District I 1625 N. French Dr., Hobbs, NM 88240 District II 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 Department

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised August 24, 2018 Submit to appropriate OCD District office

Incident ID	
District RP	
Facility ID	
Application ID	

## **Release Notification**

### **Responsible Party**

Responsible Party: BPX Energy	OGRID: 778
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179
Contact email: steven.moskal@bpx.com	Incident # (assigned by OCD)
Contact mailing address: 1199 Main St., Suite 101, Durango CO, 8	301 NF1907335094

### **Location of Release Source**

Latitude: 36.701690 °

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Wilch A 001	Site Type: Natural Gas Production Well Pad
Date Release Discovered: March 8, 2019	API#: 30-045-07902

Unit Letter	Section	Township	Range	County
В	26	T29N	R08W	San Juan



DISTRICT III

Surface Owner: State Federal Tribal Private (Name:

### Nature and Volume of Release

Materia	al(s) Released (Select all that apply and attach calculations or specific	justification for the volumes provided below)	
Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)	
Produced Water	Volume Released (bbls):	Volume Recovered (bbls):	
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No	
Condensate	Volume Released (bbls): 28 bbls	Volume Recovered (bbls): <u>0 bbls</u>	
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)	
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)	

Cause of Release:

Internal corrosion of steel production tank resulted in hole in the base of the tank. Site has not been fully assessed.

State of New Mexico Oil Conservation Division

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Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the responsible party consider this a major release?
🗌 Yes 🖾 No	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

### **Initial Response**

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

 $\square$  The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: Steve Moskal

Cher Mu Signature:

Date: March 13, 2019

Title: Environmental Coordinator

email: <u>steven.moskal@bpx.com</u>

Telephone: (505) 330-9179

OCD Only	
Received by:	lanessa fields

Date: 3 3 2019

State of New Mexico Oil Conservation Division

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## Site Assessment/Characterization

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	<u>545</u> (ft bgs)
Did this release impact groundwater or surface water?	📋 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗋 Yes 🛛 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🔀 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🛛 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗋 Yes 🛛 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🛛 No
Are the lateral extents of the release within 300 feet of a wetland?	🗋 Yes 🛛 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🛛 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🛛 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🛛 No
Did the release impact areas not on an exploration, development, production, or storage site?	🔲 Yes 🖾 No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: Each of the following items must be included in the report.

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.

Data table of soil contaminant concentration data

- Depth to water determination
- Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- Boring or excavation logs
- Photographs including date and GIS information
- Topographic/Aerial maps
- Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Form C-141 Page 4	State of New Mexico Oil Conservation Division	Incident ID District RP Facility ID Application ID
I hereby certify that the informative regulations all operators are reconciliated to adequately investigate addition, OCD acceptance of a and/or regulations. Printed Name: <u>Steve Mos</u>	ation given above is true and complete to the best of my pured to report and/or file certain release notifications a nt. The acceptance of a C-141 report by the OCD does and remediate contamination that pose a threat to grour C-141 report does not relieve the operator of responsibi	knowledge and understand that pursuant to OCD rules and nd perform corrective actions for releases which may endanger not relieve the operator of liability should their operations have ndwater, surface water, human health or the environment. In lity for compliance with any other federal, state, or local laws
Signature:	Date: <u>March 13</u> Date: <u>March 13</u> Date: <u>March 13</u> Telephone:	<u>, 2019</u> (505) 330-9179
OCD Only Received by:	ise Fields	Date: 3/13/2019

State of New Mexico Oil Conservation Division

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## **Remediation Plan**

**Remediation Plan Checklist:** Each of the following items must be included in the plan.

Detailed description of proposed remediation technique

Scaled sitemap with GPS coordinates showing delineation points

Estimated volume of material to be remediated

Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC

Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: Each of the following items must be confirmed as part of any request for deferral of remediation.

Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

Extents of contamination must be fully delineated.

