



DEPARTMENT OF NATURAL RESOURCES

*John W. Hickenlooper, Governor*

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April 25, 2014

Ms. Naomi Azulai  
Production Technician  
(970) 563-4000 Phone  
[Naomiazulai@maralexinc.com](mailto:Naomiazulai@maralexinc.com)

Re: Garfield II Pit  
East Divide Creek Rd  
Facility ID # 418038  
NENE 19 7S 91W  
Garfield County

Dear Ms. Azulai,

Colorado Oil and Gas Conservation Commission (COGCC) staff has recently conducted inspections to the Garfield II Pit (Inspection #671000017 and #671000025), reviewed existing complaint and inspections from 2010 (Complaint #200258980, Inspections #s 200258756, 200263686) and reviewed the original pit and liner specification, as submitted to the BLM. The COGCC has determined that the Garfield II pit may pose a threat to the environment due to current liner conditions.

The COGCC has determined that Maralex must start implementing immediately the following course of actions:

1. Empty the pit and stop using it to receive produced water or any other exploration and production (E&P) waste;
2. Submit a Form 27, Site investigation and Remediation Work Plan. The objective of this investigation is to confirm that no releases have occurred and that groundwater and surface waters of the State are not impacted or threatened by a potential impact. The Site investigation will include borings and soil sampling (and groundwater sampling if applicable). This will be a pre-requisite to submit the Form 28.
3. Submit a Form 28 to construct and operate a Centralized E&P Waste Management Facility.

Background:

- The BLM issued a Right-Way permit to Maralex in 1982. The Garfield II pit was constructed and started operation before 1990 (see 1990 aerial photos);
- The original pit specifications included two liners of 3 and 8 mil respectively. These liners have been in place for at least 24 years and probably for 30 years, unless Maralex upgraded the liners at some point in time. If that is the case, Maralex will need to provide documentation;
- Patches were observed in the perimeter of the pit above the fluid level, at the fluid level and below the fluid level. Some of them are below the 2 feet freeboard maximum fluid level.
- On July 6 2010, a landowner raised his concerns regarding the proximity of the pit to the creek, adjacent natural drainages, and rural residences (Complaint #200258980);

DEPARTMENT OF NATURAL RESOURCES: Mike King, Executive Director

COGCC COMMISSION: Richard Alward – John Benton – Thomas L. Compton – DeAnn Craig – Tommy Holton – W. Perry Pearce – Andrew Spielman – Mike King – Chris Urbina  
COGCC STAFF: Matt Lepore, Director – Margaret Ash, Field Inspection Manager – Jim Milne, Environmental Manager – Stuart Ellsworth, Engineering Manager

- On July 2010, COGCC conducted an inspection (#200258756) and requested that Maralex submit a pit permit to be in compliance. COGCC conducted a follow-up inspection (#200263686) and noted that no actions had been taken by Maralex;
- On March 20, 2014 BLM contacted COGCC, concerning Maralex' request to extend BLM's Right-of-Way permit. A joint inspection was conducted on March 27, 2014 (doc #671000017). A copy of the inspection report was emailed automatically to Ms Naomi Azulai and Mr. Jim Graves, from Maralex. Subsequently, BLM emailed a copy of the original pit specifications to COGCC;
- On April 2, 2014, COGCC conducted a second inspection (doc #671000025). A copy of the inspection report has been emailed automatically to Ms. Naomi Azulai and Mr. Jim Graves, from Maralex;
- Based on the background information presented above, COGCC cannot approve the future use of the pit without a proper upgrade to bring the pit to current specifications and state-of-the-art engineering practices.

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.

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

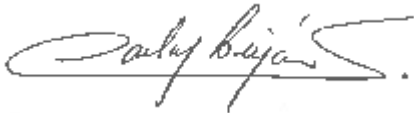
- 1) Removal of waste in the pit is not limited to the debris, pieces of metals, wood, etc. but includes washing the pit lining to remove all sediments accumulated during the operation of the pit. Cleaning of the pit lining is a first step for the Site Investigation and must be addressed in the Form 27.
- 2) A comprehensive sampling plan that describes the sampling locations and depths (and number of samples), sampling procedure, equipment (by hand, direct-push, auger, 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. At 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) Maralex shall follow the 900 Series Rules and samples shall be analyzed for Table 910-1 parameters.
- 4) There is a 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.)
- 5) 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.

- 6) 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.

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.

Please submit the requested Form 27 Site Assessment and Remediation Work plan for our review by May 15, 2014. If you require any additional information, please call me at 970 625 5682 or send me an email at [carlos.lujan@state.co.us](mailto:carlos.lujan@state.co.us)

Sincerely,

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

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

Cc: Alex Fischer – COGCC Environmental Supervisor