

State of Colorado  
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203  
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:  
401940011

Receive Date:

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Report taken by:

Site Investigation and Remediation Workplan (Initial Form)

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. However, this shall not preclude the Operator from taking immediate action to protect public health or safety, the environment, wildlife, or livestock.

This Form 27 describes site conditions as currently understood by the Operator; approval of this Form 27 by COGCC is based on the site conditions accurately described herein; any changes in site conditions identified during or subsequent to the performance of the approved workplan may necessitate additional investigation or remediation which shall be described on a supplemental Form 27. This Form 27 is intended to provide basic information regarding the proposed site investigation and remediation actions, but the workplan may be more fully described in attached documentation. Refer to Rules 340, 905, 906, 907, 908, 909, and 910

OPERATOR INFORMATION

Name of Operator: SANDRIDGE EXPLORATION & PRODUCTION LLC	Operator No: 10598	Phone Numbers
Address: 123 ROBERT S KERR AVE	Phone: (405) 429-5745	
City: OKLAHOMA CITY State: OK Zip: 73102	Mobile: (405) 651-6853	
Contact Person: Matt Church	Email: mchurch@sandridgeenergy.com	

PROJECT, PURPOSE & SITE INFORMATION

**PROJECT INFORMATION**

Remediation Project #: \_\_\_\_\_ Initial Form 27 Document #: 401940011

**PURPOSE INFORMATION**

<input type="checkbox"/> 901.e. Sensitive Area Determination	<input type="checkbox"/> 909.c.(5), Rule 910.b.(4): Remediation of impacted ground water
<input type="checkbox"/> 909.c.(1), Rule 905: Pit or PW vessel closure	<input type="checkbox"/> Rule 909.e.(2)A.: Notice completion of remediation in accordance with Rule 909.b.
<input checked="" type="checkbox"/> 909.c.(2), Rule 906: Spill/Release Remediation	<input type="checkbox"/> Rule 909.e.(2)B.: Closure of remediation project
<input type="checkbox"/> 909.c.(3), Rule 907.e.: Land treatment of oily waste	<input type="checkbox"/> Rule 906.c.: Director request
<input type="checkbox"/> 909.c.(4), Rule 908.g.: Centralized E&P Waste Management Facility closure	<input type="checkbox"/> Other _____

**SITE INFORMATION** N Multiple Facilities ( in accordance with Rule 909.c. )

Facility Type: SPILL OR RELEASE	Facility ID: 461449	API #: _____	County Name: JACKSON
Facility Name: Janet 0780 3-16H21 3-16H21	Latitude: 40.584779	Longitude: -106.387475	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: SWSW	Sec: 9	Twp: 7N	Range: 80W Meridian: 6 Sensitive Area? Yes

**SITE CONDITIONS**

General soil type - USCS Classifications GP Most Sensitive Adjacent Land Use Livestock Grazing

Is domestic water well within 1/4 mile? No Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? No

**Other Potential Receptors within 1/4 mile**

Grizzly Creek is located approximately 0.2 miles from the release location. Adjacent water well permits were reviewed to determine groundwater depth. Water well permit number 73634 is a stock well, drilled to a total depth of 12 feet BGS, and it's first beneficial use was in 1960. Water well permit number 73634 is located 0.7 miles NW of release location. Water well permit number 73212-A, permitted in 1994, recorded a static water level of 7 feet BGS. Water well permit number 73212-A is located 0.75 miles NW of release location. Groundwater elevations are estimated to be 7 feet (below ground surface) near Grizzly Creek. Elevation of the site is approximately 25 feet higher than Grizzly Creek and the estimated groundwater elevations is estimated to be 25-30 feet bgs onsite.

