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

FOR OGCC USE ONLY

REM 9695
Document 2526393
Date 06/17/2016

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): Pit Closure

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:
Scott Hudson
No: 713-328-1014
Fax:

API Number: 05-001-06455 County: Adams
Facility Name: State of Colorado A-B Facility Number: 113694
Well Name: State of Colorado AB #1 Well Number: State of Colorado AB #1
Location: (QtrQtr, Sec, Twp, Rng, Meridian): NESE, 16, 2S, 66W, 6 Latitude: 39.87873 Longitude: -104.777559

TECHNICAL CONDITIONS

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

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.): residental, cultivated

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: ascalon sandy loam, 0-3 percent slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.): DWR well permit #125 WCB, Tashiro Maskati, installed January 25, 1954, located approx. 1,088' to the west of the site, water well uses not provided on DWR well permit

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

Impacted Media (check):	Extent of Impact:	How Determined:
☐ Soils		
☐ Vegetation		
☐ Groundwater		
☐ Surface Water		

REMEDIATION WORKPLAN

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

The production pit is approx. 10' long by 10' wide by approx. 10' deep (see attached document COGIS Pit Information) A Geoprobe track rig will be utilized to advance five soil borings, one outside of each sidewall and one within the center of the pit. Two soil samples will be collected from each sidewall soil boring, one sample at approx. 5' below ground surface (bgs) and an additional sample at approx. 11' bgs. Two soil samples will also be collected from the center soil boring, one composite fill sample from 0-10' bgs and an addtional confirmation soil sample at approx. 10-11' bgs. Two addtional soil samples will be collected to the west of the 10'x10' production pit. If impacts are observed during pit assessment activities additional borings/increased boring depths will be completed to vertically and horizontally define impacts. Soil samples collected will be submitted to Origins Laboratory for a full Table 910-1 suite analysis. In addition, three nearby non-impacted native soil samples will be collected and analyzed for inorganics and metals for purposes of establishing background soil conditions.

Describe how source is to be removed:

No source has been identified at this time. If soil and/or groundwater impacts are observed during pit assessment activities a Form 27 remediation addendum will be submitted to the COGCC.

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.:

No source has been identified at this time. If soil and/or groundwater impacts are observed during pit assessment activities a Form 27 remediation addendum will be submitted to the COGCC.

Submit Page 2 with Page 1

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

REMEDIATION WORKPLAN (Cont.)

OGCC Employee:

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

If groundwater is encountered during soil boring assessment activities, temporary groundwater monitoring wells will be installed to collect grab groundwater samples from each location. The groundwater samples will be submitted to Origins Laboratory of analysis of BTEX and inorganics presented in Table 910-1. If additional wells are needed to define dissolved phase impacts they will be installed at a later date.

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.

Reseeding does not appear necessary at this time. The environmental footprint will be assessed following assessment/remediation activities if necessary.

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:

Assessment activities have not yet been completed. 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 be included in a Form 27 remediation addendum 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 assessment and/or remediation activities will be disposed of at a certified disposal facility.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 7/1/2016	Date Site Investigation Completed: 7/15/2016	Date Remediation Plan Submitted: TBD
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: CAROL A. PRUITT Signed: CAROL A. Pruitt

Title: SUPV., REGULATORY COMPLIANCE Date: 6/17/16

OGCC Approved: Chris Canfield, P.G. Title: _____ Date: _____

Digitally signed by Chris Canfield, P.G.
DN: cn=Chris Canfield, P.G., o=Colorado Oil & Gas Conversation Commission, ou=Environmental Protection Specialists, email=chris.canfield@state.co.us, c=US
Date: 2016.06.17 08:51:42 -06'00'

COGIS - PIT Information

STATE OF COLORADO "A-B" - #113694 Information

Related Insp GIS Doc COA Orders

Facility ID:	113694	Facility Name / No:	STATE OF COLORADO "A-B" /
Operator Name / No:	CARRIZO NIOBRARA LLC / 10439	Facility Status / Date:	AC / (11/23/2010)
County Name / No:	ADAMS / 001	Location:	NESE 16 2S66W
Field Name / No:	HOLSTER / 36600	Lat / Long:	39.87873 / -104.777559
Pit Use:		Offsite Disposal:	N/A

Existing Site Conditions

Sensitive Area:		Land Use:	
Dist. to Water Source:		Surface Water:	
Dist. to Ground Water:		Water Wells:	

Pit Design and Construction Data

Size of PIT (feet):		Depth:	10
Length:	10	Width:	10
Calc. PIT Capacity (bbls/day):			
Daily Disposal Rates (bbls/day)	Evap:	Perc:	
PIT Type:		Liner Material:	Thickness:
Treatment Method:			
Pit Covering Fence:		Net:	
Comment:	Unlined earthen pit. Now approx. 10 X 10. Empty. No oil staining. Wire screen off pit.		