

Jason Michelson Project Manager Chevron Environmental Management Company 1500 Louisiana Street, #38116 Houston, Texas 77002 Work: 832-854-5601 Cell: 281-660-8564 jmichelson@chevron.com

May 30, 2019

New Mexico Oil Conservation Division, District II 811 S. First St Artesia, NM 88210

Re: South Culebra Bluff 5B to Candelario 4" Polyline Release Site Status Letter NMOCD Case No. 2RP-4737 Eddy County, New Mexico

Dear whom it concerns,

Please find enclosed for your files, copies of the following report:

• South Culebra Bluff 5B to Candelario 4' Polyline Release - May 30, 2019 Site Status Letter

The Site Status Letter was prepared by Arcadis U.S., Inc. (Arcadis) on behalf of Chevron Environmental Management Company (CEMC). CEMC has prepared a Report to summarize the initial cleanup activities and follow up activities from the South Culebra Bluff 5B to Candelario 4' Polyline Release. CEMC is respectfully requesting NMOCD review and comments on the previously submitted documents.

Please do not hesitate to call Rebecca Andresen with Arcadis at 206-726-4717 or myself at 832-854-5601, should you have any questions.

Sincerely,

ason Michelson

Yason Michelson

Encl. South Culebra Bluff 5B to Candelario 4' Polyline Release - Site Status Letter South Culebra Bluff 5B to Candelario 4' Polyline Release Form C-141

C.C. Brett Krehbiel, Arcadis



Mr. Rob Hamlet New Mexico Oil Conservation Division - District II Environmental Specialist 811 S. First St. Artesia, NM 88210

Subject:

Site Status Report South Culebra Bluff 5B to Candelario 4" Polyline Release NMOCD Case No. 2RP-4737 Eddy County, New Mexico

Dear Mr. Hamlet:

On behalf of Chevron Environmental Management Company (CEMC), Arcadis U.S., Inc. (Arcadis) prepared this Site Status Report (Report) for the South Culebra Bluff 5B (SCB 5B) to Candelario 4" Polyline Release (Site), located in Eddy County, New Mexico. The release was from a polyline running between these two wells. Rockcliff Operating New Mexico LLC (Rockcliff), the previous owner of these wells, notified New Mexico Oil Conservation District (NMOCD), National Response Center, and the New Mexico Environmental Department of the release on April 30, 2018.

The purpose of the Report is to summarize initial cleanup activities and follow up actions from the release on April 26, 2018, and to request NMOCD review and comment on previously submitted documents.

SITE DESCRIPTION AND BACKGROUND

The Site is located approximately 1.5 miles from Loving in Unit C, Section 24, Township 23S, Range 28E, Eddy County, New Mexico. The spill area is associated with the SCB 5B to Candelario 4" Polyline 2. The release site is located approximately 0.2 miles from the Pecos River, with an elevation of approximately 2951 feet above sea level. Depth to groundwater is approximately 31 feet at the Site.

File information indicates that on April 26, 2018, a third party ran over the 4" polyline that transfers produced water from SCB #5B to the Candelario SWD #1

Arcadis U.S., Inc. 630 Plaza Drive Suite 100 Highlands Ranch Colorado 80129 Tel 720 344 3500 Fax 720 344 3535 www.arcadis.com

ENVIRONMENTAL

Date: May 30, 2019

Contact: Rebecca Andresen

Phone: 206-726-4717

Email: Rebecca.Andresen@arcadis .com

Our ref: B0049810.0000 disposal well, which caused a failure in the line. The landowner, Mosaic Company (Mosaic), used clamps to pinch the polyline on both sides of the damaged area, but the clamps became disengaged over the weekend, causing a further release. Upon determining the ownership of the line, Mosaic notified Rockcliff on April 30, 2018.

The release ran from the polyline across Fisherman's Lane and split into two individual paths. One path flowed over the edge of the ravine to the northeast, briefly diverging and then merging before entering the river. The other path flowed down the south side of the road, downhill towards the low water crossing, eventually pooling between the forms of a currently active county roadworks project and spreading to the north where the majority of the release pooled.

According to the initial C-141 Form dated April 26, 2018, the release was approximately 720 bbls of produced water and approximately 7.2 bbls of crude oil (Attachment 1).

INITIAL RELEASE RESPONSE ACTIVITIES

According to the available file information, Sounder Miller and Associates (SMA), on behalf of Rockcliff, mobilized to the emergency response location to perform initial action. Talon LPE was contacted to place booms in the river to provide containment around the two points of entry as well as downstream (three total).

SMA worked with onsite teams to remove impacted material near the northern bank of the river and collected soil confirmation samples for laboratory analysis. Surface water samples were also collected for laboratory analysis (SMA, July 2018).

The Bureau of Land Management (BLM), the Army Corps of Engineers, the Interstate Stream Commission, and the New Mexico Department of Fish and Game visited the site to monitor first response efforts during April 30, 2018.

