

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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Report taken by:
Jim Hughes

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>KINDER MORGAN CO2 CO LP</u>	Operator No: <u>46685</u>	Phone Numbers
Address: <u>1001 LOUISIANA ST SUITE 1000</u>		Phone: <u>(970) 882-5532</u>
City: <u>HOUSTON</u> State: <u>TX</u> Zip: <u>77002</u>		Mobile: <u>(970) 403-9501</u>
Contact Person: <u>Michael Hannigan</u>	Email: <u>co2source_regulatory@kindermorgan.com</u>	

PROJECT, PURPOSE & SITE INFORMATION

PROJECT INFORMATION

Remediation Project #: 9666 Initial Form 27 Document #: 200439556

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: Submittal of most recent soil sample analytical data

SITE INFORMATION

No Multiple Facilities

Facility Type: <u>LOCATION</u>	Facility ID: <u>313620</u>	API #: _____	County Name: <u>MONTEZUMA</u>
Facility Name: <u>GOODMAN POINT (GP #13)- N37N17W 32SESE</u>		Latitude: <u>37.413710</u>	Longitude: <u>-108.738230</u>
** correct Lat/Long if needed: Latitude: _____		Longitude: _____	
QtrQtr: <u>SESE</u>	Sec: <u>32</u>	Twp: <u>37N</u>	Range: <u>17W</u> Meridian: <u>N</u> Sensitive Area? <u>Yes</u>

SITE CONDITIONS

General soil type - USCS Classifications SM Most Sensitive Adjacent Land Use Non-irrigated agricultural

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

None

SITE INVESTIGATION PLAN

TYPE OF WASTE:

- X E&P Waste
Other E&P Waste
X Non-E&P Waste
Produced Water
Workover Fluids
Oil
Tank Bottoms
Condensate
Pigging Waste
Drilling Fluids
Rig Wash
X Drill Cuttings
Spent Filters
Pit Bottoms
Other (as described by EPA)
Drilling pit liner

DESCRIPTION OF IMPACT

Table with 4 columns: Impacted?, Impacted Media, Extent of Impact, How Determined. Row 1: Yes, SOILS, TPH > Table 910-1, Soil sample collection & laboratory 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 actions included conducting a review of water well databases to identify water wells within a 1/2 mile of the location and preparing a scope of work for the assessment of the former drilling pit.

PROPOSED SAMPLING PLAN

Proposed Soil Sampling

X Will soil samples be collected as part of this investigation? (Number, type (grab/composite), analyses, and locations of samples):

A soil sample will be collected from the location of soil boring #7 at a depth of 10' to 11' below ground surface in the second quarter of 2022 where the TPH concentration in a soil sample collected on 11/10/21 exceeded the Table 915-1 screening level of 500 mg/kg.

Proposed Groundwater Sampling

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

Empty text box for groundwater sampling details.

Proposed Surface Water Sampling

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

Empty text box for surface water sampling details.

Additional Investigative Actions

Additional alternative investigative actions described in attached Site Investigation Plan (summary):

Empty text box for additional investigative actions.

SITE INVESTIGATION REPORT

SAMPLE SUMMARY

Soil

NA / ND

Number of soil samples collected 32 -- Highest concentration of TPH (mg/kg) 3590
 Number of soil samples exceeding 915-1 1 -- Highest concentration of SAR 259
 Was the areal and vertical extent of soil contamination delineated? Yes BTEX > 915-1 No
 Approximate areal extent (square feet) 1200 Vertical Extent > 915-1 (in feet) 1

Groundwater

Number of groundwater samples collected 1 ND Highest concentration of Benzene (µg/l) _____
 Was extent of groundwater contaminated delineated? Yes ND Highest concentration of Toluene (µg/l) _____
 Depth to groundwater (below ground surface, in feet) 44' ND Highest concentration of Ethylbenzene (µg/l) _____
 Number of groundwater monitoring wells installed 0 ND Highest concentration of Xylene (µg/l) _____
 Number of groundwater samples exceeding 915-1 0 NA Highest concentration of Methane (mg/l) _____

Surface Water

0 Number of surface water samples collected
0 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

Does this Supplemental Form 27A include changes to a previously approved Remedial Action Plan? Yes

SOURCE REMOVAL SUMMARY

Describe how source is to be removed.

