

State of Colorado
Oil and Gas Conservation Commission

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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.

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

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>	City: <u>DENVER</u> State: <u>CO</u> Zip: <u>80202</u>	Phone: <u>(303) 893-2503</u>
Contact Person: <u>Andy Verbonitz</u>	Email: <u>averbonitz@bayswater.us</u>	Mobile: <u>()</u>

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 17111 Initial Form 27 Document #: 402611297

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: _____

SITE INFORMATION

No Multiple Facilities

Facility Type: <u>LOCATION</u>	Facility ID: <u>305865</u>	API #: _____	County Name: <u>WELD</u>
Facility Name: <u>DEINES-67N66W 31SENE</u>	Latitude: <u>40.532520</u>	Longitude: <u>-104.815220</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SENE</u>	Sec: <u>31</u>	Twp: <u>7N</u>	Range: <u>66W</u> Meridian: <u>6</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Building Unit 200' South
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

Irrigation Ditch 150' South

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
No	GROUNDWATER	Initial	Laboratory analytical
Yes	SOILS	60 CU	Laboratory analytical 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.

Contamination discovered under separator was excavated and hauled to North Weld Landfill. Groundwater was pulled from the excavations and hauled to licensed injection facility. Confirmation soil and groundwater samples were collected and 100 pounds of activated carbon (COGAC™) were emplaced in the open excavation prior to backfilling.

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):

Confirmation soil samples were collected from the lateral extent of the excavation and from the assessment potholes. Please see attached updated soil table, laboratory analytical reports, and updated Site Map. During monitoring well installation, one soil sample was collected from each boring for analysis of full Table 915-1 and results are also included in the results summary tables.

Proposed Groundwater Sampling

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

Groundwater samples were collected from the open excavation and assessment potholes. Groundwater samples were also collected from the the network of monitoring wells on a quarterly basis. The groundwater sample locations are included on the attached figures.

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):

During excavation phase, two background samples (BG01, BG02) were collected from an adjacent, undisturbed location. EC concentrations exceeded the Table 915-1 allowable concentrations in sample BG02. During monitoring well installation, one additional background sample (SS-12) was collected from the soil boring used to install MW01. Sample SS-12 exceeded the Table 915-1 allowable levels for arsenic, barium, and selenium.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

Number of soil samples collected 26
Number of soil samples exceeding 915-1 19
Was the areal and vertical extent of soil contamination delineated? Yes
Approximate areal extent (square feet) 200

NA / ND

ND Highest concentration of TPH (mg/kg) _____
-- Highest concentration of SAR 1.6
BTEX > 915-1 No
Vertical Extent > 915-1 (in feet) 5

Groundwater

Number of groundwater samples collected 38
Was extent of groundwater contaminated delineated? Yes
Depth to groundwater (below ground surface, in feet) 4
Number of groundwater monitoring wells installed 8
Number of groundwater samples exceeding 915-1 1

-- Highest concentration of Benzene (µg/l) 310
-- Highest concentration of Toluene (µg/l) 270
-- Highest concentration of Ethylbenzene (µg/l) 13
-- Highest concentration of Xylene (µg/l) 87
NA Highest concentration of Methane (mg/l) _____

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?

Two background samples (BG01 and BG02) were collected during initial sampling. Sample BG02 exceeded the Table 915-1 standard for EC at 4.6 mmhos/cm. During monitoring well installation, MW01 was installed up gradient and away from the contamination source area. Soil sample SS-12 was collected from the monitoring well soil boring and exceeded the Table 915-1 Protection of Groundwater Soil Screening Levels for arsenic, barium, and selenium at 7.29 mg/kg, 106 mg/kg, and 0.91 mg/kg, respectively. MW01 groundwater results will also serve as background data for chloride, sulfate, and TDS.

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

Volume of solid waste (cubic yards) 60 Volume of liquid waste (barrels) 153

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.

Approximately 60 cubic yards of potentially impacted soil were excavated and hauled to Waste Management's North Weld Landfill, in Ault, Colorado 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.

To ensure soil met Table 915-1 Protection of Groundwater Soil Screening Levels (PGSSLs), one soil sample was collected from each soil boring during monitoring well installation. Soil sample SS-17 was collected from MW06 soil boring and exceeded the PGSSL for benzo(a)anthracene at a concentration of 0.0191 mg/kg. During quarterly groundwater monitoring, MW06 was sampled for benzo(a)anthracene and results were compared to WQCC Regulation 41 standards. All monitoring well soil boring samples exceeded the PGSSLs for arsenic, barium, and selenium but were within range of the background soil boring sample SS-12 collected from the MW01 boring. Based on background pH data, results for pH in the excavation soil samples are also within range of soil variability at the location.

Based on the excavation soil sample data, the soil boring data, and the quarterly groundwater monitoring data, no further action is necessary. Bayswater is requesting Remediation # 17111 be closed. Please see attached documentation.

