

# State of Colorado Oil and Gas Conservation Commission

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Report taken by:

## Site Investigation and Remediation Workplan (Supplemental 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.

Closure request is not available for an Initial Site Investigation and Remediation Workplan.

### OPERATOR INFORMATION

Name of Operator: <u>BENCHMARK ENERGY LLC</u>	Operator No: <u>10380</u>	<b>Phone Numbers</b>
Address: <u>PO BOX 8747</u>		Phone: <u>(303) 894-2100 x5181</u>
City: <u>PRATT</u>	State: <u>KS</u>	Zip: <u>67124</u>
Contact Person: <u>James Hix - East OWP EPS</u>	Email: <u>james.hix@state.co.us</u>	Mobile: <u>(303) 905-5341</u>

### PROJECT, PURPOSE & SITE INFORMATION

#### PROJECT INFORMATION

Remediation Project #: 18166 Initial Form 27 Document #: 402694706

#### PURPOSE INFORMATION

- ☐ Rule 913.c.(1): Pit or Cuttings Trench closure.
- ☐ Rule 913.c.(2): Buried or partially buried vessel closure, which will be by removal.
- ☐ Rule 913.c.(3): Remediation of Spill and Releases pursuant to Rule 912.
- ☐ Rule 913.c.(4): Land treatment of Oily Waste pursuant to Rule 905.e.
- ☐ Rule 913.c.(5): Closure of Centralized E&P Waste Management Facilities pursuant to Rule 907.h.
- ☐ Rule 913.c.(6): Remediation of impacted Groundwater pursuant to Rule 915.e.(3).D, and the contaminant concentrations in Table 915-1.
- ☐ Rule 913.c.(7): Investigation and remediation of natural gas in soil or Groundwater.
- ☐ Rule 913.c.(8): When requested by the Director due to any potential risk to soil, Groundwater, or surface water.
- ☐ Rule 913.c.(9): Decommissioning of Oil and Gas Facilities.
- ☒ Rule 913.g: Changes of Operator.
- ☐ Rule 915.b: Request to leave elevated inorganics in situ.
- ☒ Other: Well Cut and Cap

#### SITE INFORMATION

No Multiple Facilities

Facility Type: <u>WELL</u>	Facility ID: <u></u>	API #: <u>075-60014</u>	County Name: <u>LOGAN</u>
Facility Name: <u>LOGAN J SAND UNIT (OWP) 4-24</u>	Latitude: <u>40.682788</u>	Longitude: <u>-103.356853</u>	
** correct Lat/Long if needed: Latitude: <u></u>		Longitude: <u></u>	
QtrQtr: <u>SESE</u>	Sec: <u>1</u>	Twp: <u>8N</u>	Range: <u>54W</u>
Meridian: <u>6</u>	Sensitive Area? <u>Yes</u>		

#### SITE CONDITIONS

General soil type - USCS Classifications SW Most Sensitive Adjacent Land Use crop

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**

HPH: no; no bldgs; freshwater ponds ~0.20 mi NW

**SITE INVESTIGATION PLAN****TYPE OF WASTE:**☒ **E&P Waste** ☐ **Other E&P Waste** ☒ **Non-E&P Waste**☒ Produced Water ☐ Workover Fluids no waste generated☒ Oil ☐ Tank Bottoms☐ Condensate ☐ Pigging Waste☐ Drilling Fluids ☐ Rig Wash☐ Drill Cuttings ☐ Spent Filters☐ Pit Bottoms☐ Other (as described by EPA) \_\_\_\_\_**DESCRIPTION OF IMPACT**

Impacted?	Impacted Media	Extent of Impact	How Determined
Yes	SOILS	Investigation Pending	laboratory analysis

**INITIAL ACTION SUMMARY**

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

Pursuant to COGCC Rule 911 a site investigation will be conducted pertaining to the LOGAN J SAND UNIT 4-24 wellhead cut and cap. The wellhead will be cut and capped per COGCC rules. This is an orphan well. The flowline will be mapped during the well cut and cap process. Flowline removal will happen at some later date.

**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 ):

A grab soil sample will be collected at the base of the excavation or the area showing the highest degree of impact during field screening activities at the wellhead excavation. A grab confirmation soil sample will be collected at the wellhead excavation. Soil samples will be analyzed by a certified laboratory for TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons) organic compounds in soil per COGCC Table 915-1, and EC, SAR, pH, and boron. All samples collected will be analyzed by a certified laboratory using approved COGCC laboratory analysis methods.

**Proposed Groundwater Sampling**☒ Will groundwater samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

If groundwater is encountered during the site investigation a grab groundwater will be collected and analyzed for all organic compounds per COGCC Table 915-1.

**Proposed Surface Water Sampling**☐ Will surface water samples be collected as part of this investigation? ( Number, analyses, and locations of samples ):

Surface water samples are not expected to be collected as part of this investigation.

**Additional Investigative Actions**☐ Additional alternative investigative actions described in attached Site Investigation Plan ( summary ):

Visual inspection of the wellhead area will occur during abandonment activities. Field personnel will field screen all disturbed areas using visual and olfactory senses to determine if laboratory confirmation sampling is required. The COGCC Wellhead Closure Checklist will be utilized and filled out during the abandonment process. A photolog will be submitted on the Subsequent Form 27.

**SITE INVESTIGATION REPORT****SAMPLE SUMMARY**

**Soil**

Number of soil samples collected 8

Number of soil samples exceeding 915-1 5

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

Approximate areal extent (square feet) 75

**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 915-1

**NA / ND**

-- Highest concentration of TPH (mg/kg) 599

-- Highest concentration of SAR 6

BTEX &gt; 915-1 No

Vertical Extent &gt; 915-1 (in feet) 9

**Surface Water**

0 Number of surface water samples collected

Number of surface water samples exceeding 915-1

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?

