

State of Colorado Oil and Gas Conservation Commission

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FOR OGCC USE ONLY

REM 9711

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Date 06/24/2016

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.

OGCC Employee:

☐ Spill ☐ Complaint☐ Inspection ☐ NOAV

Tracking No:

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

☒ Spill or Release ☐ Plug & Abandon ☐ Central Facility Closure ☐ Site/Facility Closure ☐ Other (describe): _____

OGCC Operator Number: 10439

Name of Operator: Carrizo Niobrara LLC

Address: 500 Dallas Street Suite 2300

City: Houston State: TX Zip: 77002

Contact Name and Telephone:

Eric Johansson

No: (713) 358-6227

Fax: _____

API Number: 05-001-08293

County: Adams

Facility Name: Custy-62S66W / 15SWSW

Facility Number: 320170

Well Name: Custy #1

Well Number: Custy #1

Location: (QtrQtr, Sec, Twp, Rng, Meridian): SWSW, 15, 2S, 66W, 6 Latitude: 39.87267 Longitude: -104.76956

TECHNICAL CONDITIONS

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

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.): residential, cultivated

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: vonta-ascaon loamy sands, 3 to 9 percent slopes and platner loam, 0 to 3 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): DWR well permit #105682, Kenneth J Custy, domestic well,

~425 feet to the NW, well is perforated from 220 to 360 feet below ground surface

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

Impacted Media (check):



Soils



Vegetation



Groundwater



Surface Water

Extent of Impact:

See attached.

See attached.

How Determined:

Visual observations and laboratory results

Laboratory results

REMEDIALTION WORKPLAN

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

Facility was shut-in, documented on Form 19 submitted on 6/17/16. The portion of the dump line that contained a small hole was identified, removed, and capped.

Describe how source is to be removed:

Source removal excavation activities were completed at the site from 6/17/16 through 6/22/16. In addition, vac trucks were used to remove any impacted groundwater that accumulated within the base of the excavation.

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.:

Seven proposed soil borings/monitoring wells (MW-01 through MW-07) are scheduled to be advanced at the site on 6/27/16. Soil/groundwater samples will be collected from each location to define potential impacts vertically/laterally around the release location. Based on laboratory results, residual soil/groundwater impacts will be addressed via air sparge/soil vapor extraction (AS/SVE) technology or via in-situ bioremediation.



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.):

Seven proposed monitoring wells (MW-01 through MW-07) are scheduled to be installed on 6/27/16 to define residual petroleum hydrocarbon impacts beneath the site. Additional monitoring wells may be installed based on field observations. Based on laboratory analytical results, if concentrations in groundwater exceed COGCC Table 910-1 regulatory limits, groundwater samples will be collected from the monitoring wells on a quarterly schedule. Groundwater will be analyzed for BTEX following EPA Method 8260. The monitoring plan may be amended based on groundwater analytical results indicating COGCC Table 910-1 compliance in surrounding monitoring wells.

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.

The excavation was backfilled with clean fill to grade. The environmental footprint will be assessed following plug and abandonment activities and remediation activities and will be detailed in a separate report.

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:

Soil boring/monitoring well installation activities are scheduled to be completed on 6/27/16. Once laboratory analytical results are obtained, a site map will be constructed illustrating sample locations. If remediation is necessary, a site map illustrating remediation activities will also be included in a supplemental Form 27 submitted to the COGCC.

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

Any soil generated during source removal, assessment and/or remediation activities will be disposed of at a certified disposal facility.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 6/17/16	Date Site Investigation Completed: 6/27/16	Date Remediation Plan Submitted: TBD
Remediation Start Date: 6/17/16	Anticipated Completion Date: TBD	Actual Completion Date: TBD

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

Print Name: Eric Johansson Signed: [Signature]
Title: EHS Supervisor Date: 6/24/16

OGCC Approved: _____ Title: _____ Date: _____