Soil Remediation Summary

In Situ

Ex Situ

_____ Bioremediation (or enhanced bioremediation)

Yes _____ Excavate and offsite disposal

_____ Chemical oxidation

If Yes: Estimated Volume (Cubic Yards) _____ 60

_____ Air sparge / Soil vapor extraction

Name of Licensed Disposal Facility or COGCC Facility ID # _____

_____ Natural Attenuation

_____ Excavate and onsite remediation

_____ Other _____

_____ Land Treatment

_____ Bioremediation (or enhanced bioremediation)

_____ Chemical oxidation

_____ Other _____

Groundwater Remediation Summary

Yes _____ Bioremediation (or enhanced bioremediation)

Yes _____ 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.

Following monitoring well installation, groundwater samples were collected quarterly from each of the eight monitoring wells. All groundwater samples were compliant with Table 915-1 allowable levels or the site specific background concentrations identified by MW01 groundwater analytical results. Based on the soil sample results of SS-17, groundwater sample MW06 was also analyzed for benzo(a)anthracene and compared to the WQCC Regulation 41 standards. MW06 groundwater was compliant with the WQCC Regulation 41 standards for benzo(a)anthracene. As of July 2022, all monitoring wells have shown compliant monitoring results for four consecutive quarters. Please see attached quarterly groundwater monitoring reports.

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

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.

Bayswater expects to qualify as an Option 1 operator, as defined in COGCC Rule 702, and will provide updated bonding per the Rules by the defined due dates in 2022. Bayswater currently holds \$305,000 in blanket and excess inactive bonding as well as general liability insurance, as required by Rule 705.

Operator anticipates the remaining cost for this project to be: \$ 1000

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:

All waste was disposed of at licensed disposal facilities.

Volume of E&P Waste (solid) in cubic yards 50

E&P waste (solid) description Hydrocarbon Bearing Soil

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Waste Management's North Weld Landfill, in Ault, Colorado

Volume of E&P Waste (liquid) in barrels 153

E&P waste (liquid) description Potentially impacted groundwater

COGCC Disposal Facility ID #, if applicable:

Non-COGCC Disposal Facility: Licensed injection facility

REMEDIATION COMPLETION REPORT

REMEDIATION COMPLETION SUMMARY

Is this a Final Closure Request for this Remediation Project? Yes

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? Yes

Does the previous reply indicate consideration of background concentrations? Yes

Does Groundwater meet Table 915-1 standards? Yes

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.

Following abandonment and decommissioning, all former locations of oil and gas facilities were re-contoured and reclaimed in accordance with COGCC 1000 series regulations.

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? No

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

Did the local soil conservation district provide the seed mix? No

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 05/12/2021

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. 02/17/2021

Actual Spill or Release date, or date of discovery. 04/12/2021

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 03/15/2021

Proposed site investigation commencement. 04/05/2021

Proposed completion of site investigation. 09/03/2021

REMEDIAL ACTION DATES

Proposed start date of Remediation. _____

Proposed date of completion of Remediation. 07/11/2022

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:

OPERATOR COMMENT

This 2022 Quarterly Update Report includes: 4th consecutive compliant GW monitoring report, previous GW monitoring reports, closure request, and all previously collected data.

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

Signed: Andy Verbonitz

Title: Environmental Coordinator

Submit Date: 08/09/2022

Email: averbonitz@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: 11/16/2022

Remediation Project Number: 17111

COA Type**Description**

	<p>Based on the information presented, it appears that no further remedial action is necessary at this time and the COGCC approves the closure request. However, should future conditions at the site indicate contaminant concentrations in soils exceeding COGCC standards or if groundwater is found to be impacted, then further investigation and/or remediation activities may be required.</p> <p>The surface area disturbed by the remediation activity shall be reclaimed in accordance with the 1000 Series Reclamation Rules. For locations with active ongoing oil and gas operations, comply with Rule 1003 interim reclamation requirements and for locations that will no longer have active oil and gas operations, comply with Rule 1004 Final Reclamation requirements.</p>
1 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**

403104044	FORM 27-SUPPLEMENTAL-SUBMITTED
403130739	SOIL SAMPLE LOCATION MAP
403130744	LOGS
403130745	GROUND WATER ELEVATION MAP
403130756	ANALYTICAL RESULTS
403130757	ANALYTICAL RESULTS
403130758	MONITORING REPORT
403130762	MONITORING REPORT
403130764	MONITORING REPORT
403130765	MONITORING REPORT
403130767	ANALYTICAL RESULTS
403130768	ANALYTICAL RESULTS
403130772	ANALYTICAL RESULTS
403130776	ANALYTICAL RESULTS
403130777	ANALYTICAL RESULTS
403130778	ANALYTICAL RESULTS
403130779	ANALYTICAL RESULTS
403130780	ANALYTICAL RESULTS

Total Attach: 18 Files

Date Run: 11/16/2022 Doc [#403104044]

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)