 Samples in proper container/ bottle?	**Yes**
#16 Samples properly preserved?	**Yes**
#17 Sample container(s) intact?	**Yes**
#18 Sufficient sample amount for indicated test(s)?	**Yes**
#19 All samples received within hold time?	**Yes**
#20 Subcontract of sample(s)?	**No**
#21 VOC samples have zero headspace (less than 1/4 inch bubble)?	**N/A**
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron
Mary Negron
Date: 08/09/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 08/09/2016

CHAIN OF CUSTODY

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XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200) | Odessa, Texas (432-563-1800) | Lakeland, Florida (863-646-8526)

Dallas, Texas (214-902-0300) | Norcross, Georgia (770-449-8800) | Tampa, Florida (813-620-2000)

Service Center - San Antonio, Texas (210-509-3334) www.xenco.com

Xenco Quote # | Xenco Job # 534667

Client / Reporting Information

Company Name / Branch: ConocoPhillips

Company Address:

Email: Bryan.W.Clay@conocophillips.com

Phone No:

Project Contact: BRYAN CLAY

Samplers's Name: Bryan Clay

Project Information

Project Name/Number:

Project Location: Red Hills WF2

Invoice To:

PO Number:

Analytical Information

BTEX | TX1005 | Chlorides

Matrix Codes

A= Air
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
WW= Waste Water
W = Wipe
O = Oil

WW= Waste Water

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	BTEX	TX1005	Chlorides	Field Comments
1	SP-1	4"	8/5/16	1213	S	1									X	X	X	
2	SP-2	4"	8/5/16	1223	S	1									X	X	X	
3	SP-3	4"	8/5/16	1230	S	1									X	X	X	
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 3:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	[signature]	1655 8/8	Mazn	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: X
			5			Cooler Temp: 5.7°C IR ID:R-8 Corrected Temp: 5.7°C

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to XENCO Laboratories and its affiliates, subcontractors and assigns XENCO's standard terms and conditions of service unless previous...

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Final 1.000

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

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Analyst:

PH Device/Lot#:

Checklist completed by: Mary Alexis Negron
Mary Negron
Date: 08/09/2016

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks
Date: 08/09/2016

Red Hills WF2 Release