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

OIL CONS. DIV DIST. 3
MAY 18 2016

Form C-141
Revised August 8, 2011

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

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company **Burlington Resources, a Wholly Owned Subsidiary of ConocoPhillips Company**	Contact **Bobby Spearman**
Address **3401 East 30th St, Farmington, NM**	Telephone No. **(505) 324-6131**
Facility Name: Quinn #6	Facility Type: Gas well

Surface Owner **Fee**	Mineral Owner **BLM**	API No.**300451060**

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	**20**	**31N**	**8W**	**990**	**North**	**990**	**East**	**San Juan**

Latitude 36.887414 Longitude -107.693325

NATURE OF RELEASE

Type of Release **Condensate**	Volume of Release **23bbls**	Volume Recovered 22bbls
Source of Release **Production tank**	Date and Hour of Occurrence **1-7-16 10:30a**	Date and Hour of Discovery **1-7-16 10:30a**
Was Immediate Notice Given? ☐ Yes ☐ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
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.*
Production tank developed a hole due to corrosion spilling 23 bbl of oil, well was shut in and the remaining oil in the tank was pulled and transferred. Crew was able to recover 22bbls of oil.

Describe Area Affected and Cleanup Action Taken.*
Spill was contained within the berm area of the location. Crews removed frozen soil and oil and hauled to disposal. Due to frozen ground and snow levels ConocoPhillips will perform soil sampling as soon as possible.
5-15-16 Crew completed the following:
Excavation was 38' x 19' x 1-2' deep. 30 c/yds of soil was transported to JFJ Land Farm and claean soil was placed in the excavation site. Analytical results were below the regulatory standards – no further action required. The soil sampling report is attached for review.

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: R Spearman	OIL CONSERVATION DIVISION
Printed Name: Robert Spearman	Approved by Environmental Specialist: Vanessa
Title: **Field Environmental Specialist**	Approval Date: 5/20/2016 Expiration Date:
E-mail Address: **Robert.E.Spearman@ cop.com**	Conditions of Approval: — Attached ☐
Date: 5-16-16 Phone: 505-324-6131	

* Attach Additional Sheets If Necessary

NVF1600837175

26

Quinn #6 Release Report

Unit Letter A, Section 20, Township 31 North, Range 8 West
San Juan County, New Mexico

May 12, 2016

Prepared for:
ConocoPhillips
5525 Highway 64
Farmington, New Mexico 87401

Prepared by:
Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401

Rule Engineering, LLC
Solutions to Regulations for Industry

ConocoPhillips
Quinn #6 Release Report

Prepared for:

ConocoPhillips
5525 Highway 64
Farmington, New Mexico 87401

Prepared by:

Rule Engineering, LLC
501 Airport Drive, Suite 205
Farmington, New Mexico 87401

Heather M. Woods

Heather M. Woods, P.G., Area Manager

Reviewed by:

Russell Knight, PG, Principal Hydrogeologist

May 12, 2016

Table of Contents

Tables

Figures

Appendices

1.0 Introduction

The ConocoPhillips Quinn #6 release site is located in Unit Letter A, Section 20, Township 31 North, Range 8 West, in San Juan County, New Mexico. The release of an estimated 23 barrels (bbls) of condensate/oil, discovered on January 7, 2016, was the result of the development of a corrosion hole in the production tank and approximately 22 bbls of the liquid was recovered.

A topographic map of the location reproduced from the United States Geological Society quadrangle map of the area is included as Figure 1 and an aerial site map is included as Figure 2.

2.0 Release Summary

Site Name	Quinn #6		
Site Location Description	Unit Letter A, Section 20, Township 31 North, Range 8 West		
Wellhead GPS Location	N36.88750 and W107.69344	***Release GPS Location***	N36.88739 and W107.69335
Land Jurisdiction	Private	***Discovery Date***	January 1, 2016
Release Source	Production Tank	***Substance(s) Released***	Condensate/oil
Volume Released	23 bbls	***Volume Recovered***	22 bbls
NMOCD Site Rank	10		
Distance to Nearest Surface Water	Unnamed, ephemeral wash located approximately 580 feet to the northwest which drain to Pump Canyon		
Estimated Depth to Groundwater	Greater than 100 feet below grade surface (bgs)	***Distance to Nearest Water Well or Spring***	Greater than 1,000 feet
Contractor	CF&M		

3.0 NMOCD Site Ranking

In accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases (August 1993), this site was assigned a ranking score of 10 (Table 1).

