<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., 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

Revised August 8, 2011

Form C-141

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

Release Notification and Corrective Action

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

						OPERA'	TOR		X Initi	al Report		Final Report							
Name of Company Oxy Permian						Contact Casey Summers													
Address PO Box 4294; Houston, TX 77210						Telephone No. (575) 513-8289													
Facility Name NHU West Injection Battery						Facility Type Battery													
Surface Owner Oxy Mineral Owner						API No. 30-025-05504													
				LOCA	TION	OF RE	LEASE												
Unit Letter   Section   Township   Range   Feet from the   No.				North/	South Line	Feet from the East/\		Vest Line	est Line   County										
Н	25	185	37E							Lea County, NM		8							
Latitude N 32.71966° Longitude W 103.19909°																			
NATURE OF RELEASE																			
Type of Release Produced water						Volume of	THE REPORT OF THE PARTY OF THE				0 bbls								
Source of Release Leaking seal on injection pump #2						Date and Hour of Occurrence Date and Hour of Discov				overy									
Was Immediate Notice Given?						If YES, To													
Yes No Not Required							erding, Olivia Yu-												
By Whom? Kathy Purvis, BBC International Was a Watercourse Reached?							lour 01/25/2017 dume Impacting t												
Yes No						11 123, 40	name impacting t	ne wate	icourse.										
If a Watercou	rse was Imp	nacted, Descri	be Fully.*																
						<i>R</i>	RECEIVED												
By Olivia Yu at 3:21 pm, Feb 09, 2017																			
						B	v Olivia Y		3.21 r	om Feb	09	2017							
Describe Caus	se of Proble	m and Remed	lial Action	Taken.*		В	y Olivia Y		3:21 p	om, Feb	09,	2017							
Describe Caus A leaking seal					produced			u at		••••	09,	2017							
A leaking seal	on injection	n pump #2 ca	used a rele	ease of 5 bbls of p	produced		y Olivia Y	u at		••••	09,	2017							
	on injection	n pump #2 ca	used a rele	ease of 5 bbls of p	produced			u at		••••	09,	2017							
A leaking seal	on injection	n pump #2 ca	used a release	ease of 5 bbls of p		water. No f		red and	the seal wa	as replaced.									
A leaking seal Describe Area The area affect I hereby certif	on injection Affected a ted is appropriately that the in	on pump #2 cand Cleanup A pximately 30'	action Take x 12' on l	ease of 5 bbls of pen.*  ocation. Remedia	ation wil	water. No f	luids were recove	red and	the seal wa	is replaced.  plan approve	d by N!	MOCD.							
A leaking seal Describe Area The area affect I hereby certif regulations all	on injection Affected a ted is approxy that the ir operators	on pump #2 cand Cleanup Approximately 30' Information gives required to	action Tak x 12' on I	ease of 5 bbls of pen.*  ocation. Remedia is true and complet/or file certain re	ete to the	water. No f	luids were recove	red and with a re	the seal wa	ns replaced.  plan approve to NMO cases which n	d by N! CD ruk	MOCD.							
A leaking seal Describe Area The area affect I hereby certif regulations all public health of	on injection Affected a ted is appropriately that the irroperators a per the environment of the environment	on pump #2 cand Cleanup A eximately 30' aformation gives required to comment. The	x 12' on I	ease of 5 bbls of pen.*  ocation. Remedia is true and complet/or file certain receipt of a C-141 repo	ete to the	be complete best of my tifications an	luids were recove ed in accordance v knowledge and un id perform correct	red and with a re	the seal wa	plan approve	d by Ni	MOCD. es and anger ability							
A leaking seal Describe Area The area affect I hereby certif regulations all public health of should their of or the environ	on injection Affected a ted is appropriately that the irroperators a per the environment. In again, and the irroperations have the environment. In again, and the irroperations have the environment.	on pump #2 cand Cleanup A eximately 30' aformation gives required to comment. The type failed to an edition, NMO	x 12' on least a release to the control of the cont	ease of 5 bbls of pen.*  ocation. Remedia is true and complet/or file certain received a C-141 repoinvestigate and re	ete to the elease no rt by the	water. No f	luids were recove	red and with a re iderstantive action	the seal wa	plan approve uant to NMO cases which neve the opera	d by N! CD ruk nay end tor of li	MOCD. es and anger ability							
