

State of Colorado Oil and Gas Conservation Commission

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Document Number:

401261956

Receive Date:

04/19/2017

Report taken by:

CHRIS CANFIELD

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>ENERGY SEARCH CO ADDBA ENERGY SEARCH CO INC</u>	Operator No: <u>27635</u>	Phone Numbers
Address: <u>PO BOX 1896</u>		Phone: <u>(303) 830-7208</u>
City: <u>EDWARDS</u> State: <u>CO</u> Zip: <u>81632</u>		Mobile: <u>(303) 916-4070</u>
Contact Person: <u>Jack McCartney</u>	Email: <u>jack@mccartneyengineering.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 10065 Initial Form 27 Document #: 401217756

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 checked="" 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>LOCATION</u>	Facility ID: <u>319844</u>	API #: _____	County Name: <u>ADAMS</u>
Facility Name: <u>GINTHER-61S67W 20SWNW</u>	Latitude: <u>39.951929</u>	Longitude: <u>-104.919602</u>	
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SWNW</u>	Sec: <u>20</u>	Twp: <u>1S</u>	Range: <u>67W</u> Meridian: <u>6</u> Sensitive Area? <u>No</u>

SITE CONDITIONS

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

Is domestic water well within 1/4 mile? Yes 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

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	SOILS	Approx 550 cu yd soil	PID screenings, soil analysis

INITIAL ACTION SUMMARY

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

Initial soil and groundwater evaluation was completed adjacent to site facilities and ancillary equipment. Single location indicated contamination in both soil and groundwater. Additional soil borings and monitoring wells were completed adjacent to source to evaluate the extent of contamination. No remediation activities have yet been conducted.

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):

Initial sampling completed. Samples were collected from TH-16 @ 15', TH-16 @ 25', SB-1 @ 10', SB-2 @ 10', SB-4 @ 13', SB-5 @ 15.5', SB-8 @ 14', SB-10 @ 9', and sampled for TVPH and BTEX.

Proposed Groundwater Sampling

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

Initial sampling completed. Samples were collected from TH-15, TH-16, and TH-21, and sampled for TVPH and BTEX. Monitoring wells TH-18 and TH-19 were dry at the time of the sampling.

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 9

Number of soil samples exceeding 910-1 4

Was the areal and vertical extent of soil contamination delineated? Yes

Approximate areal extent (square feet) 37

NA / ND

-- Highest concentration of TPH (mg/kg) 5189

NA Highest concentration of SAR

BTEX > 910-1 Yes

Vertical Extent > 910-1 (in feet) 15

Groundwater

Number of groundwater samples collected 2

Was extent of groundwater contaminated delineated? Yes

Depth to groundwater (below ground surface, in feet) 28'

Number of groundwater monitoring wells installed 6

Number of groundwater samples exceeding 910-1 1

-- Highest concentration of Benzene (µg/l) 55.4

-- Highest concentration of Toluene (µg/l) 4.56

-- Highest concentration of Ethylbenzene (µg/l) 62.4

-- Highest concentration of Xylene (µg/l) 295

NA Highest concentration of Methane (mg/l)

Surface Water

0 Number of surface water samples collected

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)

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.

Source area soil will be excavated, transported from site, and properly disposed of at the Denver Regional Landfill South. Confirmational soil samples will be taken to ensure site soils are below COGCC standards.

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.

Following soil excavation, confirmational soil samples will be taken to ensure site soils are below COGCC standards. Groundwater will be tested quarterly for four quarters to confirm groundwater has not been impacted.

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) _____ 550

Name of Licensed Disposal Facility or COGCC Facility ID # _____ 1005633

_____ 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 _____ four quarters of monitoring

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.

The CTL/Thompson report dated January 9th, 2017, reported that groundwater sample collected from monitoring well TH-16 contained levels of Benzene above COGCC standards. Subsequent sampling of the TH-16 well, conducted by Western Environment and Ecology, Inc. on January 25th, 2017, indicated that all analyte concentrations were below COGCC standards. Groundwater will be sampled on a quarterly basis, for four quarters, to confirm that groundwater has not been impacted.

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:

N/A

Volume of E&P Waste (solid) in cubic yards 300

E&P waste (solid) description Stained petroleum contaminated soil with odor, elevated PID readings

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: Front Range Landfill

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

E&P waste (liquid) description N/A

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: N/A

REMEDIATION COMPLETION REPORT

REMEDIATION COMPLETION SUMMARY

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

Do all soils meet Table 910-1 standards? Yes

Does the previous reply indicate consideration of background concentrations? Yes

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.

Backfilled with clean off site material. Location will not be reseeded since site will be graded in preparation for a housing development project.

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 approve the seed mix? No

If NO, does the seed mix comply with local soil conservation district recommendations? No

IMPLEMENTATION SCHEDULE

PRIOR DATES

Date of Surface Owner notification/consultation, if required. 12/01/2016

Actual Spill or Release date, if known. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 12/13/2016

Date of commencement of Site Investigation. 12/13/2016

Date of completion of Site Investigation. 02/07/2017

REMEDIAL ACTION DATES

Date of commencement of Remediation. 03/15/2017

Date of completion of Remediation. 04/13/2017

SITE RECLAMATION DATES

Date of commencement of Reclamation. 04/13/2017

Date of completion of Reclamation. 04/13/2017

OPERATOR COMMENT

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

Signed: Jack McCartney

Title: Agent

Submit Date: 04/19/2017

Email: jack@mccartneyengineering.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: CHRIS CANFIELD

Date: 04/24/2017

Remediation Project Number: 10065

COA Type

Description

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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

401261956	FORM 27-SUPPLEMENTAL-SUBMITTED
401262712	OTHER

Total Attach: 2 Files

General Comments

User Group

Comment

Comment Date

Environmental	COGCC has reviewed, and is hereby approving, your 04-19-2017 request for No Further Action. However, should future conditions at the subject location indicate that contaminant concentrations in soils exceed COGCC standards, or if ground water is found to be impacted, further investigation and/or remediation activities may be required. Remediation Project 10065 will be closed in the COGIS database. Spill/Release Point 449321 (referenced in your request) was closed previously with the approval of your Form 27. Note that surface reclamation must meet the COGCC 1004 series rules.	04/24/2017
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Total: 1 comment(s)