

FORM  
**27**  
Rev 6/99

State of Colorado  
**Oil and Gas Conservation Commission**



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

**RECEIVED**  
FOR OGCC USE ONLY  
MAY 05 2016  
**COGCC**  
OGCC Employee:  
 Spill  Complaint  
 Inspection  NOAV  
Tracking No:

**SITE INVESTIGATION AND REMEDIATION WORKPLAN**

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

**CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED**

Spill or Release  Plug & Abandon  Central Facility Closure  Site/Facility Closure  Other (describe): Evaluation of Former Drilling Pit Area

OGCC Operator Number: <u>46685</u>	Contact Name and Telephone: <u>Andrew Antipas</u>
Name of Operator: <u>Kinder Morgan CO2 Co</u>	No: <u>970-882-5534</u>
Address: <u>17801 Hwy 491</u>	Fax: <u>970-882-5521</u>
City: <u>Cortez</u> State: <u>CO</u> Zip: <u>81321</u>	

API Number: <u>05-083-06635</u>	County: <u>Montezuma</u>
Facility Name: <u>N/A</u>	Facility Number: <u>N/A</u>
Well Name: <u>Goodman Point (GP-11)</u>	Well Number: <u>11</u>
Location (QtrQtr, Sec, Twp, Rng, Meridian): <u>NW 1/4 SW 1/4, Sec. 1, T36N, R18W</u> Latitude: <u>37.40675 N</u> Longitude: <u>108.79003 W</u>	

**TECHNICAL CONDITIONS**

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Potential for CO2 well drill cuttings exceeding Pre 2008 COGCC Table 910-1 concentrations

Site Conditions: Is location within a sensitive area (according to Rule 901e)?  Y  N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): cultivated, dry land farming, industrial, and non-cropland

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Submitted on previous Form 2A

Potential receptors (water wells within 1/4 mi, surface waters, etc.): No surface water, water wells, or residences identified within 1/2 mile of location.

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input checked="" type="checkbox"/> Soils	<u>Not yet determined</u>	<u>See attached assessment scope</u>
<input type="checkbox"/> Vegetation		
<input type="checkbox"/> Groundwater		
<input type="checkbox"/> Surface Water		

**REMEDIATION WORKPLAN**

Describe initial action taken (if previously provided, refer to that form or document):  
To date the only initial actions that have taken place is to conduct a water well review to identify water wells within 1/2 mile of the location and the preparation of the attached scope of work for the assessment of the former drilling pit location.

Describe how source is to be removed:  
Upon completion of assessment activities, Kinder Morgan will meet with COGCC to review assessment results and present a Remediation Work plan if subsurface conditions warrant.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:  
Upon the completion of the assessment activities, Kinder Morgan will submit the results to the COGCC along with any remediation plans (as needed) for the consideration and approval of the COGCC.



Tracking Number: \_\_\_\_\_  
Name of Operator: \_\_\_\_\_  
OGCC Operator No: \_\_\_\_\_  
Received Date: \_\_\_\_\_  
Well Name & No: \_\_\_\_\_  
Facility Name & No: \_\_\_\_\_

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**REMEDIATION WORKPLAN (Cont.)**

OGCC Employee: \_\_\_\_\_

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):  
There are no anticipated impacts to groundwater at this location. The depth to the Dakota-Glen Canyon aquifer system in this area is anticipated to be between 800-1,200 feet below ground surface.

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. Use additional sheet for description if required.

If a remediation plan is deemed necessary, Kinder Morgan will address any needed reclamation activities within the remediation plan. This would be completed after Kinder Morgan submits the soil assessment report to the COGCC.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required?  Y  N If yes, describe:

No soil samples are available at this time. Proposed soil boring locations are presented on the figure included within the attached general scope of work.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

If offsite disposal of any material is deemed necessary, a properly licensed disposal facility will be used.

**IMPLEMENTATION SCHEDULE**

Date Site Investigation Began: 2Q 2016 Date Site Investigation Completed: \_\_\_\_\_ Date Remediation Plan Submitted: \_\_\_\_\_  
Remediation Start Date: \_\_\_\_\_ Anticipated Completion Date: \_\_\_\_\_ Actual Completion Date: \_\_\_\_\_

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

Print Name: Andrew Antipas Signed: Andrew Antipas  
Title: Project Manager Date: 5-3-2016

OGCC Approved: [Signature] Title: Environmental Protection Specialist Date: 5/18/16



## **General Scope of Work for Goodman Point (GP-11)**

Kinder Morgan CO2 – McElmo Dome and Doe Canyon Units  
SW Colorado

### **Applicable COGCC 910 Table**

Pre 2008 Table 910

### **Groundwater Assessment**

No groundwater wells were identified within ½ mile of this well location. Based on the regional direction of flow of the Dakota-Glen Canyon aquifer system and estimated depth of this regional aquifer (between 800-1,200 feet below ground surface), impacts to groundwater resources in this area are not anticipated.

### **Site Assessment**

This site assessment is intended to collect current data from the former drilling pit location including:

- Photographic documentation of current surface vegetation and current land use.
- Soil samples from 8 boring locations within the former pit area to gather the following data:
  - Thickness of the “clean” soil cap and collection of soil samples to determine constituents of the boring.
  - Thickness of any drilling material left in the former drilling pit and soil samples to evaluate current concentrations of applicable constituents.
  - Document the presence or absence of any liner material.
  - Depth to native soils below the former drilling pit.
- GPS coordinates of each soil boring location.
- Summary report

### **Soil Boring Program:**

Eight soil borings will be advanced to native soils below the former drilling pit location to assess the current conditions of the former drilling pits. Borings will not extend more than 2 feet below the bottom of the former drilling pit. The soil boring program will be conducted as follows:

- All necessary utility notifications will be made prior to advancing soil borings.
- A hollow stem auger rig will be utilized to collect a continuous sample of each boring.
- Photograph each full diameter split spoon for inclusion in the assessment report.

- Field screen a sample of each 1 foot interval for total chloride concentration and note on a boring log. Jar the remainder of the sample for potential laboratory analysis for constituents identified on the pre 2008 COGCC Table 910. The typical sample submittal for laboratory analysis for each boring will be as follows:
  - Highest chloride sample interval observed from the surface to 3 feet bgs.
  - Highest chloride concentration of the visually identified drilling waste. If no waste is visible, the highest observed chloride concentration from 3 feet bgs to the bottom of the boring.
  - The bottom boring sample.
  - Please note that groundwater is not anticipated to be encountered, however, perched water may be encountered in the bottom of the hole in select locations. If groundwater is encountered, a sample will be submitted for analysis as well by the pre 2008 COGCC Table 910 constituents.
- Collect the GPS coordinate for each boring with an accuracy of less than 1 foot.
- Backfill each boring with removed material.

**Summary Report:**

Upon completion of the site assessment activities, a summary report will be completed. This summary report should contain all sampling information, including sampling data from laboratory, and drawings of sampling sites.

