MAY 1 1 2018

District I 1625 N. French Dr., Hobbs, NM 88240 District II
811 S. First St., Artesia, NM 88210
District III District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural ROSSITATE II-ARTESIA O.C.D.

Form C-141 Revised April 3, 2017

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.

- 10	,		Rele	ase Notific	ation	and Co	rrective A	ction				
NABI	8134	5 123		1100		OPERA				l Report	Final Report	
Name of Co	ompany Ma	tador Resou	rces Com	pany 2289	37 C	ontact Case		20				
Address 5400 LBJ Freeway, Suite 1500 Dallas, TX 75240 Telephone No. (972) 371-5439 Facility Name ZACH MCCORMICK FEDERAL COM Facility Type Gas Well												
#201H	me ZACH	MCCORMI	CK FEDE	ERAL COM	172	cinty Type	Gas Well					
Surface Owner Private Mineral Owner Fe								API No. 30-015-44247				
				LOCA	ATION	OF RE	LEASE					
Unit Letter					South Line	Feet from the	East/W	est Line	County			
D	18	24S	34E 29€	742	North		351	West		Eddy		
			Latitud	e 32.223435	o Longi	itude10	4.032545°	NAD	83			
						OF REL						
Type of Rele	ease Recycle	UILL	Volume of Release 239 bbls			Volume Recovered 120 bbls						
Type of Release Recycled Water Source of Release Equipment Failure							d Hour of Occurrence Date and			Hour of Discovery 6:00 am 4-		
							5:00 am 4-17-18 17-18					
Was Immediate Notice Given? ☐ Yes ☐ No ☐ Not Required							If YES, To Whom? Crystal Weaver (NMOCD)					
By Whom? Lucas Middleton						Date and Hour 4-17-18 9:17 a.m.						
Was a Watercourse Reached? ☐ Yes ☒ No							If YES, Volume Impacting the Watercourse.					
If a Waterco	urse was Im	pacted, Desc	ribe Fully.	ķ							ata s	
II u wateree	arse was in	pueted, 5 esc										
A road cros	sing for a la	lem and Remonsy flat hose far up and sent for	iled. Causin	n Taken.* ng the fluids to ru A berm was adde	in down ted to the	the road. The east side of t	en crossed over in the road.	to the ir	rigation di	tch east o	f the road. All standing	
SMA will d	elineate and		k plan for	approval of reme							3	
regulations public healt should their or the envir	all operators h or the env operations onment. In	s are required ironment. The	to report a se acceptan adequatel OCD acce	nd/or file certain ce of a C-141 rep y investigate and	release n ort by th remediat	e NMOCD re contamina	and perform corre narked as "Final tion that pose a the eye the operator o	Report" of the section in the sectio	does not re round water sibility for	lieve the cer, surface	NMOCD rules and nich may endanger operator of liability e water, human health ce with any other	
Signature:							OIL CONSERVATION DIVISION					
d state of the second s	na Casar e	now		A CONTRACTOR OF THE PROPERTY O		Approved b	y Environmental	Specialis	st:	X) HOUSE	WALES TO THE REAL PROPERTY OF THE PARTY OF T	
No. of the supplication	ne: Casey S	ory, Environ	nental, & S	Safety		Approval D	ate: 5/14/18	3	Expiration	n Date:	NIA	
		@matadorres					of Approval:	10-1	- 0	Attac	ched Do Jala	
Dates			Phone	e: (972) 371-5439	9		Sep at	tach	PCI		XXX414A	

Phone: (972) 371-5439

Date:

* Attach Additional Sheets If Necessary

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 5/11/2018 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 200-4742 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 2 office in ARTESIA on or before 6/11/2018. 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

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