

State of Colorado
Oil and Gas Conservation Commission

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Report taken by:
John Heil

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.

Refer to Rules 340, 905, 906, 907, 908, 909, and 910

OPERATOR INFORMATION

Name of Operator: <u>BARGATH LLC</u>	Operator No: <u>10128</u>	Phone Numbers
Address: <u>2717 COUNTY ROAD 215 SUITE 200</u>		Phone: <u>(801) 5846746</u>
City: <u>PARACHUTE</u> State: <u>CO</u> Zip: <u>81635</u>		Mobile: <u>(801) 2441219</u>
Contact Person: <u>Aaron Galer</u>	Email: <u>aaron.galer@williams.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION
Remediation Project #: 6925 Initial Form 27 Document #: 2223631

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: <u>GAS COMPRESSOR STATION</u>	Facility ID: <u>424530</u>	API #: _____	County Name: <u>GARFIELD</u>
Facility Name: <u>CALLAHAN COMPRESSOR STATION</u>	Latitude: <u>39.468400</u>	Longitude: <u>-108.086900</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SENE</u>	Sec: <u>3</u>	Twp: <u>7S</u>	Range: <u>96W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

SITE CONDITIONS

General soil type - USCS Classifications SC Most Sensitive Adjacent Land Use Agricultural

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

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 type="checkbox"/> Produced Water | <input type="checkbox"/> Workover Fluids | _____ |
| <input type="checkbox"/> Oil | <input type="checkbox"/> Tank Bottoms | |
| <input checked="" type="checkbox"/> Condensate | <input type="checkbox"/> Pigging Waste | |
| <input type="checkbox"/> Drilling Fluids | <input type="checkbox"/> Rig Wash | |
| <input checked="" 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	GROUNDWATER	Approx. 100'W x 230'L	Monitoring Results
Yes	SOILS	Approx. 40'L x 15'W x 30'D	Soil Borings

INITIAL ACTION SUMMARY

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

The broken pipeline was immediately isolated and exposed for repair. Trenching and probing was completed across the site to delineate the extent of impacts. Groundwater and surface water samples were collected to evaluate if impacts were present. Approximately 15 cubic yards of condensate impacted soil was excavated and disposed of.

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):

Six boring will be advanced to approximately 35-feet below ground surface in the locations presented in the attached scope of work, figure 4. A minimum of three samples will be collected from each boring from the depth with the highest field screening results from each ten-foot interval. Laboratory analysis will include BTEX, TPH-GRO, and TPH-DRO.

Proposed Groundwater Sampling

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

If soil contamination is observed to a depth at which groundwater is encountered, a monitoring well will be completed, purged, and sampled for BTEX, TPH-GRO, and TPH-DRO. In addition, quarterly sampling of six monitoring wells will continue.

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 4
Number of soil samples exceeding 910-1 3
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 600

NA / ND

-- Highest concentration of TPH (mg/kg) 956
NA Highest concentration of SAR
BTEX > 910-1 Yes
Vertical Extent > 910-1 (in feet) 30

Groundwater

Number of groundwater samples collected 816
Was extent of groundwater contaminated delineated? Yes
Depth to groundwater (below ground surface, in feet) 30'
Number of groundwater monitoring wells installed 17
Number of groundwater samples exceeding 910-1 314

-- Highest concentration of Benzene (µg/l) 20000
-- Highest concentration of Toluene (µg/l) 46000
-- Highest concentration of Ethylbenzene (µg/l) 3100
-- Highest concentration of Xylene (µg/l) 37000
NA Highest concentration of Methane (mg/l)

Surface Water

4 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?

Monitoring wells MW-6 and MW-7 were installed as background monitoring locations. MW-6 field screening indicated soil contamination present at 14'-15.5' with a PID results of 2,288 ppm, but no detections of BTEX or TPH. MW-7 field screening indicated no soil contamination and no detections of BTEX or TPH.

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?

Yes, see attached scope of work.

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.

THE COMPROMISED PIPE FITTING HAS BEEN REPAIRED THUS PREVENTING ANY ADDITIONAL FLUID LOSS TO THE SUBSURFACE SOILS.

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.

The contaminated soil surrounding the leaking pipe was excavated until the depth of the excavation was determined unsafe and compromised the nearby building integrity. ORC Advanced was injected into the groundwater downgradient of the release area to form a barrier for dissolved-phase contaminants and enhance natural attenuation. Additionally, ORC Advanced was injected upgradient and within the source area to enhance natural attenuation.

Soil Remediation Summary

In Situ

Ex Situ

No Bioremediation (or enhanced bioremediation)

Yes Excavate and offsite disposal

No Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) 15

No Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or COGCC Facility ID # _____

Yes Natural Attenuation

Excavate and onsite remediation

No Other _____

Land Treatment

Bioremediation (or enhanced bioremediation)

Chemical oxidation

Other _____

Groundwater Remediation Summary

Bioremediation (or enhanced bioremediation)

Chemical oxidation

Air sparge / Soil vapor extraction

Yes 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.

Monthly and quarterly groundwater sampling has occurred since the release was identified and investigation completed in 2012. The current monitoring plan includes six monitoring wells analyzed for BTEX, TPH, Chlorides, TDS, and sulfate.

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? Yes _____

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

None

Volume of E&P Waste (solid) in cubic yards _____ 15

E&P waste (solid) description condensate contaminated soil _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: ECDC Environmental _____

Volume of E&P Waste (liquid) in barrels _____ 0

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 _____

Do all soils meet Table 910-1 standards? _____

Does the previous reply indicate consideration of background concentrations? _____

Are the only residual soil impacts pH, SAR, or EC at depths greater than 3 feet below ground surface? _____

Does Groundwater meet Table 910-1 standards? _____

Is additional groundwater monitoring to be conducted? _____

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.

AS THIS IS A WORKING FACILITY, THERE ARE CURRENTLY NO PLANS FOR ANY RECLAMATION ON THE FACILITY.

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. _____

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). _____

Date of commencement of Site Investigation. 12/27/2011

Date of completion of Site Investigation. 02/29/2012

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

This site investigation is tentatively scheduled to be completed the week of December 14th. I will notify the COGCC PM once the dates are set.

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

Signed: Aaron Galer

Title: Environmental Specialist

Submit Date: 11/09/2020

Email: aaron.galer@williams.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: John Heil

Date: 12/16/2020

Remediation Project Number: 6925

COA Type

Description

	Remediate soils and groundwater to Table 910-1 concentration levels.
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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

402508821	FORM 27-SUPPLEMENTAL-SUBMITTED
402528086	SITE INVESTIGATION PLAN
402528275	ANALYTICAL RESULTS

Total Attach: 3 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)