# SITE INVESTIGATION PLAN

## TYPE OF WASTE:

- |  |  |  |
|--|--|--|
| <input checked="" type="checkbox"/> E&P Waste      | <input type="checkbox"/> Other E&P Waste             | <input type="checkbox"/> Non-E&P Waste |
| <input checked="" type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids             |  |
| <input checked="" type="checkbox"/> Oil            | <input type="checkbox"/> Tank Bottoms                |  |
| <input type="checkbox"/> Condensate                | <input type="checkbox"/> Pigging Waste               |  |
| <input type="checkbox"/> Drilling Fluids           | <input type="checkbox"/> Rig Wash                    |  |
| <input type="checkbox"/> Drill Cuttings            | <input type="checkbox"/> Spent Filters               |  |
|  | <input type="checkbox"/> Pit Bottoms                 |  |
|  | <input type="checkbox"/> Other (as described by EPA) |  |

## DESCRIPTION OF IMPACT

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	Approximately 450 square feet.	Form 19 Supplemental Investigation

## INITIAL ACTION SUMMARY

Description of initial action or emergency response measures take to abate, investigate, and/or remediate impacts associated with E&P Waste.

Initial Form 19 was submitted 1/24/2019. At 1115 on 1/23/2019 well testers noticed a leak on the Janet 3 dump line leaving the allocation dual pack vessel. They immediately shut in the well and called the night pumper. When the night pumper arrived they had shut down the Janet 4 as well because these two wells use the same truck line. All lines to the associated wells were isolated. A hydro vac truck was then used to recover released fluid. The equipment that failed (4"x2" swage) was replaced.

## PROPOSED SAMPLING PLAN

### Proposed Soil Sampling

Will soil samples be collected as part of this investigation? ( Number, type (grab/composite), analyses, and locations of samples ):

On 1/30/2019, two soil grab samples were collected (1-2 inches in depth) within the spill area to evaluate the potential for soil to be impacted by the spill. Samples were screened for the presence of hydrocarbons with a photoionization detector (PID) and submitted to Pace/ESC Labs for COGCC Table 910-1 Analyses.

### Proposed Groundwater Sampling

Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

### Proposed Surface Water Sampling

Will surface water samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

### Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

# SITE INVESTIGATION REPORT

## SAMPLE SUMMARY

### Soil

Number of soil samples collected 2

Number of soil samples exceeding 910-1 2

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 450

### NA / ND

--            Highest concentration of TPH (mg/kg) 1940

--            Highest concentration of SAR 9.19

BTEX > 910-1 No

Vertical Extent > 910-1 (in feet) 0

### Groundwater

Number of groundwater samples collected 0

Was extent of groundwater contaminated delineated? No

Depth to groundwater (below ground surface, in feet)           

Number of groundwater monitoring wells installed           

Number of groundwater samples exceeding 910-1           

           Highest concentration of Benzene (µg/l)           

           Highest concentration of Toluene (µg/l)           

           Highest concentration of Ethylbenzene (µg/l)           

           Highest concentration of Xylene (µg/l)           

           Highest concentration of Methane (mg/l)           

### Surface Water

0 Number of surface water samples collected

           Number of surface water samples exceeding 910-1

If surface water is impacted, other agency notification may be required.

## OTHER INVESTIGATION INFORMATION

Were impacts to adjacent property or offsite impacts identified?

Were background samples collected as part of this site investigation?

Was investigation derived waste (IDW) generated as part of this investigation?

Volume of solid waste (cubic yards)           

Volume of liquid waste (barrels)           

Is further site investigation required?

# REMEDIAL ACTION PLAN

## SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

SandRidge has and will continue to conduct source removal of the impacted soil via dig and haul activities.

## REMEDIATION SUMMARY

Describe how remediation of existing impacts to soil and groundwater is to be accomplished (i.e. summarize remedial action plan). Provide a brief narrative description including: technical justification, schedule for implementation, estimated time to attain NFA status, plus plans and specifications for the selected remedial action technology.

Hydrovac and excavation equipment have removed the majority of impacted materials but oil staining remains on the surface in spots due to limitations of excavating in frozen ground conditions. Surface staining will be excavated when conditions allow. The necessity for excavation into the subsurface will be further identified as material is removed and will be dependent on the approval of the COGCC. Impacted materials will be disposed at a properly licensed disposal facility. Clean backfill material will be spread on location when confirmation soil samples confirm all impacted materials have been removed.