Contamination does not cause an imminent risk to human health, the environment, or groundwater.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: <u>Steve Moskal</u> Ti	tle: <u>Environmental Coordinator</u>	
Signature:	Date: <u>March 13, 2019</u>	
email: <u>steven.moskal@bpx.com</u>	Telephone: <u>(505) 330-9179</u>	
OCD Only Received by: Approved with Attached Condition Signature: Control Condition	Date: $313209$ ons of Approval Denied Date: $314239$	Deferral Approved

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following items must be included in the closure report.

A scaled site and sampling diagram as described in 19.15.29.11 NMAC

Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name:	_ Title:						
Signature:	Date:						
email:	Telephone:						
OCD Only	······································						
Received by:	Date:						
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.							
Closure Approved by:	Date:						
Printed Name:	Title:						

#### **BP Remediation Plan**

To:	Vanessa Fields (NMOCD), Emmanuel Adeloye (BLM)
From:	Steve Moskai (BP)
CC:	Jeff Blagg (Blagg Engineering)
Date:	3/13/2019
Re:	Wilch A 001 - Ex-situ Soil Remediation – Soil Shredding API#: 30-045-07902 (B), S26, T29N, R08W; Tank GPS: Latitude:36.701690 ° Longitude: -107.642409°

Mrs. Fields and Mr. Adeloye,

The Wilch A 001 site is an active natural gas production well location within the San Juan Basin Gas Field in San Juan County, New Mexico. The site is located on land managed by the Bureau of Reclamation and Land Management Farmington Field Office (BLM-FFO) and is in an area primarily used for oil and gas production with limited recreation use. The production well was drilled in 1962.

#### Background

An integrity failure of an aboveground production storage tank resulted in the release of approximately 28 bbls of produced water and natural gas condensate. This data was obtained from the previous tank gauging information collected on February 4, 2019. The release was discovered on March 8, 2019. Initial site investigation has not been performed to determine remedial action. This plan is submitted in advance in the case that remediation is necessary in order to perform soil shredding in conjunction with the nearby Hardie LS 001A which has already been approved for soil shredding. Vertical and lateral delineation of the site has not yet been performed. The well site is operated by BP Production.

#### Site Ranking

Depth to groundwater at the release site is estimated to be approximately 555 feet from ground surface. This estimation is based on data from Stone and others (1983), and depth to groundwater data obtained from water wells permitted by the New- Mexico State Engineer's Office (OSE, Figure 1). Additional information is based on the known depth to groundwater at the nearby a private stock water well SJ 00006.

Local topography and proximity to adjacent water features are also considered. A topographic map of the site is provided as Figure 2 and demonstrates that the release site is not within 300 feet of any continuously flowing watercourse or within 200 feet of any other significant watercourse, lakebed, sinkhole or playa lake as measured from the ordinary high water mark. Figure 3 demonstrates that the release is not within 300 feet of a permanent residence, school, hospital, institution or church. Figure 4 demonstrates, based on a search of the OSE database and USGS topographic maps, that there are no freshwater wells or springs within 1000 feet of the release. Figure 5 demonstrates that the release site is not within a municipal boundary or a defined municipal freshwater well field. Figure 6 demonstrates that the release site is not within 500 feet of a wetland. Figure 7 demonstrates that the release site is not in an area overlying a subsurface mine. The release is not located in an unstable area. Figure 8 demonstrates that the release is not within the mapped FEMA 100-year floodplain.

Based on the siting criteria, the remediation site closure standards will be 2,500 ppm TPH, 1,000 ppm GRO+DRO, 50 ppm BTEX, 10 ppm benzene and 10,000 ppm chlorides.

#### **Proposed Remediation – Soil Shredding**

Based on recent success of soil shredding technologies performed on BP remediation sites, BP proposes to use this technology at the subject site. To date, BP has successfully contracted soil shredding of nearly 150,000 cubic yards of soil to meet site closure standards.