Depth to groundwater at the site is estimated to be greater than 100 feet bgs based on the elevation differential between the release location and the wash in Pump Canyon, in addition to the depth to groundwater information published on the New Mexico Office of

the State Engineer (NMOSE) online New Mexico Water Rights Reporting System (NMWRRS) for local registered water wells.

A review was completed of the NMWRRS and no water wells were identified within a 1,000 foot radius of the location. No water wells were observed within a 1,000 foot radius of the location during a visual inspection.

An ephemeral wash traverses the area approximately 580 feet northwest of the release location which drains to Pump Canyon.

Based on the ranking score of 10, action levels for remediated soils at the site are as follows: 10 milligrams per kilogram (mg/kg) benzene, 50 mg/kg total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1,000 mg/kg total petroleum hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO).

4.0 Field Activities

On April 4, 2016, ConocoPhillips initiated repair activities at the location. CF&M provided heavy equipment operation and repair support. Rule Engineering, LLC (Rule) personnel provided excavation guidance and collected confirmation samples from the resultant excavation.

Approximately 30 cubic yards of soil and 10 bbls of liquid/sludge was excavated and transported to JFJ Landfarm, operated by Industrial Ecosystems, Inc., near Aztec, New Mexico for disposal/remediation. The maximum extent of the excavation measured approximately 38 feet by 19 feet by 1 to 2 feet in depth. The excavation was backfilled with clean, imported material. A depiction of the final excavation with sample locations is included as Figure 2 and the executed C-138 waste acceptance form is provided in Appendix A.

5.0 Soil Sampling

Rule collected two composite confirmation soil samples (SC-1 and SC-2) from the final excavation. Each confirmation soil sample is a representative composite comprised of five to six equivalent portions of soil collected from the sampled area.

A portion of each sample was field screened for volatile organic compounds (VOCs) and TPH. Field screening for VOC vapors was conducted with a photoionization detector (PID). Prior to field screening, the PID was calibrated with 100 parts per million (ppm) isobutylene gas. Field analysis for TPH was conducted for selected samples per USEPA Method 418.1, utilizing a total hydrocarbon analyzer. Prior to field analysis, the machine was calibrated following the manufacturer's procedure which includes calculation of a calibration curve using known concentration standards.

Soil samples collected for laboratory analysis were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Environmental Analysis

Laboratory in Albuquerque, New Mexico. All samples were analyzed for BTEX per U.S. Environmental Protection Agency (USEPA) Method 8021B, TPH (GRO/DRO) per USEPA 8015D and chloride per USEPA Method 300.0. Laboratory analytical results are summarized in Table 2 and presented on Figure 2. The analytical laboratory report is included in Appendix B.

6.0 Field Screening Results

Field screening results for soil confirmation samples SC-1 and SC-2 indicated VOC concentrations of 150 ppm and 5.6 ppm, respectively. The field TPH result for confirmation sample SC-1 was 400 mg/kg and the TPH result for confirmation sample SC-2 was below the reporting limit of 20.0 mg/kg. Field screening results are summarized in Table 2.

7.0 Laboratory Analytical Results

Laboratory analytical results for excavation confirmation sample SC-1 reported the benzene concentration below the laboratory reporting limit of 0.020 mg/kg, which is below the NMOCD action level of 10 mg/kg. Total BTEX concentration for SC-1 was reported as 0.70 mg/kg and the TPH (GRO/DRO) concentration for SC-1 was reported as 132 mg/kg, which are below the NMOCD action levels of 50 mg/kg and 1,000 mg/kg, respectively. The chloride concentration for SC-1 was reported below the laboratory reporting limit of 30 mg/kg.

Laboratory analytical results for excavation confirmation sample SC-2 reported benzene, total BTEX, and TPH (GRO/DRO) concentrations below the laboratory reporting limits, which are below the applicable NMOCD action levels. The chloride concentration for SC-2 was reported as 31 mg/kg.

