

State of Colorado Oil and Gas Conservation Commission

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



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401448190

Receive Date:

01/12/2018

Report taken by:

RICK ALLISON

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>BAYSWATER EXPLORATION & PRODUCTION LLC</u>	Operator No: <u>10261</u>	Phone Numbers
Address: <u>730 17TH ST STE 500</u>		Phone: <u>(303) 8932503</u>
City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>		Mobile: <u>()</u>
Contact Person: <u>Meagan Miller</u>	Email: <u>mmiller@bayswater.us</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 10604Initial Form 27 Document #: 401433998

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>SPILL OR RELEASE</u>	Facility ID: <u>452298</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>Meyring 13-27 flowline</u>	Latitude: <u>40.541333</u>	Longitude: <u>-104.654861</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWSW</u>	Sec: <u>27</u>	Twp: <u>7N</u>	Range: <u>65W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications CL Most Sensitive Adjacent Land Use Cropland

Is domestic water well within 1/4 mile? Yes Is surface water within 1/4 mile? Yes

Is groundwater less than 20 feet below ground surface? Yes

Other Potential Receptors within 1/4 mile

Loan Treen Creek

SITE INVESTIGATION PLAN

TYPE OF WASTE:

☒ E&P Waste

☐ Other E&P Waste

☐ Non-E&P Waste

☐ Produced Water

☐ Workover Fluids

☒ 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	GROUNDWATER	water is being vac trucked daily	vac trucks and booms
Yes	SOILS	still determining	excavation and removal

INITIAL ACTION SUMMARY

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

Removed both points of failed flowline, pressure tested the liner (shown to have good integrity), and have dug out each area. The flowlines will be seamed to new flowlines and pressure tested. The East Dig site is currently believed to be clean and is ready for sampling. The West side is continuing to be monitored and cleaned as needed. Booms are in place within the dug out area, as well as by the creek to prevent any contamination of creek water.

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):

Please see the attached diagrams and analysis

Proposed Groundwater Sampling

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

Please see the attached diagrams and analysis

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):

PDC will continue to monitor and clean/vac out West Side and continue to sample until area is clean.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 14
Number of soil samples exceeding 910-1 2
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 5000

NA / ND

-- Highest concentration of TPH (mg/kg) 389
NA Highest concentration of SAR
BTEX > 910-1 Yes
Vertical Extent > 910-1 (in feet) 8

Groundwater

Number of groundwater samples collected 4
Was extent of groundwater contaminated delineated? Yes
Depth to groundwater (below ground surface, in feet) 4'
Number of groundwater monitoring wells installed 0
Number of groundwater samples exceeding 910-1 3

-- Highest concentration of Benzene (µg/l) 1215
-- Highest concentration of Toluene (µg/l) 1964
-- Highest concentration of Ethylbenzene (µg/l) 103
-- Highest concentration of Xylene (µg/l) 726
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?

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

Volume of solid waste (cubic yards) 3320 Volume of liquid waste (barrels) 10460

☒ Is further site investigation required?

This facility has been transfered to PDC - Therefore, PDC will continue the groundwater monitoring program for this investigation. Four quarters of groundwater monitoring showing compliance with Table 910-1 Concentration Levels are required for site closure. Please see the attached sampling results that provide points of compliance for the first round of sampling.

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.

Excavate the contaminated soil. Vac truck out any water that shows an oil sheen, use booms and replace as needed.

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.

Both excavated soil and vacuum trucked contamination was disposed of offsite.

Soil Remediation Summary

☐ In Situ

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Air sparge / Soil vapor extraction

_____ Natural Attenuation

_____ Other _____

☒ Ex Situ

Yes _____ Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards) _____ 3500

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

Yes _____ Other _____ Vacuum truck. Delineation is still being determined

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.

This facility has been transferred to PDC - Therefore, PDC will continue the groundwater monitoring program for this investigation. Four quarters of groundwater monitoring showing compliance with Table 910-1 Concentration Levels are required for site closure. Please see the attached sampling results that provide points of compliance for the first round of sampling.

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? Yes _____

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

No beneficial reuse

Volume of E&P Waste (solid) in cubic yards 3320

E&P waste (solid) description Hydrocarbon bearing soil

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: North Weld Waste Management

Volume of E&P Waste (liquid) in barrels 10460

E&P waste (liquid) description hydrocarbon bearing water

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Fosters Vac Truck company disposed of water.

REMEDATION COMPLETION REPORT

REMEDATION COMPLETION SUMMARY

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

Do all soils meet Table 910-1 standards? Yes _____

Does the previous reply indicate consideration of background concentrations? No _____

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? Yes _____

Is additional groundwater monitoring to be conducted? Yes _____

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.

This facility has been transferred to PDC - Therefore, PDC will continue the groundwater monitoring program for this investigation. Four quarters of groundwater monitoring showing compliance with Table 910-1 Concentration Levels are required for site closure. Please see the attached sampling results that provide points of compliance for the first round of sampling.

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. 09/22/2017

Actual Spill or Release date, if known. 09/22/2017

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 09/22/2017

Date of commencement of Site Investigation. 09/22/2017

Date of completion of Site Investigation. 11/02/2017

REMEDIAL ACTION DATES

Date of commencement of Remediation. 09/22/2017

Date of completion of Remediation. 11/04/2017

SITE RECLAMATION DATES

Date of commencement of Reclamation. 11/02/2017

Date of completion of Reclamation.

OPERATOR COMMENT

This facility has been transferred to PDC - Therefore, PDC will continue the groundwater monitoring program for this investigation. Four quarters of groundwater monitoring showing compliance with Table 910-1 Concentration Levels are required for site closure. Please see the attached sampling results that provide points of compliance for the first round of sampling. Bayswater would like to request that this remediation project be transferred to PDC, effective January 4, 2018.

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

Signed: Meagan M. Miller

Title: Environmental Specialist

Submit Date: 01/12/2018

Email: mmiller@bayswater.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: RICK ALLISON

Date: 01/19/2018

Remediation Project Number: 10604

COA Type**Description**

	Operator assuming responsibility for this project should submit a Form 27 Supplemental Report using their Operator number and Remediation 10604.
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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**

401448190	FORM 27-SUPPLEMENTAL-SUBMITTED
401448372	ANALYTICAL RESULTS
401448374	ANALYTICAL RESULTS
401448375	ANALYTICAL RESULTS
401448418	OTHER
401448420	OTHER
401448421	OTHER
401511972	ANALYTICAL RESULTS
401511973	GROUND WATER SAMPLE LOCATION
401511976	ANALYTICAL RESULTS

Total Attach: 10 Files

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

Environmental	Operator resubmitted form with requested groundwater monitoring plan.	01/19/2018
Environmental	Return to Draft: 1. Please change the Remediation Complete to "Will future groundwater monitoring be conducted = Yes." 2. Please supply a proposed groundwater monitoring program. Four quarters of groundwater monitoring showing compliance with Table 910-1 Concentration Levels are required for site closure. 3. Please include a site map showing soil and groundwater sample locations to date, and include locations of proposed monitoring wells.	11/14/2017

Total: 2 comment(s)