State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised August 8, 2011

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

API No. 30-039-07154

Release Notification and Corrective Action

	OPERATOR	\boxtimes	Initial Repette The Final Report
Name of Company Burlington Resources, a Wholly Owned	Contact Lisa Hunter		916 0010. 010 0101. 0
Subsidiary of ConocoPhillips Company			050 0 0010
Address 3401 East 30th St, Farmington, NM	Telephone No. (505) 258-1607		SEP 06 ZUID
Facility Name San Juan 27-5 Unit 1	Facility Type Gas		

Surface Owner Federal

LOCATION OF DELEASE

Mineral Owner SF-079393

	LOCATION OF RELEASE										
Unit Letter P	Section 4	Township 27N	Range 5W	Feet from the 660	North/South Line South	Feet from the 660	East/West Line East	County Rio Arriba			

Latitude 36.59725 Longitude 107.35659

NATURE OF RELEASE

Type of Release Hydrocarbon	Volume of Release Unknown	Volume Recovered None
Source of Release Unknown	Date and Hour of Occurrence	Date and Hour of Discovery
	Unknown	November 30, 2015
Was Immediate Notice Given?	If YES, To Whom?	16
By Whom?	Date and Hour	
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	atercourse.
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Historic conta of problem/release unknown. No remedial action taken to date.	mination discovered while trenching	for plunger lift automation upgrade. Cause
Describe Area Affected and Cleanup Action Taken.* A site assessment was conducted in April 2016 to characterize the horizon of 22 meeting refusal in shale. Preliminary site assessment data suggests existing site grade (see attached data). Collection of supplemental soils da remedial action plan.	ntal and vertical extent of impacts. N an impacted area of approximately 60 ata is proposed for September 2016 in	ine geoprobe borings were drilled to depths 000 sq feet to a depth of 24 feet below n order to derive the most cost effective
I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release me public health or the environment. The acceptance of a C-141 report by the should their operations have failed to adequately investigate and remediate or the environment. In addition, NMOCD acceptance of a C-141 report do federal, state, or local laws and/or regulations.	he best of my knowledge and underst otifications and perform corrective as e NMOCD marked as "Final Report" e contamination that pose a threat to oes not relieve the operator of respon	and that pursuant to NMOCD rules and ctions for releases which may endanger does not relieve the operator of liability ground water, surface water, human health isibility for compliance with any other
Signature: John HA	OIL CONSER	ist: Ame A
Printed Name: Lisa Hunter		Sec
Title: Field Environmental Specialist	Approval Date: 9/9/16	Expiration Date:
E-mail Address: Lisa.Hunter@cop.com	Conditions of Approval:	Attached D
Date: August 26, 2016 Phone: 505-258-1607	see princed.	
Attach Additional Sheets IT Necessary #WCS 16 243	37437	B

Smith, Cory, EMNRD

From:	Smith, Cory, EMNRD
Sent:	Friday, September 09, 2016 11:09 AM
To:	Coffman, Keith
Cc:	Hunter, Lisa (Lisa.Hunter@conocophillips.com); Powell, Brandon, EMNRD; 'Walker, Jeffrey'; Fields, Vanessa, EMNRD; Diemer, Katherina
Subject:	RE: Site Assessment Workplan for COP San Juan 27-5 No. 1
Categories:	Review Needed

Keith,

The OCD approves the submitted delineation plan with the following conditions of approval;

- COPC will fully delineate the release both horizontally and vertically
- Based upon the provided initial delineation details additional delineation will be required in the vicinity of SB-4.
- All laboratory samples will be sampled for TPH to include DRO-GRO-MRO/ORO and BTEX.
- Additional boreholes and proposed depths may be required based upon field conditions identified during the investigation.
- COPC will provide the OCD no less than 48 hours' notice prior to the start of delineation.
- Within 45 days of completion of delineation, COPC will submit to the OCD the results of the investigation and include COPC remediation plan.

OCD approval of the delineation plan does not relive COPC of any requirements imposed by other regulatory agencies.

If you have any questions please give me a call.