Background soil samples, Sample ID #312345\_BK01@3' and 312345\_BK02@3', were collected as part of this site investigation. Results for soil reclamation suitability parameters indicated that soil pH, electrical conductance, SAR, boron, and metals met Table 915-1 cleanup soil screening levels (SSL).

☐ 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**

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? No

**SOURCE REMOVAL SUMMARY**

Describe how source is to be removed.

Soils impacted with E&P waste from around the wellhead will be excavated, temporarily stockpiled on location, and disposed at a commercial disposal facility.

**REMEDIAL ACTION 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.

The E&P Waste impacted soils will be excavated, hauled to a commercial disposal facility. If the horizontal and vertical extent of the E&P Waste impacts cannot be defined or removed during the initial remediation, then additional site investigation and/or remediation will be performed at a later date under an approved supplemental Form 27. Site data will be evaluated and remediation technologies implemented to meet Table 915-1 soil residential screening levels, protection of groundwater screening levels, or Table 915-1 groundwater and WQCC Regulation 41 numeric and narrative levels as applicable to site conditions.

**Soil Remediation Summary**☐ In Situ☐ Ex Situ

Bioremediation ( or enhanced bioremediation )

Excavate and offsite disposal

\_\_\_\_\_ Chemical oxidation  
\_\_\_\_\_ Air sparge / Soil vapor extraction  
\_\_\_\_\_ Natural Attenuation  
\_\_\_\_\_ Other \_\_\_\_\_

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

#### Approved Reporting Schedule:

☐ Quarterly☐ Semi-Annually☐ Annually☒ Other

#### ☐ Request Alternative Reporting Schedule:

☐ Semi-Annually☐ Annually☐ Other

Rule 913.e:

After initial approval of a Form 27, the Operator will provide quarterly update reports in a Supplemental Form 27 to document progress of site investigation and remediation, unless an alternative reporting schedule has been requested by the Operator and approved by the Director. The Director may request a more frequent reporting schedule based on site-specific conditions.

#### Report Type:

☐ Groundwater Monitoring☐ Land Treatment Progress Report☐ O&M Report☒ Other Subsequent Report

### Adequacy of Operator's General Liability Insurance and Financial Assurance

Describe the adequacy of the Operator's general liability insurance and Financial Assurance to fully address the anticipated costs of Remediation, including the estimated remaining cost for this project (below).

If this information has been provided on a Form 27 within the last 12 months, provide the Document Number of that form.

The BENCHMARK ENERGY LLC - LOGAN J SAND UNIT (OWP) #4-24 well (Location #312345) is in the COGCC Orphaned Well Program.

Operator anticipates the remaining cost for this project to be: \$ 50000

### WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? No

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:

## REMEDIATION COMPLETION REPORT

### REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? No

If YES:

☐

Compliant with Rule 913.h.(1).

☐

Compliant with Rule 913.h.(2).

☐

Compliant with Rule 913.h.(3).

Do all soils meet Table 915-1 standards?

Does the previous reply indicate consideration of background concentrations?

Does Groundwater meet Table 915-1 standards?

Is additional groundwater monitoring to be conducted? \_\_\_\_\_

Operator shall comply with the COGCC 1000-Series Reclamation Requirements for all impacted and disturbed areas.

## 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.

Reclamation will be in accordance with COGCC 1000 Series Rules under a separate scope of work. Reclamation planning will include discussion of existing and new grade recontouring, the method and testing of compaction alleviation, consulting the surface owner, and a reseeding program consisting of new seed, seed mix, and noxious weed prevention. Final reclamation will be performed in accordance with Rule 1004.

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 provide the seed mix? \_\_\_\_\_

If YES, does the seed mix comply with local soil conservation district recommendations? \_\_\_\_\_

Did the local soil conservation district provide the seed mix? \_\_\_\_\_

### SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. \_\_\_\_\_

Proposed date of completion of Reclamation. \_\_\_\_\_

## IMPLEMENTATION SCHEDULE

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

### PRIOR DATES

Date of Surface Owner notification/consultation, if required. \_\_\_\_\_

Actual Spill or Release date, or date of discovery. \_\_\_\_\_

### SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 06/19/2021

Proposed site investigation commencement. 08/05/2021

Proposed completion of site investigation. 03/30/2023

### REMEDIAL ACTION DATES

Proposed start date of Remediation. \_\_\_\_\_

Proposed date of completion of Remediation. \_\_\_\_\_

Per Rule 913.d.(2): Any change from the approved implementation schedule will be requested at least 14 days in advance, and the Operator may not make the change without the Director's approval.

☐ Change from approved implementation schedule per Rule 913.d.(2).

Basis for change in implementation schedule:

This oil and gas location is in the COGCC Orphaned Well Program. Exact timing of site investigation and remediation activities are subject to change dependent on OWP project funding, contractor availability, and the prioritization score within the OWP site list.

**OPERATOR COMMENT**

The BENCHMARK ENERGY LLC - LOGAN J SAND UNIT (OWP) 4-24 oil and gas well (Location ID#312345) is in the COGCC Orphaned Well Program. This supplemental Form 27 presents the site investigation results for work performed on 02/13/2023 and 04/18/2023. Soil sample pH results for three samples collected at 5 ft below ground surface (bgs) from around the pump jack house were above Table 915-1 cleanup level of 8.3. Total petroleum hydrocarbons (TPH) concentrations were above 500 mg/kg in soil sample 312345\_WH01\_B02@10' collected at the wellhead.

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

Signed: James Hix

Title: East OWP EPS

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

Email: james.hix@state.co.us

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: 18166

**COA Type****Description**

0 COA	

**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**

403408249	SITE INVESTIGATION REPORT
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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)