

State of Colorado
Oil and Gas Conservation Commission



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

#8405

FOR OGCC USE ONLY

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 Employee:

☐ Spill ☐ Complaint
☐ Inspection ☐ NOAV
Tracking No:

OGCC Operator Number: 56680

Name of Operator: Merrion Oil & Gas Corporation

Address: 610 Reilly Ave

City: Farmington State: NM Zip: 87401

Contact Name and Telephone:

Philana Thompson

No: 505-324-5336

Fax: 505-324-5350

API Number: 05-103-10449

County: Rio Blanco

Facility Name: CDX Reserve Pit

Facility Number: 272878

Well Name: Federal 10-1-101

Well Number: #13

Location: (QtrQtr, Sec, Twp, Rng, Meridian): SWSW S10, T1S, R101W Latitude: 39.971838 Longitude: -108.72498

TECHNICAL CONDITIONS

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

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.): dry land

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Redcreek-Rentsac Complex, 5 to 30% slopes

Potential receptors (water wells within 1/4 mi, surface waters, etc.):

3/4 mile distance to nearest surface water

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

Not yet determined

☐

Surface Water

REMEDIAL WORKPLAN

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

Describe how source is to be removed:

Torn liner will be removed and transported to Rio Blanco County Solid Waste Facility in Meeker, CO. The area of the pit will then be sampled according to COGCC rule 903.b. table 910-1 to ensure no contamination has occurred.

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.:

Any impacted soil will be will be reported and remediated as outlined in COGCC Rule 906, 909 & 910. An additional workplan will be filed in the event a spill/release has occurred.



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.):

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.

Per on-shore order #1, the disturbed area no longer needed will be re-contoured to the approximate natural contours. Grading, leveling and seeding will be done as recommended by the Authorized Officer. A interim reclamation plan (see attached) will be submitted to the BLM White River Resource Area Office in Meeker Co.

Interim reclamation activities will begin upon approval from COGCC & White River Resource Area BLM, and as weather permits.

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:

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

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: 8/31/2013 Date Site Investigation Completed: YBD Date Remediation Plan Submitted: 11/14/2013
Remediation Start Date: when approved 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: Philana Thompson

Signed: _____

Title: Regulatory Compliance Specialist

Date: 11/14/2013

OGCC Approved: Kris Neidel

Title: Environmental Protection Specialist Date: 5/9/2014

Interim Reclamation Plan- Pit
Federal 10-1-101 #13
05-103-10449
Federal Lease # COC63282
Location: SWSW S10, T1S, R101W

Pit Interim Reclamation Objectives:

The objectives of this interim reclamation (IR), which reestablishes vegetation, ecological function and other natural resource values during the productive life of an energy facility (e.g. well pad), are to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; to control erosion and sediment transport; and to minimize loss of habitat, forage, and visual resources throughout the project life. IR will be judged successful when disturbed areas not needed for long-term production operations have been recontoured, stabilized, and revegetated with a self-sustaining, vigorous, diverse, native (or otherwise approved) plant community sufficient to minimize visual impacts, provide forage, stabilize soils, and impede the invasion of noxious weeds.

Proposed Pit Interim Reclamation Plan:

Merrion Oil & Gas will comply with the requirements in accordance with the approved Sundry Notice associated with this submittal.

- Contact BLM 48 hours prior to commencing earthwork.
- Remove and dispose of pit liner at the Rio Blanco County Solid Waste Facility
- Pit remediation and reclamation will be completed upon compliance with the concentrations as per COGCC Table 910-1 standards.
- In the event soil analysis shows possible spill/release, an additional plan will be submitted for remediation of any contaminated soils.
- The pit will be backfilled in compacted lifts no deeper than 4 feet, to prevent subsidence under any surface pressures.
- Seeding of topsoil will be done at the time of disturbance/ construction.
- Other stabilization measures to be implemented in disturbed areas at the time of initial site construction may include pre- and post-construction BMPs, contouring, texturing, mulching, slash/brush berming/storage, and weed monitoring/ control.
- Stabilization measures would begin at the time of construction, or at least within 72 hours after initial surface disturbing activities, in order to stabilize materials, maintain biotic soil activities and minimize weed infestations.

Revegetation

Following soil preparations, a range drill (disk type seed drill) will be used to apply the approved seed mix over the disturbed areas. The drill will be equipped with a depth regulator to ensure even planting depths appropriate to the plant species and soil types. Should broadcast seeding be deemed more appropriate in some areas, the seed application rates will be doubled and a rake or harrow used to incorporate the seed into the soil. Any steep slopes, greater than 2:1, will be blanketed for soil stabilization and seed retention.

