

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: BP America Production Co.	OGRID: 778	Initial Report/Remediation Plan
Contact Name: Steve Moskal	Contact Telephone: (505) 330-9179	
Contact email: steven.moskal@bpx.com	Incident # (assigned by OCD) <b>NMOC</b>	
Contact mailing address: 1199 Main Street, Suite 101, Durango CO, 81301	<b>NVF 1900239194</b> <b>DEC 20 2018</b> <b>DISTRICT III</b>	

### Location of Release Source

Latitude: 36.6943469° Longitude: -107.6434987°  
(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Hardie LS 001A	Site Type: Natural Gas Production Well Pad
Date Release Discovered: December 17, 2018	API#: 30-045-22415

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

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (Name: \_\_\_\_\_)

### Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls):	Volume Recovered (bbls):
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input checked="" type="checkbox"/> Condensate	Volume Released (bbls): <u>Est 20 bbls</u>	Volume Recovered (bbls): <u>0 bbls</u>
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

#### Cause of Release:

Impacts were identified at the location on November 20, 2018 during a site inspection. A small stained area of soil was noted, but appeared to be isolated. The source was unknown. Upon further investigation, it was discovered an open ended flow line from the separator had been buried during the remedial activities of the BGT in March of 2018. On December 17, 2018, it was confirmed that the release had migrated at least 17 vertical feet from the surface. Full delineation of the release has not yet been performed. The well site is operated by BP Production.

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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?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice 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*

- ☒ 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 Title: Environmental Coordinator

Signature: 

Date: December 19, 2018

email: steven.moskal@bpx.com

Telephone: (505) 330-9179

#### OCD Only

Received by: Vanessa Fields

Date: 12/20/18

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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>&gt;400</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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.
- ☐ Field data
- ☐ 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.



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Oil Conservation Division

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Printed Name: Steve Moskal Title: Environmental Coordinator

Signature:  Date: December 19, 2018

email: steven.moskal@bpx.com Telephone: (505) 330-9179

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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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.

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Printed Name: Steve Moskal Title: Environmental Coordinator

Signature: 

Date: December 19, 2018

email: steven.moskal@bpx.com

Telephone: (505) 330-9179

**OCD Only**

Received by: Vanessa Fields Date: 1/2/2019

☐ Approved ☒ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: 

Date: 1/2/2019

*GW information Incorrect  
50-100' closure*

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## 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: \_\_\_\_\_





NMOCD Site Ranking Estimate:

Depth to water >400'

Nearest Water Course = 345'

Nearest Water Well = 2,480'

Ranking: TPH (GRO+DRO) = 1,000 ppm

TPH (GRO+DRO+MRO) = 2,500 ppm



Release as found on Nov 21, 2018

Flow line shut in.

Volume estimated at < 1 bbl



Hand auger to 2' depth. Impacts present. Field OVM = 3,840 ppm @ 2'