Soil shredding involves the excavation of the impacted soil which is then placed in processing equipment, such as a hammer mill or pug mill, to mechanically process and break-up the soil. The soil becomes more uniform and is aerated during the mechanical processing. The soil is then ejected from the processing equipment and a chemical oxidizer is applied, in this case, a 35% solution of hydrogen peroxide and water. The applied concentration of hydrogen peroxide typically ranges from 3-8%. The hydrogen peroxide quickly oxidizes the hydrocarbon impacts (reagents), resulting in soil, water and carbon dioxide (products). Once the soil is processed, it is stockpiled and allowed to sit for approximately 2-5 days of residence time. A composite soil sample is collected from each segregated stockpile and submitted for laboratory analysis to determine the effectiveness of the ex-situ remediation process. If the laboratory results are of acceptable levels, the soil will be used as backfill to the excavation; if results are unsatisfactory, the soil is passed through the process once more and a subsequent laboratory sample will be collected for laboratory confirmation as described before. Typically, 24 hours of notice is provided to the regulatory agencies for the opportunity to observe and witness the stockpile sampling.

BP proposes to excavate and remediate approximately 500 cubic yards of hydrocarbon impacted soil. If successful, soil shredding will continue. BP proposes to treat the impacted soil and segregate windrow stockpiles broken into 100 cubic yard increments. A single, five-point composite, soil sample will be collected to represent each 100 cubic yard stockpile. If necessary, once a baseline of approximately 1,000 cubic yards of soil is consistently and successfully treated, BP will propose to decrease the sampling frequency to 500 cubic yard stockpile segments. The 500 cubic yard sampling modification will be discussed with the NMOCD and BLM for approval and input prior to implementation. BP would expect to have a sampling modification approval from the agencies within 48 working hours from the time of request. The remediation will then continue until complete and sampling will be based on the regulatory agencies approved sampling plan.

Excavation sampling will be in accordance with a typical dig and haul. The sidewalls and base of the excavation will be sampled in a frequency based on the size and progress of the excavation. Agency notification of excavation sampling will also be issued in advanced, 24 hours if possible. The composite sampling area of the sidewalls and base will be determined based on the size and available area of the excavation at the time of each sampling event. This information will be communicated to each regulatory agency and agreed upon prior to sample submission.

BP is currently anticipates mobilizing to the location once this plan and the BLM Sundry is approved. BP plans to shut the well in and remove all necessary surface equipment. BP requests that the BLM provides a <u>50' buffer</u> from the pad disturbance in anticipation of any offsite activities, should it be necessary.

It is understood, that if soil remediation is not successful via the soil shredding, an alternative method such as a dig and haul or soil vapor extraction will be necessary. If soil shredding is not effective, BP will elect to perform an alternative type of remediation such as dig and haul, soil vapor extraction or other approved methods. BP will be in close communications with the agencies in the event an alternative remediation method is required.

#### Site Closure and Reporting

Once the soil shredding process is complete, the excavated area will be fully backfilled and compacted, and surface equipment will be re-set. Any necessary interim reclamation will be performed. Final reclamation of the well pad will occur at a later date, once the natural gas production well is plugged and abandoned.

A final remediation report will be delivered to NMOCD and BLM for approval of final site closure regarding the excavation and soil shredding activities within 60 days of the end of remediation.







# New Mexico Office of the State Engineer Point of Diversion Summary

			(quarters a (quarters	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)				(NAD83 UTM in meters)		
Well Tag	POD	Number	Q64 Q1	6 Q4	Sec	Tws	Rng	X	Y	
	SJ 0	0006		2	26	29N	08W	264013	4064891* 🍯	
Driller Lic	ense:		Driller C	ompa	ny:					
Driller Na	me:	UNKNOWN								
Drill Start	Date:	01/27/1953	Drill Fini	sh Da	te:	0	1/27/1953	Pl	ug Date:	
Log File D	ate:	11/17/1953	PCW Rev	v Date	e:			So	urce:	Shallow
Ритр Тур	e:		Pipe Disc	harge	Size	:		Es	timated Yield	20 GPM
Casing Siz	e:	6.63	Depth We	ell:		5	60 feet	De	epth Water:	
	Wate	r Bearing Stratifi	cations:	Te	op B	ottom	Descrip	otion		
				54	45	557	Other/U	Inknown		
	Casing Perforations:		Т	p B	ottom					
				44	18	560	)			

#### \*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability or suitability for any particular purpose of the data.

3/12/19 10:54 AM

POINT OF DIVERSION SUMMARY