Laboratory analytical results are summarized in Table 2 and presented on Figure 2. The analytical laboratory report is included in Appendix B.

8.0 Conclusions

The ConocoPhillips Quinn #6 release site is located in Unit Letter A, Section 20, Township 31 North, Range 8 West, in San Juan County, New Mexico. The release of an estimated 23 barrels (bbls) of condensate/oil, discovered on January 7, 2016, was the result of the development of a corrosion hole in the production tank and approximately 22 bbls of the liquid was recovered. Following the excavation of hydrocarbon impacted soils, two confirmation samples (SC-1 and SC-2) were collected from the resultant excavation which measured at the maximum extent approximately 38 feet by 19 feet by 1 to 2 feet in depth. Laboratory analytical results for confirmation samples SC-1 and SC-2 reported benzene, total BTEX, and total TPH (GRO/DRO) concentrations below the applicable NMOCD action levels for a site rank of 10. Approximately 30 cubic yards of soil and 10 bbls of liquid/sludge was excavated and transported to JFJ Landfarm, operated by

Industrial Ecosystems, Inc., near Aztec, New Mexico for disposal/remediation. The excavation as backfilled with clean, imported material.

Based on laboratory analytical results of the confirmation soil samples, no further work is recommended at this time.

9.0 Closure and Limitations

This report has been prepared for the exclusive use of ConocoPhillips and is subject to the terms, conditions, and limitations stated in Rule's report and Service Agreement with ConocoPhillips. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Tables

Table 1. NMOCD Site Ranking Determination
ConocoPhillips
Quinn #6
San Juan County, New Mexico

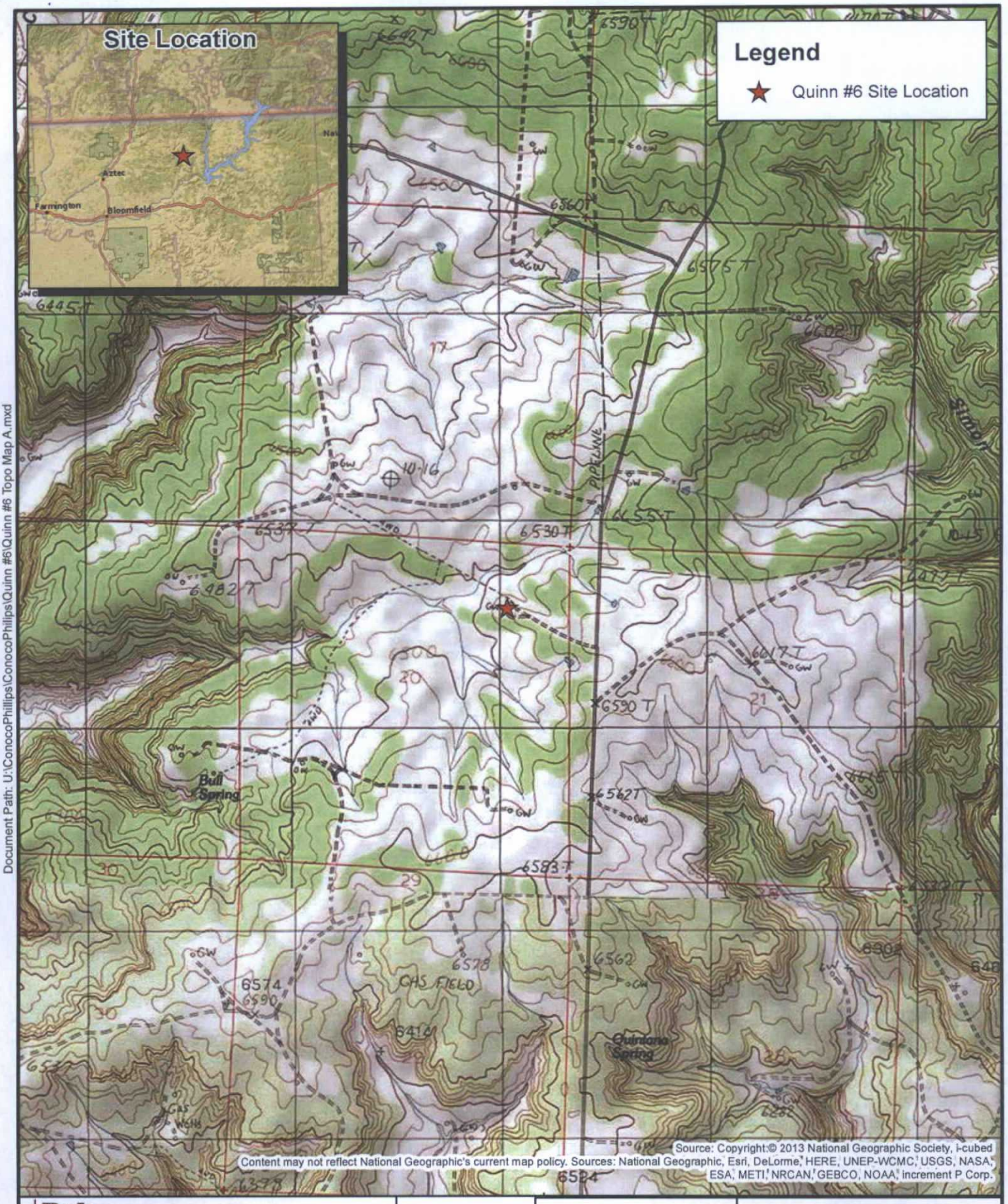
Ranking Criteria	Ranking Score	Site-Based Ranking Score	Basis for Determination	Data Sources
Depth to Groundwater				
<50 feet	20	0	Elevation differential information derived from the topographic map of the area and depth to groundwater information published on the New Mexico Office of the State Engineer's iWaters database.	NMOCD Online database, NMOSE NMWRRS, Anastacio Spring Quadrangle, Google Earth, and Visual Inspection
50-99 feet	10			
>100 feet	0			
Wellhead Protection Area				
<1,000 feet from a water source, or <200 feet from private domestic water source	20 (Yes)	0	No water source or recorded water wells within 1,000 foot radius of location.	NMOSE NMWRRS, Anastacio Spring Quadrangle, Google Earth, and Visual Inspection
	0 (No)			
Distance to Surface Water Body				
<200 horizontal feet	20	10	An unnamed, ephemeral wash is located approximately 580 feet northwest of release location which drains to the wash in Pump Canyon.	Anastacio Spring Quadrangle, Google Earth, and Visual Inspection
200 to 1,000 horizontal feet	10			
>1,000 horizontal feet	0			
Site Based Total Ranking Score		**10**		