Cory Smith Environmental Specialist Oil Conservation Division Energy, Minerals, & Natural Resources 1000 Rio Brazos, Aztec, NM 87410 (505)334-6178 ext 115 cory.smith@state.nm.us From: Walker, Jeffrey [mailto:Jeff.Walker@ghd.com]
Sent: Friday, September 02, 2016 8:29 AM
To: Smith, Cory, EMNRD
Cc: Coffman, Keith; Hunter, Lisa (Lisa.Hunter@conocophillips.com); Powell, Brandon, EMNRD
Subject: RE: Site Assessment Workplan for COP San Juan 27-5 No. 1

Cory,

I do not have any information on any prior notification to NMOCD regarding the discovery of historic contamination at the subject site. To my knowledge, this is the first notification. Hard copies of the Initial C-141 and site assessment work plan are being sent for your review via overnight delivery.

Your prompt review and approval of the work plan would be greatly appreciated as I am trying to take advantage of a window of drill rig availability the week of Sept. 12.

Thank you and please do not hesitate to contact me with any questions.

Jeff 505-884-0672

From: Smith, Cory, EMNRD [mailto:Cory.Smith@state.nm.us]
Sent: Tuesday, August 30, 2016 10:24 AM
To: Walker, Jeffrey
Cc: Coffman, Keith; Hunter, Lisa (Lisa.Hunter@conocophillips.com); Powell, Brandon, EMNRD
Subject: RE: Site Assessment Workplan for COP San Juan 27-5 No. 1

Jeff,

This appears to be the first form of contact I have had about this particular site. Was anyone notified when historic contamination was found in November? In the meantime, please submit the Initial C-141 hard copy and I will review the plan.

Cory Smith Environmental Specialist Oil Conservation Division Energy, Minerals, & Natural Resources 1000 Rio Brazos, Aztec, NM 87410 (505)334-6178 ext 115 cory.smith@state.nm.us From: Walker, Jeffrey [mailto:Jeff.Walker@ghd.com] Sent: Friday, August 26, 2016 8:45 AM To: Smith, Cory, EMNRD Cc: Coffman, Keith Subject: Site Assessment Workplan for COP San Juan 27-5 No. 1

Cory,

Please find attached for your review and comment/approval a work plan to conduct site assessment activities at the San Juan 27-5 No. 1 (API 30-039-07154). Also attached is the Initial Form C-141. A copy of the workplan is also being submitted to Katherina Diemer at BLM.

Please let me know if you have any questions.

Jeff Walker GHD

T: 505 884 0672 | M: 505 377 3920 | | F: 505 884 4932 | E: jeff.walker@ghd.com 6121 Indian School Rd. NE, Suite 200, Albuquerque, NM 87110 | www.ghd.com WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

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August 24, 2016

Reference No.11124687

Mr. B. Keith Coffman, Program Manager ConocoPhillips RM&R 600 North Dairy Ashford, 2WL 11050 Houston, TX 77079

Dear Mr. Coffman:

Re: Soils Assessment Work Plan San Juan 27-5 #1 (API # 30-039-07154) S4, T27N, R5W Rio Arriba County, New Mexico

GHD Services, Inc. (GHD) is pleased to present this work plan to further assess the hydrocarbon impacts to soils at the above referenced site (the Site). This work plan is submitted in response your request to provide further assessment of hydrocarbon impacts at the Site. The Federal Bureau of Land Management (BLM) is the surface owner at the Site and regulatory oversight is provided by the New Mexico Oil Conservation Division (NMOCD). A Site Location Map is included as Figure 1, attached to this Work Plan.

Project Information

Hydrocarbon impacted soil was discovered while trenching for a plunger lift automation upgrade on November 30, 2015. A sample of the impacted soil was collected by a ConocoPhillips environmental specialist and submitted for laboratory analyses. The sample was submitted for confirmation laboratory analyses of volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B and total petroleum hydrocarbons (gasoline, diesel and oil range organics, TPH) by EPA Method 8015D. Results indicated the TPH concentration was 5,820 milligrams per kilogram (mg/kg, parts per million, ppm), above the NMOCD Recommended Remediation Action Level (RRAL) assigned to the Site. The VOC concentrations were below the laboratory reporting limits (non-detect).

