

State of Colorado
Energy & Carbon Management Commission1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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Document Number:

404115654

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03/06/2025

Report taken by:

Chris Sanchez

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 ECMC 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: STRACHAN EXPLORATION INC	Operator No: 83130	Phone Numbers Phone: (303) 790-9115 Mobile: ()
Address: 992 S 4TH AVE SUITE 100-461		
City: BRIGHTON State: CO Zip: 80601		
Contact Person: Jason Harms	Email: jason@strachanexploration.com	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 39419 Initial Form 27 Document #: 404115654

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

Yes Multiple Facilities

Facility Type: WELL	Facility ID: _____	API #: 011-06060	County Name: BENT
Facility Name: SNIFF E-1	Latitude: 38.052036	Longitude: -102.792035	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: CNW	Sec: 15	Twp: 23S	Range: 48W Meridian: 6 Sensitive Area? No

Facility Type: LOCATION	Facility ID: 321217	API #: _____	County Name: BENT
Facility Name: SNIFF-623S48W 15CNW	Latitude: 38.052036	Longitude: -102.792032	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: CNW	Sec: 15	Twp: 23S	Range: 48W Meridian: 6 Sensitive Area? No

SITE CONDITIONS

General soil type - USCS Classifications SM

Most Sensitive Adjacent Land Use Rangeland

Is domestic water well within 1/4 mile? No

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

Closest Registered DWR Well – Livestock Watering Well Permit 106347 Appx 3,600 feet east of Site. Static water level of 40 feet below ground surface at time of completion

Additional Water Wells – Groundwater well Permit 9290, Approximately 3,400 feet east of site. Static water level of 60 feet below ground surface at time of completion

Nearest Surface Water – Arkansas River approximately 2.44 miles north-northwest of Site.

Nearest Occupied Building –Approximately 1.85 mile southeast of Site.

High Priority Habitat - None

No other potential receptors are located within ¼ mile of the Site

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
UNDETERMINED	SOILS	No known impacts	Investigation pending

INITIAL ACTION SUMMARY

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

Plugging and abandonment of the wellhead and removal of the production equipment at the Sniff E-1 location occurred in February 2021 without a previously submitted and approved Form 27 Site Investigation and Remediation Workplan as identified by ECMC Western Engineering Supervisor Curtis Haverkamp during Form 6 Post-P&A review. In response, this Form 27 Initial serves as past-due notification for the decommissioning of the Sniff E-1 wellhead and related production equipment. See attached Figure 1 for a topographic map of the general location.

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):

Soil samples will be collected via hand-auger from native subsurface soils in the cardinal directions of the former wellhead location at approximately 4 ft-bgs, and adjacent to the cut and capped wellhead at approximately 6 ft-bgs for field-screening purposes. A minimum of one discrete grab confirmation soil sample will be collected for laboratory analysis either in any area of observed hydrocarbon impacts, or adjacent to the cut and capped wellhead. Additionally, a minimum of one discrete grab confirmation soil sample will be collected for laboratory analysis from underneath each former above ground storage tank footprint, and from the location of the former separator/treater. Soil samples will be submitted to an accredited laboratory for analysis of TPH (C6-C36), Table 915-1 Organic Compounds in Soil, Table 915-1 metals, and Table 915-1 Soil Suitability for Reclamation. See the attached Figure 2 for an illustration of the wellhead and proposed soil sample locations.

Proposed Groundwater Sampling

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

If groundwater is encountered, a grab sample will be collected as soon as practical. If contaminated soil is in contact with groundwater or if free product/hydrocarbon sheen are observed, the release will be reported in accordance with Rule 912.b. Groundwater samples will be submitted for laboratory analysis of Table 915-1 Groundwater Inorganic Parameters and Organic Compounds in Groundwater. Based on nearby register DWR groundwater wells, groundwater is anticipated to be greater than 30 ft-bgs at this location.

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):

At least one background soil sample will be collected from native soils not affected by oil and gas activities adjacent to the locations from depths representative of Site grab confirmation soil samples. Background samples will be submitted for ECMC Table 915-1 Soil Suitability for Reclamation Parameters and/or Metals in Soils constituents as needed based on Site grab confirmation soil sample analytical results.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 0

Number of soil samples exceeding 915-1

Was the areal and vertical extent of soil contamination delineated?

Approximate areal extent (square feet)

Highest concentration of TPH (mg/kg)

Highest concentration of SAR

BTEX > 915-1

Vertical Extent > 915-1 (in feet)

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

Highest concentration of Benzene (µg/l)

Highest concentration of Toluene (µg/l)

Highest concentration of Ethylbenzene (µg/l)

Highest concentration of Xylene (µg/l)

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?

☐ 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

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

If a suspected release is identified through soil screening and/or laboratory analysis, soils may be removed and transported to a licensed disposal facility. If all source material cannot be removed during excavation activities, alternative plans will be proposed in subsequent Form 27 supplemental.

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.

If reportable soil impacts, as defined in Rule 912.b., are discovered, a site-specific remediation plan will be developed and submitted via a Supplemental Form 27.

Soil Remediation Summary

☐ In Situ

☐ Ex Situ

Bioremediation (or enhanced bioremediation)

Chemical oxidation

Air sparge / Soil vapor extraction

Natural Attenuation

Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards)

Name of Licensed Disposal Facility or ECMC Facility ID #

Excavate and onsite remediation

Other _____

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

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.