Between May 1 through 7, 2018, SMA monitored the removal of free-standing fluid and delineation of the release. Additional surface water samples were collected and SMA completed boom and berm inspections and a biological survey. No evidence of impacted wildlife was observed (SMA, July 2018). Additional soil samples were also collected for laboratory analysis.

Road improvements along Fisherman's Lane were ongoing at the time of the release. According to file information (SMA, July 2018), the area surrounding the road was excavated and backfilled with clean material for the safety of the public and the construction company onsite. On May 15, 2018 SMA met with Rockcliff, BLM, and Sedona for a status update. While on site, BLM gave verbal approval to pour concrete within the forms and continue road construction. Rockcliff obtained written correspondence from both the BLM and NMOCD stating they were in agreement with the county road construction project to continue work and concrete pouring activities.

Due to the varying geology of the area, a background sample was taken for each NRCS soil type represented in the release area in addition to the background samples collected relative to each group of samples.

These release response activities were described in the SMA Remediation Report dated July 4, 2018. This report included a proposed remediation plan involving hydro excavation and/or excavation of

remaining impacts. The work plan was conditionally approved by the BLM in email correspondence dated July 11, 2018.

JULY - AUGUST INVESTIGATIONS

In July 2018, SMA oversaw delineation and excavation efforts of the area surrounding the source. Soil samples were collected, and, after verbal approval from the BLM, the excavation was backfilled with clean material to restore the road and surrounding area to its previous contours (SMA, September 2018).

According to file information, SMA completed the hydro excavation as per the approved work plan in August 2018. SMA personnel and their contractors placed 50 feet of absorbent booms and re-established berms with clean soil around each work area ("cell") to prevent runoff into the river. A vacuum truck was placed at the lowest lying area of each boomed cell collecting fluid during hydro-excavating activities.

SMA treated a total of five cells with the hydro excavation and collected composite bedrock samples from each cell after hydro-excavation activities were complete. Due to the varying geology in the area, SMA compared each sample result to its associated background sample (SMA, September 2018). Most of the field samples collected on August 23 and 24, 2018 after hydro excavation showed a decrease in chloride concentration since the initial action.

Chloride concentrations in three of the cells showed concentrations that are only slightly elevated from background in the area and the natural chloride concentration of the Pecos River. Chloride concentrations in one of the cells were above background but were 42% to 62% lower than the refusal samples collected prior to the hydro excavation. The chloride concentration for the fifth cell was elevated but was within the range of background for that soil type (SMA, September 2018).

New Mexico Oil Conservation Division II May 30, 2019

CLOSING

SMA submitted two documents to document the release response and remediation efforts for this site in July 2018 and September 2018 (Attachments 2 and 3, respectively). A review of file information has not indicated a response from the BLM or NMOCD for the final report (SMA, September 2018). Chevron acquired the lease for these wells in October 2018 and is currently evaluating maintenance and remediation needs for these and other wells in the field. Accordingly, we are respectfully requesting a review and determination of the attached SMA reports.

Sincerely,

Arcadis U.S., Inc.

ndulu

Rebecca Andresen Vice President

Copies: Jason Michelson, Chevron/CEMC

Enclosures:

Attachments

1 South Culebra Bluff 5B to Candelario 4' Polyline Release Form C-141

	RECEIVED						
District I 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210	New Mexi and Natural	co ResourcesMAY	0 8 2018	Revise	Form C-141 ed April 3, 2017		
District III 1000 Rio Brazos Road, Aztec. NM 87410	Oil Conserv	vation Div	ision	Submit 1 Co	opy to appropriate Dis	strict Office in	
District IV 1220 S St Francis Dr. Santa Fe, NM 87505	St. Franci	s Dr.		ruccorumice with 17.	10.20 Montes		
	Santa Fe	, NM 8750)5				
t'AB1813055699	Release Notification	and Co	rrective Act	ion			
NAB1813056113	#371115	OPERAT	OR	🛛 In	itial Report	Final Report	
Address: 1301 McKinney St. Suite 13	ng New Mexico LLC 0 00 Houston TX 77010	Contact: Joh	n Turner				
Facility Name : SCB 5B to Candelario	24-1 SWD 4" Polyline 1	Facility Type	e: Produced Water	Transfer L	ine		
Surface Owner: The Mosaic Company Mineral Owner: B			API No NA				
Unit Letter Section Township Ra	ange Feet from the North/	South Line	Feet from the E	ast/West Lin	e County	80.019	
C 24 235	28e				Eddy		
	Latitude 32.294911 Loi	ngitudel	04.043545 NAI	0.83			
	NATURE	OF RELE	EASE				
Type of Release: Produced Saltwater/Oil		Volume of bbls. Oil ~7	Release: PW ~720 2 bbls	Volun	ne Recovered: ~ 385 b	obls	
Source of Release: 4" Polyline – Produced Water Transfer Line			our of Occurrence:	Date a 4/30/1	Date and Hour of Discovery 4/30/18, 0823hrs		
Was Immediate Notice Given?			If YES, To Whom? Mike Bratcher NMOCD & National Response Center				
By Whom? John Turner			Date and Hour: 4/30/18 0853 hrs				
Was a Watercourse Reached?			If YES, Volume Impacting the Watercourse. Unknown – but appears to be minimal				
If a Watercourse was Impacted, Describe Yes – Pecos River. Point of Release was	Fully.* approximately 150 feet from the	river, on the	west side of the blut	ff. Release f	luids first pooled at th	e bottom of	
Describe Cause of Problem and Remedial from the SCB #5B CTB to the Candelaric landowner. The landowner responded to of the damaged area to stop the release. C according to 3 rd Party. 3 rd Party returned to the ground. 3 rd Party notified the lando emergency number of a polyline leaking p Rockcliff called Souder Miller & Associa	Action Taken.* On 4-26-18, it a 24-1 SWD disposal well and c the notification believing it was Once the release was secured the to the job site on the morning of owner again and landowner responduced water between the SCH tes to respond to the spill for ass	appears that a aused a failur one of their fi y left the jobs 4-30-18 and onded. The la 3 #5B CTB ar essment, clea	^{3rd} party ran over the e in the line. The 3 rd reshwater lines and u ite for the weekend, noticed the upstream indowner determined ad Candelario SWD nup, and remediatio	te 4" polylind rd party notif ised clamps Very little 1 n clamp was d this was no and that the n.	e that transfers product ied The Mosaic Comp to pinch the polyline of liquid was released at gone and fluid was be of their line and notifie water was going in th	ed water bany, the on both sides this time eing released ed Rockcliff's the Pecos River.	
Describe Area Affected and Cleanup Acti Initial emergency actions began with the crews immediately began excavation of in excavator was called to remove impacted the point of entry.	ion Taken.* construction of a large earthen b npacted material nearest to the r caliche in the road construction	erm to hinder iver and a vac area. Absorbe	fluid movement. A truck was called to ent boom was deploy	fter an emer remove all s yed across th	gency one call cleared standing fluid. In add te pooled area and do	I, dirt work lition, a hydro- wnstream of	
I hereby certify that the information giver regulations all operators are required to re public health or the environment. The ac should their operations have failed to ade or the environment. In addition, NMOCI federal, state, or local laws and/or regulat	above is true and complete to t eport and/or file certain release n ceptance of a C-141 report by th quately investigate and remediat D acceptance of a C-141 report d ions.	he best of my otifications and e NMOCD me e contaminations not reliev	knowledge and und nd perform correctiv arked as "Final Rep on that pose a threat e the operator of res	erstand that re actions for ort" does not to ground v ponsibility f	pursuant to NMOCD r releases which may of t relieve the operator of vater, surface water, h or compliance with an	rules and endanger of liability uman health ny other	
211)		OIL CONSI	ERVATIO	ON DIVISION		
Signature: An humin			Approved by Environment Bester Brance				
Printed Name: John Turner			chi a l	Ciuitotaan			
Title: Field Sr. Environmental Specialist		Approval Da	te: 5/9/18	Expirat	tion Date: N/H		
E-mail Address: jturner@rockcliffenergy	.com	Conditions o	f Approval:	tanho	Attached	7,1727	
Date: 5-8-18 P * Attach Additional Sheets If Necessary	hone: 903-475-1865		Sto M	INCIEC		-7121	

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 5/8/2018 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 28/213 has been assigned. Please refer to this case number in all future correspondence.

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete <u>division-approved corrective action</u> for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District <u>2</u> office in <u>ARTESIA</u> on or before <u>6/8/2018</u>. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

• Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

• Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

• Nominal detection limits for field and laboratory analyses must be provided.

• Composite sampling is not generally allowed.

• Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold OCD Environmental Bureau Chief 1220 South St. Francis Drive Santa Fe, New Mexico 87505 505-476-3465 jim.griswold@state.nm.us

Bratcher, Mike, EMNRD

From:	John Turner <john.turner@rockcliffenergy.com></john.turner@rockcliffenergy.com>	ç
Sent:	Tuesday, May 8, 2018 4:25 PM	
То:	Bratcher, Mike, EMNRD; Tucker, Shelly; Weaver, Crystal, EMNRD; Gregston, Terry;	
	Holcomb, Sarah, NMENV; Ellington, Brent, OSE	
Cc:	Nick Koch; Mike Martin; Darrell Taylor; Brian Borque; Jamie Robinson; Greg McCain	
Subject:	SCB 5B to Candelario 24-1 SWD 4" Polyline C-141 Release Notification - Rockcliff	
	Energy Operating New Mexico LLC	
Attachments:	SCB_5B_to_Candelarie_Polyline_Release_NMOCD_C-141_5-8-18.pdf	

Please find attached the initial Form C-141, Release Notification and Corrective Action, for the release that occurred on Rockcliff Operating New Mexico LLC's 4" produced water transfer polyline near Fishermans Lane discovered on April 30, 2018.

1

If you have any questions or concerns please do not hesitate to contact me.

Thank you,

John Turner Rockcliff Energy, LLC Sr. Environmental Specialist 342 Johnny Clark Rd Longview, TX 75603 O: (903) 475-1865 C: (903) 261-4673 jturner@rockcliffenergy.com