



DEPARTMENT OF NATURAL RESOURCES

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August 16, 2013

Ms. Naomi Azulai

Re: Response to the Form 27 Site Assessment and Remediation Work plan
Draft submitted on August 05, 2013
Roan Creek Evaporation Pit Closure
Location ID # 391314
Pit Facility ID # 116525

Dear Ms. Azulai,

Colorado Oil and Gas Conservation Commission (COGCC) staff has reviewed the Form 27 Site Assessment and Remediation Work plan submitted on August 05, 2013 for the closure of the Roan Creek Evaporation Pit. The pit closure is part of a compliance effort from Maralex, and a first step toward re-purposing the existing facility to construct a Centralized Exploration & Production (E&P) Waste Management facility. COGCC staff has the following comments that need to be addressed in conjunction with re-submitting an updated Form 27 Work Plan for COGCC's review and approval:

Background:

- Maralex operated the evaporation pit for several years prior to taking it out of service. A Pit Permit Form 15 should have been submitted. Operating a pit without permit is a Violation of COGCC Rules and Regulations.
- The evaporation pit has been out of service for at least two years (or more). Maralex has been out of compliance for several years. Rule 1003 b states: "All disturbed areas affected by drilling or subsequent operations, except areas reasonably needed for production operations or for subsequent drilling operations to be commenced within twelve (12) months, shall be reclaimed as early and as nearly as practicable to their original condition or their final land use as designated by the surface owner and shall be maintained to control dust and minimize erosion to the extent practicable." ... "Interim reclamation shall occur no later than three (3) months on crop land or six (6) months on non-crop land after such operations unless the Director extends the time period because of conditions outside the control of the operator."

The pit shall therefore be closed (Rule 905 b.) in accordance with an approved Site Investigation and Remediation Workplan, Form 27. Rule 905b. also specifies that:

- (1) Operators shall ensure that soils and ground water meet the concentration levels of Table 910-1.
- (2) Pit evacuation. Prior to backfilling and site reclamation, E&P waste shall be treated or disposed in accordance with Rule 907.
- (3) Liners shall be disposed as follows: A. Synthetic liner disposal. Liner material shall be removed and disposed in accordance with applicable legal requirements for solid waste disposal.

Rule 905 c. states that spill/releases discovered during closure operations, must be reported on the Spill/Release Report Form 19.

To ensure that a proper investigation is conducted the Site Investigation and Remediation Work Plan will include the following points:

- 1) Removal of waste in the pit is not limited to the debris, pieces of metals, wood, etc. but includes washing the pit lining to remove all sediments accumulated during the operation of the pit, and during the time period the pit has been out of service. Cleaning of the pit lining is a first step for the Site Investigation and must be addressed in the Form 27.
- 2) A comprehensive sampling plan that describes the sampling locations and depths (and number of samples), sampling procedure, equipment (by hand, geoprobe, etc.) and the protocol for saving and sending samples to an authorized laboratory. A figure that clearly indicates the sampling locations will be submitted along with the sampling plan. Samples must be DISCRETE. Composite samples will not be accepted. As a minimum, samples will be collected from beneath the liner, on the four walls, AND on the bottom of the pit, at a depth of one foot. The number of samples is not rigorously dictated but must be representative of the area investigated. Samples must be taken additionally in the vicinity of the lowest point and wherever staining, odor, high PID readings, or unusual salt deposition might indicate impact to the soil. In locations of suspected impact, enough samples should be taken to define horizontally and vertically the extent of the potential impact.
- 3) Soil samples will not be restricted to the pit itself but to surrounding areas that could have potentially be impacted by overflow, and other spill/release events. The area near the leak detection sump shall be evaluated to confirm whether an impact had occurred as a result of the operation of the leak detection (the original sump was replaced when it was discovered that it was all rusty and had holes).
- 4) Maralex shall follow the 900 Series Rules and samples shall be analyzed for Table 910-1 parameters.
- 5) There is the potential for impact beneath the liners at the bottom of the pit, on the walls, and in the vicinity of the pit. A description of how impacted material would be removed, and remediated or disposed must be included in the Site Assessment and Remediation Work Plan (i.e. submittal of Form 19, excavation of impacted material, placement of impacted material on lined and/or bermed containment, remediation and/or disposal, etc.)
- 6) Although groundwater impact is not anticipated, the potential for groundwater impact must be considered: Supporting information to discard groundwater impact is suggested. Otherwise an appropriate site specific groundwater sampling, monitoring and remediation plan must be submitted.
- 7) Disposal versus re-use of lining. It is COGCC staff opinion that the lining must be removed on either cases, a) If the pit will not be re-used and will therefore be backfilled and reclaimed, or b) if the pit will be converted into a Centralized E&P Waste Management Facility. The first case is self-explanatory. If Maralex has the intention to re-use the pit, the pit shall be brought to current, state of the art standards, including the spill detection system, water discharge system to the pit, and lining system.

The pit has been out of service for several years, exposed to the elements (wind, heat, UVs). During the first site visit conducted by COGCC staff on June 18, 2013, the pit was dry. The bottom of the pit was covered with salty sediment (white material), and sludge. Debris, junk, and weeds transported by the wind were observed mostly on the south west section of the pit.

The lining has been compromised mostly on the northeast side. The northeast wall of the pit presents more than 60 patches. According to Maralex, the pit is double lined with 4-inches of sand between the liners. According to Maralex, the 60 plus penetrations are believed to be a result of bullets being shot through the liner(s). If that is the case, the lower lining has the potential to be compromised.

For the above reasons, COGCC considers that the quality and integrity of the lining has been compromised and is not suited for re-use.

However, if Maralex elects to re-use the liner(s) they have the option of having the pit liner integrity tested and certified by a Professional Engineer with expertise in the field; have a lining company certify the good conditions of the lining material and demonstrate that the leak detection system is functional and present their case to the Commission and obtain approval to re-use the liner.

- 8) Reclamation: A reclamation plan consistent with the 1000-series Rule will be included with the Form 27. Considering that Maralex current plans are to re-use the pit, COGCC will not require that the pit be backfilled at this moment. However, if Maralex decides not to re-use the pit the pit will need to be reclaimed in accordance with the 1000-series Rule.
- 9) The Form 27 will address as well all deficiencies and violations described in the Inspection # 671000003 that have not been mentioned in this letter.

Please submit the requested Form 27 Site Assessment and Remediation Work plan for our review by September 16, 2013. If you require any additional information, please call me at 970 625 5682 or send me an email at carlos.lujanstate.co.us

Sincerely,

A handwritten signature in black ink, appearing to read 'Carlos Lujan', with a stylized flourish at the end.

Carlos A. Lujan, Ph.D.
Environmental Protection Specialist
Northwest Region

Cc: Jim Milne – COGCC Environmental Manager
Alex Fischer – COGCC Environmental Supervisor