The Site RRALs were assigned in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The Site RRALs were established based on the following ranking criteria:

- Depth to Groundwater: The depth to groundwater is estimated at 70 to 80 feet below ground surface (bgs) based on the cathodic protection report for the San Juan 27-5 #1 (10 points);
- Wellhead Protection Area: The release location is within 200 feet of a private domestic water source, water well SJ 00046 (20 points); and

 Distance to Surface Water Body: A stock pond is located within 200 feet of the release location to the north. (20 points).

Based on these criteria, Site-specific RRALs are 10 parts per million (ppm) for benzene, 50 ppm for BTEX, and 100 ppm for TPH.

On April 20, 2016, Rule Engineering, LLC (Rule) advanced nine borings to characterize the extent of soil impacts. Borings were advanced with a direct-push technology (DPT) drill rig to depths ranging from 17.5 to 23.75 feet bgs. The DPT method met refusal at each of the 9 locations in a hard shale layer. Samples of the shale were collected from four of the borings, SB-1, SB-3, SB-4 and SB-7 and were submitted for laboratory analyses. Samples were analyzed for BTEX constituents by EPA Method 8021 and for TPH (gasoline and diesel range organics, GRO/DRO) by EPA Method 8015. The samples were analyzed by Hall Environmental Analyses Laboratory in Albuquerque, NM. Figure 2 includes the location of the initial Site assessment borings performed by Rule and proposed locations as described below.

Benzene concentrations from the April 2016 Site assessment were below the laboratory detection limits on all samples analyzed. Total BTEX results ranged from 0.55 ppm to 3.6 ppm. Total TPH ranged from 210 ppm (SB-3 @ 22 to 23 ft bgs) to 2290 ppm (SB-7 @ 22 to 23 ft bgs). A complete summary of the initial Rule Site assessment soil sampling results is included on Table A, attached to this Work Plan. Lithologic descriptions/boring logs of the subsurface soils encountered were not recorded during the Rule Site assessment.

1. Scope of Work

GHD proposes to use the initial Site assessment as a basis for further characterization of hydrocarbon impacts at the Site. GHD proposes to advance five additional borings at the locations indicated on Figure 2. Borings will be drilled using hollow stem auger and will use a continuous sampling system to log the soil lithology. The continuous sampler will be advanced 5 feet at a time and soils will be field screened using a calibrated photoionization detector (PID) and/or Petroflag test kit. Borings will be advanced to depths at least as deep as the hard shale layer described from the initial Site assessment. To ascertain the full depth of hydrocarbon impacts, however, borings will extend to depths where field screening indicates soils are near or below 100 ppm.

The sample with the highest field screening level (PID) and the bottom sample, from each boring, will be submitted for laboratory analyses of BTEX and TPH/GRO by EPA Method 8260 and for TPH/DRO by EPA Method 8015.

Soil borings will be backfilled with clean cuttings and hydrated bentonite chips.

Task 1 - Project Preparation

This task includes preparing and submitting this Work Plan and other project preparation activities that occur after Work Plan approval, but before fieldwork mobilization. After receiving authorization to proceed, GHD will:

- Submit the Work Plan to affected stakeholders for review and approval. This includes the NMOCD and BLM.
- Prepare a Site Specific Health and Safety Plan (HASP) and job hazard analyses (JHAs) that address the field work specified in the Work Plan.
- Coordinate site access with appropriate ConocoPhillips staff.
- Execute GHD's subsurface clearance protocol.
- Develop work orders and contracts for subcontractors.

All on Site activities will be coordinated through ConocoPhillips. The drilling contractor will notify New Mexico One-Call to facilitate location of underground utilities and pipelines prior to drilling activities. GHD will document subsurface clearance activities in accordance with our protocol.

Task 2 – Soil Borings

ConocoPhillips, GHD and the drilling subcontractor will mobilize to the Site to perform a project kickoff meeting. The project kickoff meeting will include a tailgate safety meeting to discuss the Site-specific HASP, applicable JHA's, and stop work authority. Tailgate safety meetings will be conducted daily at the beginning of the day and as conditions change.

