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State of Colorado
Oil and Gas Conservation Commission

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



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OGCC
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):

OGCC Operator Number: <u>NA 72400</u>	Contact Name and Telephone: <u>Mr. Dino Lombardi</u>
Name of Operator: <u>Xcel Energy</u>	No: <u>720-497-2108</u>
Address: <u>ESG, 4653 Table Mountain Drive</u>	Fax: <u>720-497-2117</u>
City: <u>Golden</u> State: <u>CO</u> Zip: <u>80403</u>	
API Number: <u>NA</u> County: <u>Weld</u>	
Facility Name: <u>Wattenberg Compressor Station No. 5</u> Facility Number: <u>NA</u>	
Well Name: <u>NA</u> Well Number: <u>NA</u>	
Location: (QtrQtr, Sec, Twp, Rng, Meridian): <u>SW1/4, SW1/4, SEC. 3, T2N, R66W, 6th</u> Latitude: Longitude:	

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Process Water

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.): Irrigated and Dry Land Farming

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: 9 to 15 ft. of silty/clayey sand to sandy clay underlain by shale.

Potential receptors (water wells within 1/4 mi, surface waters, etc.): Two domestic wells (755 and 805 deep) are located in within 1/4 mile of the site. A reservoir is located 1/4 mile to the SW and a second reservoir is located 1/2 mile W with its inlet ditch located south of the site.

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>9,366 Cubic Yards</u>	<u>Excavation and Disposal</u>
<input type="checkbox"/> Vegetation		
<input checked="" type="checkbox"/> Groundwater	<u>60,000 Gallons</u>	<u>Extraction/Disposal and Monitoring</u>
<input type="checkbox"/> Surface Water		

REMEDIALATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Approximately 1,500 cubic yards of petroleum impacted soils were excavated and transported off-site for disposal in 1989. Approximately 60,000 gallons of petroleum impacted groundwater was extracted for off-site disposal in 1989. Fifteen (15) groundwater monitoring wells were installed at the site in 1989. Quarterly groundwater monitoring was conducted from 1989 to 1997 and also in 2002. 7,866 cubic yards of petroleum impacted soils were excavated and transported off-site for disposal in 1994.

Describe how source is to be removed:

Based on the most recent groundwater monitoring data, petroleum (BTEX) impacted groundwater is localized in the vicinity of MW-3 and MW-5. Consequently, we propose enhanced fluid recovery (EFR) as the technology for contaminant reduction of the petroleum impacted groundwater. EFR will be performed for up to one year in the monitoring wells MW-5 & MW-7.

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.:

A vacuum truck will be utilized for the EFR. Contaminated groundwater will be pumped from the monitoring wells into a vacuum truck. The groundwater will be disposed offsite at a permitted injection facility or a permitted disposal facility.

Submit Page 2 with Page 1

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Environmental Services
Date 5/14/08

FORM
27
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REMEDIATION WORKPLAN (Cont.)

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

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

To monitor the effectiveness of the remedial technology, monitoring wells MW-5 and MW-7 (See Attached Map) will be sampled each month that EFR is performed. The samples will be analyzed for BTEX and TPH compounds. Additionally, MW-5, MW-7, MW-13, MW-14, and MW-15 will be sampled and analyzed for BTEX and TPH compounds on a quarterly basis for one to two years. An evaluation of the remedial technology effectiveness and site closure will be made at that time.

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.

Since soil excavation is not anticipated, a reclamation plan is not required.

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:

On-going groundwater monitoring (Monitoring Wells MW-3, MW-5, MW-13, MW-14, and MW-15) during and after completion of EFR.

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

The contaminated groundwater will be disposed offsite at a permitted injection facility or a permitted disposal facility.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 1989	Date Site Investigation Completed: On-going	Date Remediation Plan Submitted: September 2004
Remediation Start Date: October 2004	Anticipated Completion Date: October 2005	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: Mr. Dino Lombardi

Signed: *Dino Lombardi*

Title: Environmental Analyst IV

Date: 9/13/04

OGCC Approved: *Randall J. Jorgensen*

Title: EPS III

Date: 5/9/08

* Remediation of impacts in the vicinity of MW-5 have been undertaken by Kerr McKee O & G Onshore LP. Please refer to Remediation #4228 for additional information.