

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

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

OIL CONS. DIV DIST. 3

JAN 08 2018

Form C-141  
Revised August 8, 2011

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

### Release Notification and Corrective Action

#### OPERATOR

Initial Report  Final Report

Name of Company: BP	Contact: Steve Moskal
Address: 200 Energy Court, Farmington, NM 87401	Telephone No.: 505-330-9179
Facility Name: Hardie LS 001A	Facility Type: Natural gas well

Surface Owner: Federal	Mineral Owner: Federal	API No. 3004522415
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#### LOCATION OF RELEASE

Unit Letter J	Section 26	Township 29N	Range 08W	Feet from the 1,600	North/South Line South	Feet from the 1,800	East/West Line East	County: San Juan
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Latitude 36.69395° Longitude -107.64294°

#### NATURE OF RELEASE

Type of Release: Unknown - hydrocarbon	Volume of Release: unknown	Volume Recovered: none
Source of Release: Unknown - suspect earthen pit; 95 bbl BGT	Date and Hour of Occurrence: unknown	Date and Hour of Discovery: December 5, 2017

Was Immediate Notice Given? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?
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By Whom? Steve Moskal	Date and Hour:
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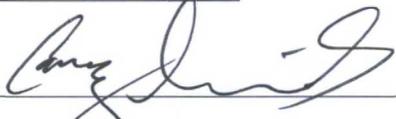
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.
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If a Watercourse was Impacted, Describe Fully.\*

Describe Cause of Problem and Remedial Action Taken.\* During the closure of a below grade tank sampling indicated what appears to be hydrocarbon impacts to the soil, likely associated with an earthen pit.

Describe Area Affected and Cleanup Action Taken.\* BP proposes to employ soil shredding to remediate hydrocarbon impacted soils at the location. The areas of concern will be excavated, treated and backfilled according to the attached remediation plan, pending approval.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Steve Moskal	Approved by Environmental Specialist: 	
Title: Field Environmental Coordinator	Approval Date: 1/16/18	Expiration Date:
E-mail Address: steven.moskal@bp.com	Conditions of Approval: Sample for	Attached <input type="checkbox"/>
Date: January 5, 2018	Phone: 505-326-9497	TPH, BTEX, Benzene

\* Attach Additional Sheets If Necessary

HINCS 1801657373

Notify OGD 24 HR prior to Sampling Complete By 3/16/18

## **BP Remediation Plan**

To: Cory Smith, Vanessa Fields(NMOCD), Whitney Thomas (BLM)  
From: Steve Moskal (BP)  
CC: Jeff Blagg (Blagg Engineering), Emmanuel Adelaye (BLM)  
Date: 1/5/2018  
Re: Hardie LS 001A - Ex-situ Soil Remediation – Soil Shredding  
(J) S-26, T29N, R08W; API #30-045-22415; Serial No.:NM-SF-078416A

Dear Mr. Smith, Mrs. Fields and Mrs. Thomas,

The Hardie LS 001A 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 Land Management Farmington Field Office (BLM-FFO) and is in an area primarily used for oil and gas production and recreation.

### **Background**

Historical impacts were identified at the location on December 5, 2017 during the closure of a 95 bbl below grade tank (BGT). The impacts are likely the result of earthen pits formerly used on the location. No historical documentation is available regarding this pit. Initial site investigation determined additional delineation was required to define the extents of impacts. Delineation of the site has not yet been performed. The well site is operated by BP Production.

### **Site Ranking**

Following the NMOCD site ranking criteria, the site closure standard is 1,000 ppm TPH, 50 ppm BTEX and 10 ppm benzene:

- Depth to groundwater >100' (0 points)
- Nearest surface water source >1,000' (0 points)
- Distance to nearest surface water body or coarse <1,000' (10 points)

### **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 perform the remediation of hydrocarbon impacts by the means of soil shredding. A conservative estimate of approximately 300 cubic yards of soil will be treated through the soil shredding process. 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, 24-48 hours if possible.

BP is currently anticipates mobilizing to the location on January 11, 2018. BP plans to shut the well in and remove all necessary surface equipment.

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. 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.