



02214994

FORM
27
Rev 6/99State of Colorado
Oil and Gas Conservation Commission

#5922

FOR OGCC USE ONLY

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

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: 10318

Name of Operator: Vaquero Energy IncAddress: 15545 Hermosa RoadCity: Bakersfield State: CA Zip: 93307

Contact Name and Telephone:

Hector GonzalesNo: 661 363-7240Fax: 661-366-2959API Number: 05-081-06077County: MoffatFacility Name: Blue Gravel 1-23 pitFacility Number: 112275Well Name: Blue GravelWell Number: 1-23Location: (QtrQtr, Sec, Twp, Rng, Meridian): SENE 23 9N 91W 6th PMLatitude: 40.725536 Longitude: -107.564092

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Produced WaterSite 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.): RangelandSoil type, if not previously identified on Form 2A or Federal Surface Use Plan: Styers-Pinelli-Taffom complex, 10 to 25 percent slopesPotential receptors (water wells within 1/4 mi, surface waters, etc.): ephemeral drainage 270 east of facility; no water wells within 1/4 mile

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

Impacted Media (check):



Soils

Extent of Impact:

not yet determined

How Determined:



Vegetation



Groundwater



Surface Water

REMEDIALTION WORKPLAN

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

Ownership of produced water pits transferred from pervious owner to Vaquero through the submittal of Form 10. Any water contained within the pits has been removed and disposed of via the Blue Gravel injection well (Blue Gravel 1-35). 05-081-06744

Describe how source is to be removed:

The impacted soil will be excavated from the pit using a backhoe to an anticipated depth of 10 ft. The lateral and vertical extent of the excavation will be based upon visual evidence of impacted soil in conjunction with field PID headspace measurements. The excavated soil will be temporarily managed within a lined berm to prevent contamination of stormwater runoff. Soil samples will be collected from the excavated pit to confirm compliance with Table 910-1 standards.

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.:

Excavated soils will be land treated in accordance with Rule 907.e.(2) through a combination of methods including disking, tilling, aerating, or adding nutrients such as microbes, water, or other amendments. The soil may also be blended with clean soil to meet Table 910-1 standards and utilized to backfill the excavation. Excess impacted soils may be transported to a local landfill for disposal. Manifests will be prepared for all soil transported to disposal.

Submit Page 2 with Page 1

JP



Page 2
REMEDIAL WORKPLAN (Cont.)

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

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

It is anticipated that groundwater will not be encountered.

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 will be filled with clean or blended soil and contoured to match the surrounding topography. Reseeding will be performed using an appropriate seed mixture, which may contain the following species: Alkali sagebrush, Western wheatgrass, Bluebunch wheatgrass, Prairie Junegrass, Bottlebrush squirreltail, Wyoming big sagebrush, Needleandthread, Indian ricegrass, and Nevada bluegrass. The NRCS, BLM, or other agencies and landowners will be consulted to determine the appropriate seed mix.

Appropriate measures will be taken to prevent the establishment of noxious weeds.

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:

NA

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

Sampling of the land treated soil will occur periodically to determine compliance with Table 910-1 standards. Once the soil meets the Table 910-1 standards, it will be incorporated into berms or used as fill material.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: _____ 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: Hector Gonzales

Signed: Hector Gonzales

Title: Production Foreman

Date: 7/6/2011

OGCC Approved: [Signature]

Title: Env. Sup

Date: 7/12/11

See Attached email as part of the Remediation Plan.

Fischer, Alex

To: Doug Henderer; hgonzalez@VaqueroEnergy.com
Cc: Brad Baum; Derek Bowman
Subject: RE: Vaquero Form 27

Doug,

I feel that this would be a good practical approach and should be included in the Form 27s.

Thanks
Alex

Alex Fischer, P.G.
Environmental Supervisor - Western Colorado
Colorado Oil and Gas Conservation Commission
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(303) 894-2109 fax
alex.fischer@state.co.us

From: Doug Henderer [<mailto:dhenderer@kleinfelder.com>]
Sent: Monday, July 11, 2011 5:20 PM
To: Fischer, Alex; hgonzalez@VaqueroEnergy.com
Cc: Brad Baum; Derek Bowman
Subject: RE: Vaquero Form 27

Alex,

Our thoughts were to screen several pits for the full 910 soil list to identify the constituents of concern. From that we would develop a background sampling program if needed, and identify a subset of constituents (TPH, benzene, etc.) for monitoring the progress of the excavation work. Do you find this approach acceptable? Do you recommend that the full 910 list be analyzed for samples from the pit prior to final closure?

Thank you,

Doug

From: Fischer, Alex [<mailto:Alex.Fischer@state.co.us>]
Sent: Monday, July 11, 2011 2:12 PM
To: Doug Henderer; hgonzalez@VaqueroEnergy.com
Cc: Brad Baum; Derek Bowman
Subject: RE: Vaquero Form 27

Doug and Hector,

Were you going to collect samples for characterization to determine impact, if any? And are you sampling for the entire 910-1 list?

Please include the API number for the Blue Gravel 1-35).

Thanks
Alex

Alex Fischer, P.G.
Environmental Supervisor - Western Colorado
Colorado Oil and Gas Conservation Commission
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alex.fischer@state.co.us

From: Doug Henderer [<mailto:dhenderer@kleinfelder.com>]
Sent: Thursday, July 07, 2011 11:27 AM
To: Fischer, Alex; Hector Gonzalez (hgonzalez@VaqueroEnergy.com)
Cc: Brad Baum; Derek Bowman
Subject: Vaquero Form 27

Alex,

Thank you again for your time last month to meet with us concerning the closure of the Vaquero Blue Gravel pits. As discussed, attached is the first Form 27 for your review. Upon your approval, we will forward executed forms 27 for the remaining pits.

Concerning the salamanders present at the Blue Gravel 1-35 pit, we do not believe that they are protected. Our research indicates that there are no USFWS listed amphibian T&E species in Moffat County, and no salamanders are listed in the state species of concern or BLM special status species databases. A photograph of a salamander is attached for your reference.

We appreciate your assistance, please let us know if you have any questions or concerns.

Doug

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