District IV	s Road, Azteo	e, NM 87410	JUL I		Conser	vation Div St. France	vision (	JUL <sup>Sul</sup>	m <b>0 2692</b> 3	to appropriat	te District Office h 19.15.29 NMA	e in AC.
220 S. St. Fran	cis Dr., Santa	1 Fe, NM 87505		Se		, NM 875						
			Rel				orrective A	REC				
NABITI	19521	( • )				OPERAT				al Report	🔲 Final Re	nort
		atador Resou	urces	228937			therine Green					
		St Ste One R					No.575-623-660	1				
Facility Nan	ne Tiger 1	4-24S-28E F	<b>RB</b> , #202	H & #222H Pad	[]	Facility Typ	pe Oil					
Surface Ow	ner Private	e		Mineral C	Owner P	rivate			API No	.30-015-441	19	
				LOCA	ATION	N OF RE	LEASE					
Unit Letter H	Section 14	Township 24S	Range 28E	Feet from the 1796	North/ N	South Line	Feet from the 356	East/VE	West Line	County Eddy		
		Latitude32	2.220092	·	Lon	gitude-104	1.0505577		NA	.D83		
						-						
Type of Relea	ase Produce	ed Water			UKE	OF REL Volume of	EASE f Release 52bbls		Volume I	Recovered 15	bbls	
Source of Release gasket on line failed							Hour of Occurrence July Date and Hour of Discovery					
Was Immediate Notice Given?						6, 2017 8: If YES, To	57am o Whom? Tim Gu	m July		017 8:57am m		
Doguinad		x[	] Yes	No Not								
Required	Casey Spou					Data and I	Hour July 6, 2017	10am	<u><u></u></u>	1 11.05	000	
By Whom? Casey Snow   Was a Watercourse Reached?   U Yes X No						If YES, V	olume Impacting t	the Wat	ercourse.		wiij	
Ring Gasket	on zipper m	em and Reme aanifold washe zipper manifo	ed out dur		hydraulic	c stimulation	operations. Used	vacuur	n trucks to	clean up stand	ding water.	
Ring Gasket Replaced ring Describe Are Area affected I hereby certi	on zipper m g gasket on a Affected d is approxim	nanifold wash zipper manifo and Cleanup / mately 50 feet	ed out dur old. Action Tal t radius ar	ing the course of ken.* bund wellhead. V	Vill delin	eate soil and	I remediate once w	vork cre	w has vaca	ted area. suant to NMC	OCD rules and	
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Operator/Responsible Party,

The OCD has received the form C-141 you provided on **7/10/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number <u>2824290</u> 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 II office in Artesia on or before 8/10/17. 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; C<sub>6</sub> thru C<sub>36</sub>), 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; C<sub>6</sub> thru C<sub>36</sub>), 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.

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