Prior to drilling, the proposed borehole locations will be cleared to a depth of 5 ft bgs using hydro-excavation. The boring will be drilled using a hollow-stem auger drill rig. A GHD environmental scientist/geologist will supervise the advancement of the soil borings at the site. Cuttings and samples will be logged according to the Unified Soil Classification System.

Borings will be advanced to an estimated depth of 25 ft bgs into the previously identified confining shale layer. Samples will be collected using a 5 ft long continuous core sampler and field screened for petroleum hydrocarbons with a calibrated PID) and/or Petroflag kit.

Task 3: Site Assessment Reporting

A summary of the boring program and field and laboratory sampling results will be included in a Site Assessment Report. The report will include:

- An updated site plan showing the location of soil borings and other site features.
- Boring logs.
- Tabulation of field screening and laboratory analytical test results.

The Site Assessment Report will include copies of laboratory chain-of-custody documentation and results, laboratory quality assurance/quality control (QA/QC) documentation, tabulated soils concentration data and a summary of findings and recommendations for future work, if necessary.

Health and Safety Considerations

Personal protective equipment including fire retardant clothing, steel-toed work boots, gloves, safety glasses and hard hats will be required (basic Level D requirements) during field tasks. The project

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HASP will be maintained onsite. It will be reviewed and signed by on-site personnel, subcontractors, and authorized visitors.

Investigation Derived Waste

Soil cuttings in excess of 100 ppm based on field screening results will be placed in DOT approved 55-gallon drums. The drums will be sealed, labeled and staged on Site pending removal to an offsite disposal facility.

Quality Assurance/Quality Control

Hollow stem auger drilling and sampling will be completed in accordance with GHDs standard Quality Assurance/Quality Control procedures designed to minimize cross-contamination between samples and to provide reliable laboratory results.

Schedule

GHD is prepared to initiate the scope of work immediately, subsequent to requisite approvals, the availability of resources and stakeholder concurrence. A start date and schedule of report submittals will be provided following receipt of driller availability.

If you have any questions or comments with regards to this work plan, please do not hesitate to contact GHDs Albuquerque office at (505) 884-0672. Your timely response to this correspondence is appreciated.

Yours truly,

GHD

Anwaller

Jeffrey Walker, CPG, PMP Project Manager

Encl. (3)

Figure 1 – Site Location Map Figure 2 - Proposed I Location and Site Details Map Table A – Soil Sampling Results

Bernard Bockisch Sr. Project Manager



CAD File: I\CAD\Files\Eight Digit Job Numbers\1112---\11124687-CoP-San Juan 27-5 No. 1\11124687-98\11124687-96(000)GN-DL001.dwg

FIGURE 1



CAD File: I:\CAD\Files\Eight Digit Job Numbers\1112---\11124687-CoP-San Juan 27-5 No. 1\11124687-98\11124687-98(000)GN-DL001.dwg

Table A. Soil Sampling Results - VOCs, Benzene, Total BTEX, and TPH ConocoPhillips San Juan 27-5 #1 Rio Arriba County, New Mexico

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben- zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
	NMO	NMOCD Action Level*		10	NE	NE	NE	50	100	
		2 to 3	1336							
		3 to 4	1536							
		5 to 6	1737							
		6 to 7	1879					-		
		7 to 8	1215							
		9 to 10	1628							
		10 to 11	1340							
		11 to 12	1492							
SB-1	4/20/2016	13 to 14	1634							
		14 to 15	1357							
		15 to 16	1509							
		16 to 17	2424							
		17 to 18	1838							
		18 to 19	2038							
		19 to 20	364							
		20 to 21	2050							
		21 to 22	1568	<0.093	<0.19	0.47	3.1	3.6	170	480
		1 to 2	590							
		4 to 5	512							
		5.5 to 6.5	2,009							
		6.5 to 7.5	1,998					-		
		7.5 to 8	702					-		-
		8 to 9	1,593				-			
		9 to 10	1,988							
		10 to 11	1,484					-		
		11 to 12	1,669					-		
SB-2	4/20/2016	12 to 13	664					-	-	
		13 to 14	1,451					-	-	
		14 to 15	1,479							
		15 to 16	2,324					-		
		16 to 17	2,433					-		
		17 to 18	2,750					-		
		18 to 19	2,570					-		
		19 to 20	2,650	-				-	-	
		20 to 21.25	1,900						-	-
		21.25 to 22.5	1,300					-		