A leaking seal Describe Area The area affect I hereby certif regulations all public health of should their of	on injection Affected a ted is appropriately that the irroperators a per the environment. In again, and the irroperations have the environment. In again, and the irroperations have the environment.	on pump #2 cand Cleanup A eximately 30' aformation gives required to comment. The type failed to an edition, NMO	x 12' on least and a releast to the control of the	ease of 5 bbls of pen.*  ocation. Remedia is true and complet/or file certain received a C-141 repoinvestigate and re	ete to the elease no rt by the	water. No f	luids were recove ed in accordance were knowledge and und perform correct arked as "Final Re on that pose a thre e the operator of re	red and with a re inderstantive active port" do act to groesponsil	the seal wa emediation d that pursions for rele oes not relic ound water, bility for co	plan approve uant to NMO cases which neve the opera	d by N! CD rule nay end tor of li er, hum th any o	MOCD. es and anger ability							
A leaking seal Describe Area The area affect I hereby certif regulations all public health of should their of or the environ	on injection Affected a ted is appropriately that the irroperators a per the environment. In again, and the irroperations have the environment. In again, and the irroperations have the environment.	on pump #2 cand Cleanup A eximately 30' aformation gives required to comment. The type failed to an edition, NMO	x 12' on least and a releast to the control of the	ease of 5 bbls of pen.*  ocation. Remedia is true and complet/or file certain received a C-141 repoinvestigate and re	ete to the elease no rt by the	water. No f	luids were recove ed in accordance v knowledge and un id perform correct arked as "Final Re	red and with a re inderstantive active port" do act to groesponsil	the seal wa emediation d that pursions for rele oes not relic ound water, bility for co	plan approve uant to NMO cases which neve the opera	d by N! CD rule nay end tor of li er, hum th any o	MOCD. es and anger ability							
A leaking seal Describe Area The area affect I hereby certif regulations all public health of should their of or the environ	on injection Affected a ted is appropriately that the irroperators a per the environment. In again, and the irroperations have the environment. In again, and the irroperations have the environment.	on pump #2 cand Cleanup A eximately 30' aformation gives required to comment. The type failed to an edition, NMO	x 12' on least and a releast to the control of the	ease of 5 bbls of pen.*  ocation. Remedia is true and complet/or file certain received a C-141 repoinvestigate and re	ete to the elease no rt by the	water. No f	luids were recove ed in accordance were knowledge and und perform correct arked as "Final Re on that pose a thre e the operator of re	red and with a re inderstantive active port" do act to groesponsil	the seal wa emediation d that pursions for rele oes not relic ound water, bility for co	plan approve uant to NMO cases which neve the opera	d by N! CD rule nay end tor of li er, hum th any o	MOCD. es and anger ability							
A leaking seal Describe Area The area affect I hereby certif regulations all public health of should their of or the environ federal, state,	on injection Affected a steed is appropriate operators a per the environment. In agort local lay	on pump #2 cand Cleanup A eximately 30' aformation gives required to comment. The type failed to an edition, NMO	x 12' on least and a releast to the control of the	ease of 5 bbls of pen.*  ocation. Remedia is true and complet/or file certain received a C-141 repoinvestigate and re	ete to the elease no rt by the emediate report do	water. No find the complete best of my tifications and NMOCD material contamination of the complete of the complet	luids were recove ed in accordance were knowledge and und perform correct arked as "Final Re on that pose a thre e the operator of re	red and with a re inderstantive active active active active port" de active growsite	the seal was emediation d that purse ons for rele bees not relia ound water, bility for co	plan approve uant to NMO cases which neve the opera	d by N! CD rule nay end tor of li er, hum th any o	MOCD. es and anger ability							
