

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 10080  
Document 2527630

**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: 05-045-15123

County: Garfield

Facility Name: Chevron F06 696

Facility Number: 335887

Well Name: Chevron

Well Number: F06 696

Location: (QtrQtr, Sec, Twp, Rng, Meridian): SE 1/4 NW 1/4 Sec 06 T6S R96W Latitude: 39.556817 Longitude: 108.153079

**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.): \_\_\_\_\_

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):

Pit was drained and is being prepared for decommissioning. Drill cuttings, liquids, the synthetic liner, and any stained soil beneath the liner will be excavated and tested for Table 910-1 parameters. These cuttings will then be stockpiled on site before landfarming begins. 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 will be excavated from the drilling pit, stockpiled on the well pad, and will be enclosed by the 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 will be landfarmed on site within a bermed area. Background soil samples will be collected and analyzed for arsenic in the vicinity of the pit to characterize natural soil arsenic concentrations above the Table 910-1 standards. Landfarming methods could include, tilling, application of fertilizer, and the addition of organic materials, i.e., sawdust with an added nitrogen or phosphorus amendment.



**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.):

There are no impacts on the 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. Exterior slopes on the East, West, and North sides shall be pulled up and materials will be pushed into the exsisting pit. Exterior slopes will be laid back at a minimum 3:1. Top soil will be spread over all slopes. 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. LINN Operating, Inc. has addressed and accommodated the wildlife concerns during the site stabilization of this pad.

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:

During closure of the water storage pit, samples of the pit bottom materials will be collected and analyzed for the Table 910-1 parameters to evaluate the compliance with the standards. Quarterly sampling will be conducted until all landfarming areas meet safe standards set and approved by the COGCC.

**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. The pit liner will be disposed of at a certified land fill.

**IMPLEMENTATION SCHEDULE**

Date Site Investigation Began: 6/20/2014	Date Site Investigation Completed: _____	Date Remediation Plan Submitted: _____
Remediation Start Date: 6/20/2014	Anticipated Completion Date: 6/20/2016	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:

Title: Environmental, Health, and Safety Representative

Date: 9/15/14

OGCC Approved: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Pit ID #443362 was a produced water pit. It has been closed and backfilled (Current status is OPEN). Please describe the pit closure process and submit the confirmation samples from pit bottom and walls. Specify what was done with the pit bottoms. Provide the latest land farming sampling results (2016) .

Linn Operating, Inc.  
Piceance Asset  
Parachute, Colorado

F06 696 Interim Site Stabilization Plan  
June 20, 2014

- Pit will be drained; liner removed and disposed of at a certified land fill.
- Soil samples from bottom of pit will be analyzed – upon meeting COGCC standards, pit will qualify for backfilling.
- Exterior slopes on east, west, and north sides shall be pulled up and materials shall be pushed into existing pit.
- Exterior slopes shall be laid back at a minimum 3:1
- Spoil material that is being treated on site by land farming is remnants from drilling and completion operations from wells on this pad. The existing spoil material shall remain on site and we will continue to conduct land farming operations. This treatment could possibly include adding organic materials, i.e., sawdust and adding a nitrogen and/or phosphorus amendment. The treated contaminated material meeting COGCC minimum standards will be blended with clean non-contaminated on-site materials and will be buried on location per COGCC standards.
- Quarterly sampling will be conducted until all land farming areas meet safe standards set and approved by the COGCC.
- Top soil will be spread over all slopes and reseeded with landowner approved seed mix.
- Linn Operating, Inc. has addressed and accommodated the wildlife concerns during the site stabilization of this pad.