Soil samples were collected at the GP-13 site on 8/24/2020 to verify successful remediation of TPH, EC and SAR impacts to soil. The 2020 sample collection and laboratory analyses showed that the EC and SAR impacts to soil <3' below ground surface in the areas of soil borings #1, #2, #3, #5 and #6, as documented in the site characterization report, were successfully remediated. However, the TPH concentration in the soil sample collected from soil boring #7 at a depth of 10' to 11' below ground surface exceeded the Table 910-1 standard (3,590 mg/kg). All other waste remaining in place meets Table 910-1 standards and/or criteria described in COGCC 2008 Rulemaking Frequently Asked Questions (#32) related to depth of clean cover.

REMEDICATION 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.

Subsurface application of liquid chemical oxidant (chem-ox injection) to soil surrounding boring #7 at a depth of 10' to 11' below ground surface was conducted May 29 and May 30, 2021. A total of 2,300 gallons of chem-ox slurry was injected at 7 different points in the treatment area. A soil sample was collected from the location of boring #7 at a depth of 10' to 11' on 11/10/21 and submitted for laboratory analysis of TPH in order to monitor the remediation progress. The TPH concentration of that soil sample (3,100 mg/kg) exceeded the Table 915-1 screening level of 500 mg/kg. A soil sample will be collected in the second quarter of 2022 from the location of boring #7 at a depth of 10' to 11' for laboratory analysis of TPH for continued monitoring of the remediation progress. If the TPH concentration of that soil sample exceeds the Table 915-1 screening level of 500 mg/kg, Kinder Morgan will propose additional active soil remediation activities.

Soil Remediation Summary

- In Situ
- Ex Situ

Yes Bioremediation (or enhanced bioremediation)

Yes Chemical oxidation

No Air sparge / Soil vapor extraction

No Natural Attenuation

No Other _____

Excavate and offsite disposal

If Yes: Estimated Volume (Cubic Yards) _____

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

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 Soil remediation (TPH) _____

WASTE DISPOSAL INFORMATION

Was E&P waste generated as part of this remediation? No

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 _____

COGCC Disposal Facility ID #, if applicable: _____

Non-COGCC Disposal Facility: _____

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

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

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? No

Does the previous reply indicate consideration of background concentrations? _____

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.

The site is currently in interim reclamation status (crop production). The location will continue to be included in Kinder Morgan's noxious weed prevention program.

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? Yes

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

Did the local soil conservation district provide the seed mix? _____

SITE RECLAMATION DATES

Proposed date of commencement of Reclamation. 11/20/2017

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. 03/02/2017

Actual Spill or Release date, or date of discovery. _____

SITE INVESTIGATION DATES

Date of Initial Actions described in Site Investigation Plan (start date). 05/02/2016

Proposed site investigation commencement. 11/19/2016

Proposed completion of site investigation. 02/08/2017

REMEDIAL ACTION DATES

Proposed start date of Remediation. 10/23/2017

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

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

Signed: Michael Hannigan _____

Title: EHS Supervisor _____

Submit Date: 12/09/2021 _____

Email: michael_hannigan@kindermorgan.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: Jim Hughes _____

Date: 01/05/2022 _____

Remediation Project Number: 9666 _____

Condition of Approval**COA Type****Description**

	Per Rule 915.f.: For sites that are subject to an open Form 19 or Form 27 as of January 15, 2021, Operators may seek the Director's permission to comply with the version of Table 910-1 that was previously in effect, if Remediation is completed by January 15, 2022. If Remediation at a site subject to an open Form 19 or Form 27 is not completed by January 15, 2022, then the Operator will comply with the current version of Table 915-1.
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**

402894237	FORM 27-SUPPLEMENTAL-SUBMITTED
402894290	ANALYTICAL RESULTS

Total Attach: 2 Files

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

		Stamp Upon Approval
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Total: 0 comment(s)