

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 10021
Document 2527560

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): drill cuttings

OGCC Employee:

☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV

Tracking No:

OGCC Operator Number: 10516

Name of Operator: LINN Operating, Inc.

Address: 1999 Broadway, Suite 3700

City: Denver State: CO Zip: 80202

Contact Name and Telephone:

Bryan Burns

No: 303-999-4245

Fax: 303-999-4345

API Number: 05-045-15279

County: Garfield

Facility Name: Chevron E33 596

Facility Number: 335917

Well Name: Chevron #33-18D

Well Number: 33-18D

Location: (QtrQtr, Sec, Twp, Rng, Meridian): SW1/4 NW1/4 Sec 33 T5S R96W Latitude: 39.573411 Longitude: 108.18135

TECHNICAL CONDITIONS

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

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.): rangeland and natural gas production

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

Potential receptors (water wells within 1/4 mi, surface waters, etc.): House Log Creek 950 feet east

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

Impacted Media (check):

- ☒ Soils
☐ Vegetation
☐ Groundwater
☐ Surface Water

Extent of Impact:

drill cuttings contained within soil berm

How Determined:

laboratory testing

REMEDIATION WORKPLAN

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

Drill cuttings were excavated and tested for Table 910-1 parameters. The most recent testing showed all parameters except arsenic below the standards. These cuttings are currently stockpiled on site. The water storage pit on site will be closed. Upon removal of water in the pit, a composite sample will be collected from the pit bottom materials to evaluate compliance with Table 910-1 standards for this material.

Describe how source is to be removed:

Drill cuttings were excavated from the drilling pit and stockpiled on the well pad and enclosed by a soil berm. The water storage pit bottom materials will be excavated and landfarmed on site if test results show concentrations above the 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.:

Drill cuttings were landfarmed on site within a bermed area. Water storage pit bottom materials will be landfarmed on site if test results show concentrations above the Table 910-1 standards. Landfarming methods could include tilling, application of fertilizer, and the addition of native soil or sawdust. Background soil samples will also be collected and analyzed for arsenic in the vicinity of the pit to characterize natural soil arsenic concentrations.



REMEDATION 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.):

There are no impacts to groundwater.

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.

After treatment is completed, and background levels of arsenic in the drill cuttings are demonstrated, drill cuttings and water storage pit bottom materials will be blended with non-contaminated on-site materials and buried in the pit and compacted. All cuttings with SAR greater than 12 will be buried at least three feet below the reclaimed ground surface. The remainder of the pit will be backfilled using native rock and soil, regraded to conform to the surrounding ground surface, and reseeded using an approved seed mix. Noxious weeds will be controlled as necessary using approved methods.

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:

Samples of the water storage pit bottom materials will be collected and analyzed for the Table 910-1 parameters to evaluate the compliance with the standards and to determine when treatment has been completed.

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

The remediated drill cuttings and water storage pit bottom materials will be blended with on-site materials and buried in the pit as described above.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 7/6/2012 Date Site Investigation Completed: _____ Date Remediation Plan Submitted: _____
Remediation Start Date: 7/6/2012 Anticipated Completion Date: 8/1/2015 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: Bryan Burns

Signed: [Signature]

Title: Environmental, Health, and Safety Representative

Date: 9/15/14

OGCC Approved: _____ Title: _____ Date: _____