The seed mixture and application rates will be as follows:

Seed mixtures will be certified weed-free and the seeding records (bag labels) or other official documentation will be available to the Authorized Officer prior to seeding.

Seeding will be accomplished as soon as reasonably possible following completion of earthwork activities. The Authorized Officer will be notified forty-eight (48) hours prior to commencing with seed application.

| Type | Variety or Cultivator | PLS/A |
|----------------------|-----------------------|-------|
| Western wheatgrass | Arriba | 3.0 |
| Pubescent wheatgrass | Luna | 2.0 |
| Russian wildrye | Bozoisky | 2.0 |
| Crested wheatgrass | Hy-crest | 2.0 |
| Fairway/Ephraim | | 2.0 |
| Four-wing Saltbush | | 0.25 |
| Wytana/Rincon | | 0.25 |

Species shall be planted in pounds of pure live seed per acre: Present Pure Live Seed (PLS) = Purity X Germination/100. Two lots of seed can be compared on the basis of PLS as follows:

Source No. One (poor quality)

| | |
|----------------------------------|------------|
| Purity | 50 percent |
| Germination | 40 percent |
| Percent PLS | 20 percent |
| 5 lb. bulk seed required to make | |
| 1 lb. PLS | |

Source No. two (better quality)

| | |
|----------------------------------|------------|
| Purity | 80 percent |
| Germination | 63 percent |
| Percent PLS | 50 percent |
| 2 lb. bulk seed required to make | |
| 1 lb. PLS | |

Seed mixtures used must be certified. There will be no primary or secondary noxious weeds in seed mixture. Seed labels from each bag will be available for inspection while seed is being sown.

Weed Management

Merrion Oil & Gas objective is to implement an integrated weed management program to control weed populations and establish desirable vegetation utilizing the following strategies:

- Control the introduction and spread of weeds through early detection.
- Establish desirable native vegetation on disturbed areas through successful re-vegetation efforts.
- Treat and control known weed populations.

Among the measures that will be implemented to prevent the introduction or establishment of weeds in areas not already infested include:

- Identification and eradication of new infestations as quickly as practical.
- Implement successful re-seeding efforts as quickly as practical in areas that have been disturbed.

Local factors, such as soil type and stability; grade; associated vegetation; existing and proposed land use; proximity to water; weed type and stage of growth; and severity of infestation; will be considered in selecting the appropriate weed management method(s). The management method(s) selected will be the least environmentally damaging, yet practical and reasonable in achieving the desired results.

Merrion Oil & Gas will utilize chemical treatment as the preferred method of weed management and control. The proper use of herbicides at the optimum time can be an effective method for controlling persistent weeds. A Pesticide Use Proposal (PUP) will be pre-approved by the BLM prior to any chemical treatment. The use and handling of herbicides will be in accordance with all application rates, restrictions, and warnings listed on the label and MSDS. Preparation and application of all herbicides will be licensed by the State of New Mexico Department of Agriculture, and a Daily Weed Pesticide Application Record will be completed and retained for all spraying activities.

Other methods to be used for weed control will include the following:

- Remove soil, seeds, and vegetative matter prior to entering or leaving the project site on all construction equipment and transport vehicles, trucks, pickups, and other vehicles ;
- Ensure that all seed mixes, straw, and/or mulch used in reclamation are certified weed-free;
- Promptly revegetating disturbed areas;
- Treating and/or removing weeds prior to ground-disturbing activities to limit seed production and dispersal;
- Treating noxious weeds that have escaped the project area onto adjacent areas to prevent further expansion into un-infested areas and re-infestation of the treated area;

Interim Reclamation will be judged successful by the BLM, when:

- The Pit area has been recontoured, stabilized, and revegetated with a self-sustaining, vigorous, diverse, native (or otherwise approved) plant community sufficient to minimize visual impacts, reestablish wildlife habitat or forage production, stabilize soils, and impede invasion by noxious weeds.
- At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species which occur in the surrounding natural vegetation.
- Permanent vegetative cover will be determined successful when the basal cover of desirable perennial species is at least 80 percent of the basal cover of the undisturbed site or, of a reference area, or, if available, of the potential basal cover as defined in the National Resource Conservation Service (NRCS) Range/Ecological Site(s) for the area.
- The resulting plant community (in a healthy early seral state) must contain at least 80 percent desirable plant species, preferably one of which is a forb or shrub. Plants must be resilient, as demonstrated by vigor, well-developed root systems and flowers. Shrubs must be well established and at least in a "young" age class, rather than comprised mainly of seedlings that might not survive.
- No one species may exceed 70 percent basal cover in the resulting plant community, to achieve species diversity on the site. Desirable species include those defined by those in the BLM-approved seed mix, other desired species found in the reference area, or potential species in the NRCS range/ecological site.

END OF PLAN