Table 2. Field Screening and Laboratory Analytical Results
ConocoPhillips
Quinn #6
San Juan County, New Mexico

Sample ID	Date	Sample Time	Sample Type	Sample Depth (ft)	Field Screening Results		Laboratory Analytical Results							
					VOCs (PID) (ppm)	TPH per Method 418.1 (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Chloride (mg/kg)
NMOCD Action Levels*					**100**	**1,000**	**10**	**--**	**--**	**--**	**50**	**1,000**		**--**
SC-1	4/4/16	12:25	Composite	1.5 to 2	**150**	400	<0.020	0.053	<0.040	0.65	0.70	12	120	<30
SC-2	4/4/16	13:56	Composite	1 to 1.5	5.6	<20.0	<0.019	<0.038	<0.038	<0.077	<0.172	<3.8	<9.6	31

Notes:
VOCs - volatile organic compounds
PID - photoionization detector
TPH - total petroleum hydrocarbons
BTEX - benzene, toluene, ethylbenzene, and total xylenes
*NMOCD Guidelines for Remediation of Leaks, Spills, and Releases (1993)
GRO - gasoline range organics
DRO - diesel range organics
ppm - parts per million
mg/kg - milligrams/kilograms

Figures



Document Path: U:\ConocoPhillips\ConocoPhillips\Quinn #6\Quinn #6 Topo Map A.mxd

Rule Engineering, LLC
Solutions to Regulations for Industry

0 1,050 2,100 4,200 Feet

Anastacio Spring Quadrangle
1:24,000

ConocoPhillips

A-S20-T31N-R8W
N36.88750, W107.69344
San Juan County, NM
API: 30-045-10600

Figure 1
Topographic Map
Quinn #6

Document Path: U:\ConocoPhillips\ConocoPhillips\Quinn #6\Quinn #6 Aerial Map.mxd

Sample ID	Date	Sample Type	Sample Depth (ft)	Laboratory Analytical Results							
				Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	Chloride (mg/kg)
NMOCD Action Levels*				10	--	--	--	50	1,000		--
SC-1	4/4/16	Composite	1.5 to 2	<0.020	0.053	<0.040	0.65	0.70	12	120	<30
SC-2	4/4/16	Composite	1 to 1.5	<0.019	<0.038	<0.038	<0.077	<0.172	<3.8	<9.6	31