A leaking seal Describe Area The area affect I hereby certif regulations all public health of should their of or the environ federal, state, of Signature: Printed Name:	on injection Affected a steed is appropriate operators a per the environment. In agort local lay	on pump #2 cand Cleanup A eximately 30' information gives required to comment. The eye failed to a dition, NMO is and/or regularity.	x 12' on least and a releast to the control of the	ease of 5 bbls of pen.*  ocation. Remedia is true and complet/or file certain received a C-141 repoinvestigate and re	ete to the elease no rt by the emediate report do	water. No find the complete best of my tifications and NMOCD material contamination of the complete of the complet	luids were recove ed in accordance v knowledge and un dd perform correct arked as "Final Re on that pose a thre e the operator of re  OIL CONS  Environmental Sp	red and with a re inderstantive active port desponsit SERV	the seal was emediation d that purse ons for rele bees not relia ound water, bility for co	plan approve uant to NMO cases which n eve the opera , surface wate ompliance wit	d by N! CD rule nay end tor of li er, hum th any o	MOCD. es and anger ability							
A leaking seal Describe Area The area affect I hereby certif regulations all public health of should their of or the environ federal, state, of Signature: Printed Name: Title: NM E	on injection Affected a steed is appropriate operators a per the environment. In according to the control of th	on pump #2 cand Cleanup A eximately 30' information gives required to comment. The eye failed to audition, NMO is and/or regulation and/or regulation.	x 12' on leven above o report and acceptance dequately CD accept lations.	ease of 5 bbls of pen.*  ocation. Remedia is true and complet/or file certain received a C-141 repoinvestigate and re	ete to the elease no rt by the emediate report do	water. No fill be completed by tiffications and NMOCD may contaminated by the proved b	luids were recovered in accordance with the latest as "Final Report that pose a three the operator of recovered the latest as the latest as "Final Report that pose a three the operator of recovered the latest as "Final Report that pose a three the operator of recovered the latest as "Final Report that pose a three the operator of recovered the latest as "Final Report that pose a three th	red and with a re inderstantive active port desponsit SERV	the seal was emediation d that pursuous for releases not reliable below the count water bility for conditions for the conditions of the co	plan approve uant to NMO cases which n eve the opera surface wate ompliance with	d by N!  CD rule  nay end  tor of li  er, hum  th any c	MOCD. es and anger ability							
A leaking seal Describe Area The area affect I hereby certif regulations all public health of should their of or the environ federal, state, of Signature: Printed Name:	on injection Affected a steed is appropriate operators a per the environment. In according to the control of th	on pump #2 cand Cleanup A eximately 30' information gives required to comment. The eye failed to a dition, NMO is and/or regularity.	x 12' on leven above o report and acceptance dequately CD accept lations.	ease of 5 bbls of pen.*  ocation. Remedia is true and complet/or file certain received a C-141 repoinvestigate and re	ete to the elease no rt by the emediate report do	water. No follower be best of my tifications an NMOCD ma contamination es not relieved approved by approved by approved Date conditions of	luids were recovered in accordance with the latest as "Final Report that pose a three the operator of recovered the latest as the latest as "Final Report that pose a three the operator of recovered the latest as "Final Report that pose a three the operator of recovered the latest as "Final Report that pose a three the operator of recovered the latest as "Final Report that pose a three th	red and with a re nderstan tive actic eport de at to greesponsit	the seal was emediation d that pursuous for relevous not relicound water bility for continuous ATION	plan approve uant to NMO cases which n eve the opera , surface wate ompliance wit	d by N! CD rule nay end tor of li er, hum th any c	MOCD. es and anger ability							

## Operator/Responsible Party,

The OCD has received the form C-141 you provided on \_1/31/2017\_ regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number \_\_1R-\_4595\_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 \_1\_ office in \_\_Hobbs\_\_\_\_ on or before \_3/9/2017\_\_. 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.

## Jim Griswold

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