BPX Energy  
Hardie LS 1A  
(J) Sec 26 - T29N - R8W  
API: 30-045-22415

Load Line Release Point

Hardie LS 1A

1,028 Feet

345 Feet

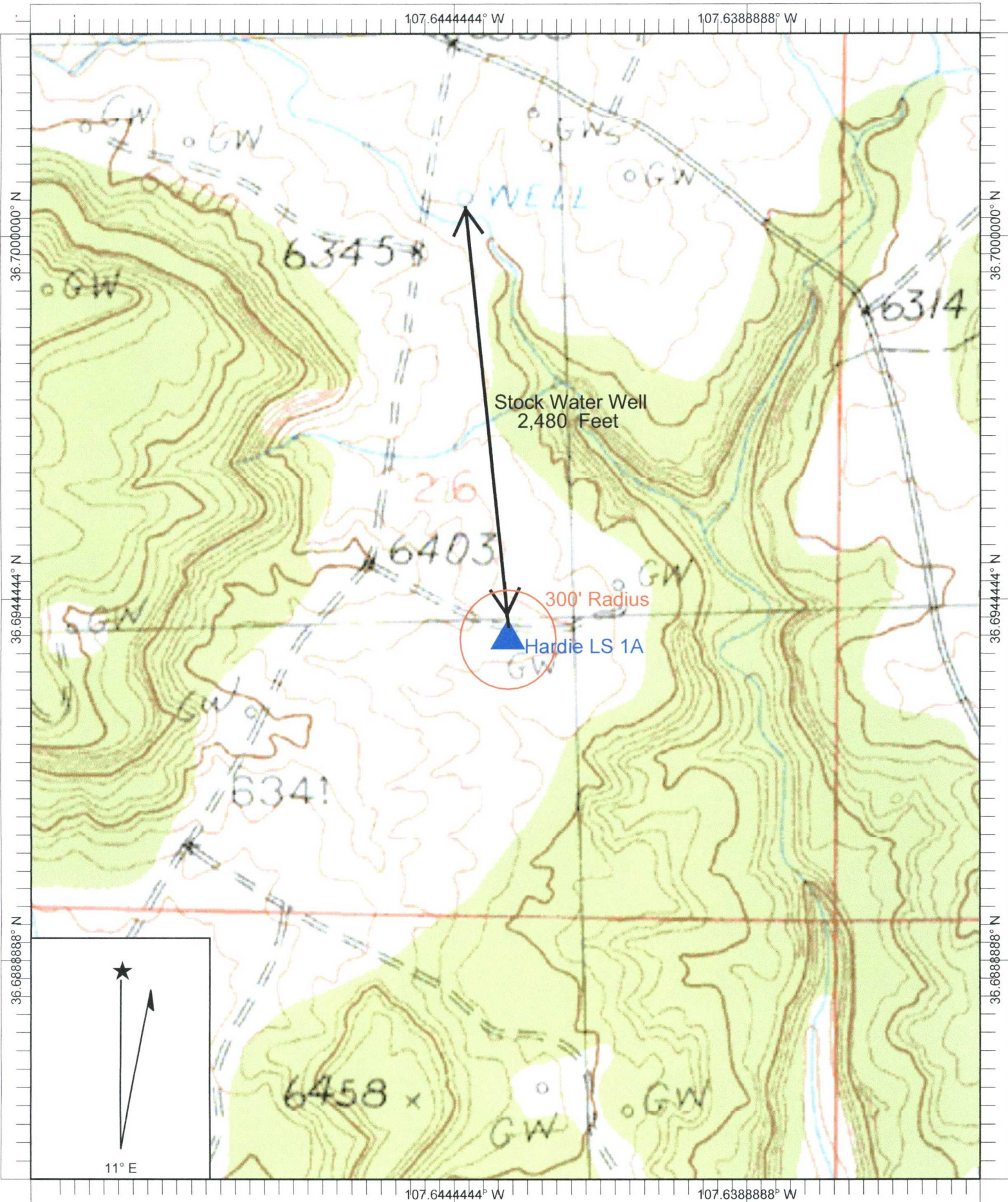
Google earth

© 2018 Google

600 ft







Name: CUTTER CANYON  
Date: 11/21/2018  
Scale: 1 inch equals 666 feet

Location: 036.6943469° N 107.6434987° W  
Caption: BPX Energy  
Hardie LS 1A



## **BP Remediation Plan**

To: Cory Smith, Vanessa Fields(NMOCD), Whitney Thomas (BLM)  
From: Steve Moskal (BP)  
CC: Jeff Blagg (Blagg Engineering), Emmanuel Adeloje (BLM)  
Date: 12/19/2018  
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**

Impacts were identified at the location on November 20, 2018 during a site inspection. A small stained area of soil was noted, but appeared to be isolated. The source was unknown. Upon further investigation, it was discovered an open ended flow line from the separator had been buried during the remedial activities of the BGT in March of 2018. On December 17, 2018, it was confirmed that the release had migrated at least 17 vertical feet from the surface. Full delineation of the release 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 GRO&DRO hydrocarbons, 2,500 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**

BP proposes to employ soil shredding on site. The previous remediation of the site was performed using soil shredding and was proven successful. 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 400 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 in January 2019, pending the approval of this plan by all regulatory agencies. 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. Collection of vadose zone samples will be performed to ensure no residual impacts remain following the remedial activities. A minimum of 24-hour notice will be provided to the agencies prior to the collection of these samples. 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 receipt of the final laboratory report.