Rule Engineering, LLC
Solutions to Regulations for Industry

0 10 20 40 Feet

1:200

N

ConocoPhillips

A-S20-T31N-R8W
N36.88750, W107.69344
San Juan County, NM
API: 30-045-10600

Figure 2
Aerial Site Map
Quinn #6

Appendix A

Executed C-138 Solid Waste Acceptance Form

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-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. **Generator Name and Address:**
ConocoPhillips
3401 E 30th. St.
Farmington, New Mexico 87402

2. **Originating Site:**
QUINN 6 (Burlington) API# 3004510600

Billing Information: 20531315 / T110 / 702015 / HZF3 / BRADLRY - Roberts, Danny Keith

3. **Location of Material (Street Address, City, State or ULSTR):**
Unit A, Section 20, T031N, R008W
SAN JUAN, NM

4/6/16 - 10 cy
4/5/16 - 20 cy

4. **Source and Description of Waste:**
Tank Bottoms Tank wash from cleaning out condensate production tank
Estimated Volume 40 US bbl Known Volume (to be entered by the operator at the end of the haul) 10 yd3 (bbls)

5. **GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS**

I, [signature] , representative or authorized agent for **ConocoPhillips Company** do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

Generator Signature

[X] RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not h non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** [X] ***Monthly*** [ ] ***Weekly*** [ ] ad

[ ] RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for w dous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CF 1, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-ha Check the appropriate items)

[ ] MSDS Information [ ] RCRA Hazardous Waste Analysis [ ] Process Knowledge [ ] Other (Provide descri ox 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, [signature] , representative for ConocoPhillips Company authorize JFJ/IEI to complete the required n the Generator Waste Testing Certification.

Generator Signature

I, [signature] , representative for Industrial Ecosystems, Inc. do hereby certify that representative s he oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been foun rm to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the represen ples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NM

Representative / Agent Signature

6. **Transporter:** Kelley Oilfield Services

OCD Permitted Surface Waste Management Facility

pH 8
Cl 174

Name and Facility Permit #: **JFJ Landfarm / Industrial Ecosystems, Inc. * Permit #: NM 01-0010B**

Address of Facility: **# 49 CR 3150 Aztec, NM 87410**

Method of Treatment and/or Disposal:

[ ] Evaporation [ ] Injection [ ] Treating Plant [X] Landfarm [ ] Landfill [ ] Other

Waste Acceptance Status: [X] **APPROVED** [ ] DENIED (Must Be Maintained As Permanent Record)

PRINT NAME: Krystle Selph TITLE: Clerk DATE: 4/4/16

SIGNATURE: Krystle Selph TELEPHONE NO.: 505-632-1782

Surface Waste Management Facility Authorized Agent

3/29/1

Appendix B

Analytical Laboratory Report

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 06, 2016

Heather Woods
Rule Engineering LLC
501 Airport Dr., Ste 205
Farmington, NM 87401
TEL: (505) 325-1055
FAX