Table A. Soil Sampling Results - VOCs, Benzene, Total BTEX, and TPH ConocoPhillips San Juan 27-5 #1 Rio Arriba County, New Mexico

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben- zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
He Pan	NMO	CD Action Level*	100	10	NE	NE	NE	50	100	
		2 to 4	44							
		10 to 11	395							
		11 to 12	525							
		14 to 15	760							
		15 to 16	874						1	
SB-3	4/20/2016	16 to 17	1,106							
		17 to 18.5	1,080							
		18.5 to 20	1,054							
		20 to 21	531			-				
		21 to 22	651							
		22 to 23	517	< 0.094	<0.19	0.55	< 0.37	0.55	110	100
		0 to 2	2.9							
		2 to 4	1.6					-		
		4 to 8	3.5							
		12 to 16	2.9	-						
SB-4	4/20/2016	17.5 to 18	4.6							
004	4/20/2010	18 to 19.5	6.8							
		19.5 to 20	21.2					-		
		20 to 21.5	600					-		
		21.5 to 22.5	1,530	-						
		22.5 to 23	942	<0.093	<0.19	0.37	0.81	1.18	160	340
		0 to 2.5	91							
		2.5 to 4	1,260						-	
		5 to 6	1,867							
		6 to 8	1,202							
		10 to 11	1,450							
		11 to 12	1,932							
		13 to 15	1,143							
SB-5	4/20/2016	15 to 16	1,438					-		
00-0	4/20/2010	16 to 17	1,286							
		17 to 18	970							
		18 to 19	1,826		/				-	
		19 to 20	1,417							
		20 to 21	1,289							
		21 to 22	1,239					-		
		22 to 23.25	1,515					-		
1.1		23.25 to 23.75	975							



Table A. Soil Sampling Results - VOCs, Benzene, Total BTEX, and TPH ConocoPhillips San Juan 27-5 #1 Rio Arriba County, New Mexico

Sample Name	Date	Approximate Sample Depth (ft bgs)	Field VOCs by PID (ppm)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylben- zene (mg/kg)	Total Xylenes (mg/kg)	Total BTEX (mg/kg)	TPH as GRO (mg/kg)	TPH as DRO (mg/kg)
	NMO	CD Action Level*	100	10	NE	NE	NE	50	1	00
		1 to 3	1.4							
		3 to 4	2.3							
		5 to 7	2.2					-		
		7 to 8	4.2					-		
CD 6	4/20/2016	8 to 10	6.6						-	
3B-0	4/20/2010	11 to 12	3.8							
		14 to 15.5	5.0							
		15.5 to 16	5.2							
		16 to 17	2.7							
		17 to 17.5	6.2							
		1 to 3	2.5						144	
		3 to 4	2.6							
	1 1	5 to 8	2.2							
	4/20/2016	9 to 12	0.9							
		13 to 15	2.3							
SB-7		15 to 16	1.3							
		17 to 19	1.0							
		19 to 20	2.4							
	1 1	20 to 21	2.7					-		
		21 to 22	1.6							
		22 to 23	364	< 0.094	<0.19	<0.19	1.6	1.6	190	1,100
		0 to 4	2.5							
		4 to 8	2.2							
00.0	4/00/0040	8 to 12	2.8							
5B-8	4/20/2016	12 to 16	2.6						194	
		20 to 21	2.2	-						
		21 to 22	2.1							
		0 to 4	34							
		4 to 8	2.2							
		8 to 12	3.0							
00.0	4/00/0040	12 to 16	2.5							
SB-9	4/20/2016	18 to 19	1.0					-		
		19 to 20	1.2							
		20 to 21	0.5							
		21 to 22	1.0					-		

Notes:

. . . .

VOCs - volatile organic compounds

All borings were terminated at auger refusal on shale.

PID - photoionization detector

ft bgs - feet below grade surface

ppm - parts per million

mg/kg - milligrams per kilogram

NE - not-established

*Based on the NMOCD Guidelines for Remediation of Leaks, Spills and Releases (August 1993)

**Based on a site ranking of 20.

