

State of Colorado
Oil and Gas Conservation Commission

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401213915
Receive Date:
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Report taken by:
CARLOS LUJAN

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 INFORMATON

| | | |
|---|--|------------------------------|
| Name of Operator: <u>URSA OPERATING COMPANY LLC</u> | Operator No: <u>10447</u> | Phone Numbers |
| Address: <u>792 BUCKHORN DR</u> | | Phone: <u>(970) 625-9922</u> |
| City: <u>RIFLE</u> State: <u>CO</u> Zip: <u>81650</u> | | Mobile: <u>()</u> |
| Contact Person: <u>Dwayne Knudson</u> | Email: <u>dknudson@ursaresources.com</u> | |

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 10074 Initial Form 27 Document #: 401213915

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 Facilites (in accordance with Rule 909.c.)

| | | | |
|--|----------------------------|-------------------------------|---|
| Facility Type: <u>SPILL OR RELEASE</u> | Facility ID: <u>448546</u> | API #: _____ | County Name: <u>GARFIELD</u> |
| Facility Name: <u>SPILL/RELEASE POINT</u> | Latitude: <u>39.459954</u> | Longitude: <u>-108.014076</u> | |
| ** correct Lat/Long if needed: Latitude: _____ | | Longitude: _____ | |
| QtrQtr: <u>SESE</u> | Sec: <u>5</u> | Twp: <u>7S</u> | Range: <u>95W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u> |

SITE CONDITIONS

General soil type - USCS Classifications CL Most Sensitive Adjacent Land Use Private landowner ~500 to the west

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

Is groundwater less than 20 feet below ground surface? No

Other Potential Receptors within 1/4 mile

Various domesitic water wells present witihin 1/4 miles of the pad.

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 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 | ~6" | Confirmation data and field screening |

INITIAL ACTION SUMMARY

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

Vac trucks were utilized to remove the free standing liquids within the containment. Tank #3 was drained of the liquids to be removed and inspected by contractor personnel.

A sample was collected from within the earthen bermed containment at the furthest point to the north (SP1) where soils were accessible. Sampling results indicated that soils did not exceed COGCC Table 910-1 thresholds with the exception of sodium absorption ratio (SAR). Additionally, field screening of the soils within the containment, as well as outside of containment were conducted at various depths, but not extending into the bentonite liner that lies ~12-18 inches below the surface. Please see Figure 1 for the sample location and field screening map.

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):

To date, two (2) samples have been collected (SP1 and SP 2) within the earthen bermed containment. Various field screening samples have been collected within and outside of the containment. Additional sampling will consist of confirmation sampling within the earthen bermed area where the tanks are currently located and soils cannot be visually inspected or screened until late March or early April 2017.

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):

See attached Site Investigation Work Plan. Additional sampling and analysis will take place to determine vertical extent of impact for excavation and remediation. Disposal of impacted soils will occur at a properly permitted and approved disposal facility.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 2

Number of soil samples exceeding 910-1 1

Was the areal and vertical extent of soil contamination delineated? No

Approximate areal extent (square feet) 0

NA / ND

-- Highest concentration of TPH (mg/kg) 1522

-- Highest concentration of SAR 25.4

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) 122'

Number of groundwater monitoring wells installed 0

Number of groundwater samples exceeding 910-1 0

NA Highest concentration of Benzene (µg/l)

NA Highest concentration of Toluene (µg/l)

NA Highest concentration of Ethylbenzene (µg/l)

NA Highest concentration of Xylene (µg/l)

NA Highest concentration of Methane (mg/l)

Surface Water

0 Number of surface water samples collected

0 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?

Samples from the pad surface were collected on the eastern side, outside of the sound water to determine if fill material contributed to SAR exceedance in SP1. The same samples will be used for arsenic and inorganic exceedance as the fill material differs from the actual background soils on the adjacent land.

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?

Additional sampling and screening needed to determine extent of impacts under the frac tanks along the western side of the pad.

REMEDIAL ACTION PLAN

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

The leaking tank has been taken out of commission and will be repaired. A tank inspection will be completed prior to tank being placed back into service. Impacted material will be excavated and profiled for disposal.

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.

until the tanks along the western side of the pad can be removed (late March or early April 2017), vac trucks will be utilized to remove any accumulation of water due to precipitation events. Once tanks are removed, additional sampling and field screening will be completed to determine the vertical and horizontal extent of impacts. Impacted material will be excavated and profiled for disposal to an approved waste disposal facility. Backfill material will be determined at the time of remediation completion to ensure pad integrity for future operations in that area.

Soil Remediation Summary

In Situ

- _____ Bioremediation (or enhanced bioremediation)
- _____ Chemical oxidation
- _____ Air sparge / Soil vapor extraction
- _____ Natural Attenuation
- _____ Other _____

Ex Situ

- _____ Excavate and offsite disposal
- _____ If Yes: Estimated Volume (Cubic Yards) _____
- _____ Name of Licensed Disposal Facility or COGCC Facility ID # _____
- _____ Excavate and onsite remediation
- _____ 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.

REMEDIATION 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.

Backfill will consist of the same material used to construct the pad, or an alternate fill determined at the time completion to ensure pad integrity.

Is the described reclamation complete? No _____

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. 11/29/2016

Actual Spill or Release date, if known. 11/29/2016

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 11/30/2016

Date of commencement of Site Investigation. _____

Date of completion of Site Investigation. _____

REMEDIAL ACTION DATES

Date of commencement of Remediation. _____

Date of completion of Remediation. _____

SITE RECLAMATION DATES

Date of commencement of Reclamation. _____

Date of completion of Reclamation. _____

OPERATOR COMMENT

Please forward onto Carlos Lujan for review

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

Signed: Kris Rowe

Title: Env. Consultant

Submit Date: 03/02/2017

Email: krowe@hrlcomp.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: CARLOS LUJAN

Date: 03/02/2017

Remediation Project Number: 10074

COA Type**Description**

| | |
|--|--|
| | |
|--|--|

Attachment Check List**Att Doc Num****Name**

| | |
|-----------|---------------------------|
| 401213915 | FORM 27-INITIAL-SUBMITTED |
| 401223574 | REMEDIAL ACTION PLAN |

Total Attach: 2 Files

General Comments**User Group****Comment****Comment Date**

| | | |
|---------------|--|------------|
| Environmental | The Tompkins Pad Produced Water Release Remediation Plan is attached to this e-form 27 | 03/02/2017 |
|---------------|--|------------|

Total: 1 comment(s)