RE: CoP Quinn #6 OrderNo.: 1604105

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/5/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1604105**
Date Reported: **4/6/2016**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Client Sample ID: SC-1
Project: CoP Quinn #6
Collection Date: 4/4/2016 12:25:00 PM
Lab ID: 1604105-001
Matrix: MEOH (SOIL)
Received Date: 4/5/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	ND	30		mg/Kg	20	4/5/2016 10:38:41 AM	24624
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	120	9.6		mg/Kg	1	4/6/2016 6:13:47 AM	24618
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/6/2016 6:13:47 AM	24618
Surr: DNOP	97.4	70-130		%Rec	1	4/6/2016 6:13:47 AM	24618
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	12	4.0		mg/Kg	1	4/5/2016 1:23:00 PM	24607
Surr: BFB	166	66.2-112	S	%Rec	1	4/5/2016 1:23:00 PM	24607
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Methyl tert-butyl ether (MTBE)	ND	0.079		mg/Kg	1	4/5/2016 1:23:00 PM	24607
Benzene	ND	0.020		mg/Kg	1	4/5/2016 1:23:00 PM	24607
Toluene	0.053	0.040		mg/Kg	1	4/5/2016 1:23:00 PM	24607
Ethylbenzene	ND	0.040		mg/Kg	1	4/5/2016 1:23:00 PM	24607
Xylenes, Total	0.65	0.079		mg/Kg	1	4/5/2016 1:23:00 PM	24607
Surr: 4-Bromofluorobenzene	112	80-120		%Rec	1	4/5/2016 1:23:00 PM	24607

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Rule Engineering LLC
Project: CoP Quinn #6
Lab ID: 1604105-002

Client Sample ID: SC-2
Collection Date: 4/4/2016 1:56:00 PM
Matrix: MEOH (SOIL) **Received Date:** 4/5/2016 7:20:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LGT**	
Chloride	31	30		mg/Kg	20	4/5/2016 10:51:06 AM	24624
EPA METHOD 8015M/D: DIESEL RANGE ORGANICS						Analyst: **KJH**	
Diesel Range Organics (DRO)	ND	9.6		mg/Kg	1	4/5/2016 10:50:00 AM	24618
Motor Oil Range Organics (MRO)	ND	48		mg/Kg	1	4/5/2016 10:50:00 AM	24618
Surr: DNOP	91.5	70-130		%Rec	1	4/5/2016 10:50:00 AM	24618
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **RAA**	
Gasoline Range Organics (GRO)	ND	3.8		mg/Kg	1	4/5/2016 11:48:52 AM	24607
Surr: BFB	99.1	66.2-112		%Rec	1	4/5/2016 11:48:52 AM	24607
EPA METHOD 8021B: VOLATILES						Analyst: **RAA**	
Methyl tert-butyl ether (MTBE)	ND	0.077		mg/Kg	1	4/5/2016 11:48:52 AM	24607
Benzene	ND	0.019		mg/Kg	1	4/5/2016 11:48:52 AM	24607
Toluene	ND	0.038		mg/Kg	1	4/5/2016 11:48:52 AM	24607
Ethylbenzene	ND	0.038		mg/Kg	1	4/5/2016 11:48:52 AM	24607
Xylenes, Total	ND	0.077		mg/Kg	1	4/5/2016 11:48:52 AM	24607
Surr: 4-Bromofluorobenzene	102	80-120		%Rec	1	4/5/2016 11:48:52 AM	24607

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604105**

06-Apr-16

Client: Rule Engineering LLC

Project: CoP Quinn #6

Sample ID	**MB-24624**	SampType:	**MBLK**	TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**PBS**	Batch ID:	**24624**	RunNo:	**33339**				
Prep Date:	**4/5/2016**	Analysis Date:	**4/5/2016**	SeqNo:	**1024485**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	1.5								

Sample ID	**LCS-24624**	SampType:	**LCS**	TestCode:	**EPA Method 300.0: Anions**				
Client ID:	**LCSS**	Batch ID:	**24624**	RunNo:	**33339**				
Prep Date:	**4/5/2016**	Analysis Date:	**4/5/2016**	SeqNo:	**1024486**	Units:	**mg/Kg**		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	14	1.5	15.00	0	93.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604105**

06-Apr-16

Client: Rule Engineering LLC
Project: CoP Quinn #6

Sample ID **MB-24618**	SampType: **MBLK**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **24618**	RunNo: **33293**
Prep Date: **4/5/2016**	Analysis Date: **4/5/2016**	SeqNo: **1022945** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.4		10.00		94.0	70	130			

Sample ID **1604105-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SC-1**	Batch ID: **24618**	RunNo: **33293**
Prep Date: **4/5/2016**	Analysis Date: **4/6/2016**	SeqNo: **1024358** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	180	10	50.25	123.1	107	31.2	162			
Surr: DNOP	5.1		5.025		102	70	130			