Operator does not have site-specific financial assurance for this project; however, Operator has inactive well, blanket, and surface bonding including Surety IDs 20170089, 20170088, 20160134, 20160133 and 20150065, as well as commercial general liability and/or umbrella/excess insurance meeting the requirements of Rule 705.b. Operator does not anticipate making an insurance claim for this project.

- Assessment activities as outlined herein are proposed.

Costs included herein are estimates only and may change over time based on numerous factors. Accordingly, Operator makes no guarantees as to the accuracy of such cost estimates, thus providing an estimate for the next year below.

Operator anticipates the remaining cost for this project to be: \$ 5000

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

ECMC Disposal Facility ID #, if applicable:

Non-ECMC Disposal Facility:

Volume of E&P Waste (liquid) in barrels

E&P waste (liquid) description

ECMC Disposal Facility ID #, if applicable:

Non-ECMC 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.

Reclamation will be conducted in accordance with COGCC 1004 Series Rules.

Is the described reclamation complete? Yes _____

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). 10/27/2021

Proposed site investigation commencement. 05/05/2025

Proposed completion of site investigation. _____

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:

OPERATOR COMMENT

This Form 27 Initial is being submitted as a past-due notification for the decommissioning of the Sniff E-1 wellhead and related production equipment. Plugging and abandonment of the wellhead and removal of the production equipment at the Sniff E-1 location occurred in February 2021 without a previously submitted and approved Form 27 Site Investigation and Remediation Workplan as identified by ECMC Western Engineering Supervisor Curtis Haverkamp during Form 6 Post-P&A review. Please find attached Figure 1 Topographic Location Map and Figure 2 Proposed Field-screening and Analytical Soil Sample locations.

Since the wellhead cut and cap and equipment removal activities, the wellhead bellhole excavation has been backfilled, and the entire area is in process of final reclamation. To minimize disturbance to reclaimed areas, Strachan Exploration proposes to use a bobcat with either a soil auger attachment or a small excavation bucket to conduct potholes in the suspected area of the cut and capped well casing until the wellhead location is discovered and photographable. Subsequently, a hand auger will be used to collect a soil sample from native soils adjacent to the wellhead, depth is anticipated to be 6-8ft bgs based on standard practices for wellhead cut and cap depth. Additional potholes will be conducted approximately 10ft laterally in cardinal directions from the well casing for the purposes of collecting field screening soil samples. Soil sampling will be conducted as described in Proposed Soil Sampling section above. Field-screening and grab confirmation soil samples will be collected from native soils only, as determined by an Entrada Consultant onsite field geologist. Analytical soil sample results, field-screening results, photographs and soil boring logs will be utilized as documentation of investigation and compliance.

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

Signed: Ryan Finley

Title: Senior Project Geologist

Submit Date: 03/06/2025

Email: rfinley@entradainc.com

Based on the information provided herein, this Application for Site Investigation and Remediation Workplan complies with ECMC Rules and applicable orders and is hereby approved.

ECMC Approved: Chris Sanchez

Date: 03/07/2025

Remediation Project Number: 39419

COA Type

Description

	<p>Operators will collect and submit for laboratory analysis a soil sample collected from the areas most likely to have been impacted during the operational life of the AST, Separator, Surface Equipment and Flowlines. These areas include, but are not limited to: where Flowlines connect to the wellhead, surface equipment, risers, valves, or manifolds; where Flowlines bend or were repaired in the past and at joints and hammer unions; where Flowlines connect to Flowlines or equipment of different material; and where Flowlines crossed drainages or surface water or are in contact with shallow groundwater.</p> <p>Attached soils sampling map identifies a Gas Compressor unit where soils samples will be field screened, The Operator shall collect a minimum of one Confirmation soil sample from the gas compressor where flowlines connect to the compressor in addition to field screening activities.</p>
	<p>Background sampling locations should be sufficiently away from the impacted area to reflect conditions not impacted by oil and gas activity, and should be obtained from similar depths and soil horizons or lithologic materials for comparison to confirmation soil samples.</p>
	<p>Operator shall adhere to Protection of Groundwater Soil Screening Levels</p>
	<p>Approval of this Form 27 does not imply approval of pre-abandonment in place notice required by Rule 1105.d.(2). for Flowline abandonment.</p> <p>If the Operator proposes the abandonment or removal of an off-location flowline(s), a Pre-abandonment notice in the form of a Form 44 is required per ECMC Rule 1105.d.(3).</p> <p>Operator has not identified the presence or absence of an on location or off location flowline for the associated Facility. Operator shall provide information identifying the presence or absence of Flowlines.</p>
	<p>After Initial Lab Results are received the Operator will adopt a quarterly reporting schedule (every 90 days) In accordance with Rule 913.e.(3)</p>
	<p>ECMC notes Operator reported well cut and capped 01/18/2021 (Form 6(S) Document# 402854638). Operator shall submit Supplemental Form 27 with all available site assessment data no later than 90 days after Initial Lab Results are received</p>

6 COAs

ATTACHMENT 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.

<u>Att Doc Num</u>	<u>Name</u>
404115654	INVESTIGATION/REMEDATION WORKPLAN (INITIAL)
404115760	SITE MAP
404115761	SITE INVESTIGATION PLAN
404120077	FORM 27-INICIAL-SUBMITTED

Total Attach: 4 Files

General Comments

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

Total: 0 comment(s)