## Soil Remediation Summary

In Situ

Ex Situ

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

Yes \_\_\_\_\_ Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) \_\_\_\_\_ 225

\_\_\_\_\_ Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or COGCC Facility ID # \_\_\_\_\_ 211979

\_\_\_\_\_ Natural Attenuation

No \_\_\_\_\_ Excavate and onsite remediation

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ Land Treatment

\_\_\_\_\_ Bioremediation (or enhanced bioremediation)

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ Other \_\_\_\_\_

## Groundwater Remediation Summary

\_\_\_\_\_ Bioremediation ( or enhanced bioremediation )

\_\_\_\_\_ Chemical oxidation

\_\_\_\_\_ Air sparge / Soil vapor extraction

\_\_\_\_\_ Natural Attenuation

\_\_\_\_\_ Other \_\_\_\_\_

## GROUNDWATER MONITORING

If groundwater has been impacted, describe proposed monitoring plan, including # of wells or sample points, monitoring schedule, analytical methods, points of compliance. Attach a groundwater monitoring location diagram.

\_\_\_\_\_

# REMEDATION PROGRESS UPDATE

## PERIODIC REPORTING

Frequency:  Quarterly  Semi-Annually  Annually  Other \_\_\_\_\_

Report Type:  Groundwater Monitoring  Land Treatment Progress Report  O&M Report

Other \_\_\_\_\_

## WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? \_\_\_\_\_

Describe beneficial use, if any, of E&P Waste derived from this remediation project:

Volume of E&P Waste (solid) in cubic yards \_\_\_\_\_

E&P waste (solid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

Volume of E&P Waste (liquid) in barrels \_\_\_\_\_

E&P waste (liquid) description \_\_\_\_\_

COGCC Disposal Facility ID #, if applicable: \_\_\_\_\_

Non-COGCC Disposal Facility: \_\_\_\_\_

## RECLAMATION PLAN

### RECLAMATION PLANNING

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing.

The facility is presently in use and reclamation activities are not warranted at this time onsite.

Is the described reclamation complete? \_\_\_\_\_

Does the reclamation described herein constitute interim or final reclamation of the Oil and Gas Location?

Interim?  Final?

Did the Surface Owner approve the seed mix? \_\_\_\_\_

If NO, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

### PRIOR DATES

Date of Surface Owner notification/consultation, if required. 01/24/2019

Actual Spill or Release date, if known. 01/23/2019

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 01/30/2019

Date of commencement of Site Investigation. 01/30/2019

Date of completion of Site Investigation. 01/30/2019

### REMEDIAL ACTION DATES

Date of commencement of Remediation. 01/23/2019

Date of completion of Remediation. \_\_\_\_\_

### SITE RECLAMATION DATES

Date of commencement of Reclamation. \_\_\_\_\_

Date of completion of Reclamation. \_\_\_\_\_

**OPERATOR COMMENT**

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I hereby certify all statements made in this form are to the best of my knowledge true, correct, and complete.

Signed: Max Moran \_\_\_\_\_

Title: Environmental Scientist \_\_\_\_\_

Submit Date: \_\_\_\_\_

Email: max.moran@absarokasolutions.com \_\_\_\_\_

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: \_\_\_\_\_

Date: \_\_\_\_\_

Remediation Project Number: \_\_\_\_\_

**COA Type**

**Description**

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**Attachment Check List**

Upon approval, the approved Form 27 and all listed attachments will be indexed to the Remediation Project file. Only the approved Form 27 will also be indexed to the related Facilities.

**Att Doc Num**

**Name**

401940683	ANALYTICAL RESULTS
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Total Attach: 1 Files

**General Comments**

**User Group**

**Comment**

**Comment Date**

		Stamp Upon Approval
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Total: 0 comment(s)