Sample ID **1604105-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **SC-1**	Batch ID: **24618**	RunNo: **33293**
Prep Date: **4/5/2016**	Analysis Date: **4/6/2016**	SeqNo: **1024359** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	170	9.9	49.70	123.1	85.9	31.2	162	6.34	31.7	
Surr: DNOP	5.3		4.970		106	70	130	0	0	

Sample ID **LCS-24618**	SampType: **LCS**	TestCode: **EPA Method 8015M/D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **24618**	RunNo: **33293**
Prep Date: **4/5/2016**	Analysis Date: **4/6/2016**	SeqNo: **1024364** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	47	10	50.00	0	93.2	65.8	136			
Surr: DNOP	4.7		5.000		93.8	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

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WO#: **1604105**

06-Apr-16

Client: Rule Engineering LLC
Project: CoP Quinn #6

Sample ID **LCS-24607**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **24607**	RunNo: **33301**
Prep Date: **4/4/2016**	Analysis Date: **4/5/2016**	SeqNo: **1024387** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.7	80	120			
Surr: BFB	1100		1000		107	66.2	112			

Sample ID **MB-24607**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **24607**	RunNo: **33301**
Prep Date: **4/4/2016**	Analysis Date: **4/5/2016**	SeqNo: **1024388** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	1000		1000		99.6	66.2	112			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1604105**

06-Apr-16

Client: Rule Engineering LLC
Project: CoP Quinn #6

Sample ID **LCS-24607** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **LCSS** Batch ID: **24607** RunNo: **33301**
Prep Date: **4/4/2016** Analysis Date: **4/5/2016** SeqNo: **1024408** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.96	0.10	1.000	0	95.9	61	143			
Benzene	0.96	0.025	1.000	0	96.3	75.3	123			
Toluene	0.91	0.050	1.000	0	91.1	80	124			
Ethylbenzene	0.88	0.050	1.000	0	88.1	82.8	121			
Xylenes, Total	2.6	0.10	3.000	0	87.5	83.9	122			
Surr: 4-Bromofluorobenzene	1.1		1.000		109	80	120			

Sample ID **MB-24607** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**
Client ID: **PBS** Batch ID: **24607** RunNo: **33301**
Prep Date: **4/4/2016** Analysis Date: **4/5/2016** SeqNo: **1024409** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	0.10								
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: 4-Bromofluorobenzene	1.0		1.000		103	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **RULE ENGINEERING LL** Work Order Number: **1604105** RcptNo: **1**

Received by/date: 04/05/16

Logged By: **Lindsay Mangin** 4/5/2016 7:20:00 AM

Completed By: **Lindsay Mangin** 4/5/2016 7:31:02 AM

Reviewed By: AT 04/05/16

Chain of Custody

1. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
2. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
3. How was the sample delivered?	Courier		

Log In

4. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
5. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
6. Sample(s) in proper container(s)?	Yes ☑	No ☐	
7. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
8. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
9. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
10. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
11. Were any sample containers received broken?	Yes ☐	No ☑	
12. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
13. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
14. Is it clear what analyses were requested?	Yes ☑	No ☐	
15. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by:

Special Handling (if applicable)

16. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

17. Additional remarks:

18. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Yes			

Chain-of-Custody Record

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: Rule Engineering, LLC

501 Airport Drive, Suite 205

Mailing Address: Farmington, NM 87401

Phone #: (505) 716-2787

email or Fax#: hwoods@ruleengineering.com

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation

☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:

☐ Standard ☒ Rush Same Day

Project Name: COP Quinn #6

Project #:

Project Manager: Heather Woods

Sampler: Justin Valdez / Heather Woods

On Ice: ☒ Yes ☐ No

Sample Temperature: 3.0

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1604105
4/4/16	1225	Soil	SC-1	(1) 4oz Glass	Cold	-001
4/4/16	1350	Soil	SC-2	(1) 4oz Glass	Cold	-002

Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$) 300.0 CL	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)					Air Bubbles (Y or N)
X		X					X								
X		X					X								

YES Hw?

Date:	Time:	Relinquished by:	Received by:	Date	Time
4/4/16	1727	Heather M. Woods	Christin Walls	4/4/16	1727
4/4/16	1820	Christin Walls		04/05/16	0720

Remarks: Direct Bill to ConocoPhillips

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.