STATE OF COLORADO

Lujan - DNR, Carlos <carlos.lujan@state.co.us>

Roan Creek Evaporation Pond

2 messages

Naomi <naomi@maralexinc.com> Tue, Aug 5, 2014 at 2:16 PM
To: "Lujan - DNR, Carlos" <carlos.lujan@state.co.us>, "Potter, Oneita" <opotter@blm.gov>
Cc: Jim Graves <mrinc20@qwestoffice.net>, "D. Craig Heydenberk" <esi.craig@sopris.net>, RONALD FROBEL <geosynthetics@msn.com>

Hi Carlos and Oneida,
Attached to this email you will find the lab results for the samples taken at the Roan Creek Evaporation Pond on 7/17/2014. I have also attached a schematic to show where each sample was collected and a table summarizing the results. I believe that these results show that the liner has and is providing a sufficient barrier. We are ready to move to the next phase of the proposed plan in order to permit and recommission the pond so long as you are in agreement that the soil sample analysis shows that the liner has not compromised the site. I would appreciate your response once you have reviewed the lab results.
Thanks.
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Naomi Azulai

Production Technician
Maralex Resources, Inc.
(970) 563-4000 Phone
(970) 563-4116 Fax

3 attachments

Roan Creek Pond Sampling Schematic.pdf
731K

Table 910-1 Comparison Roan Creek Pond.pdf
185K

Roan Creek Pond B1407105.report.pdf
1568K

Lujan - DNR, Carlos <carlos.lujan@state.co.us> Tue, Aug 5, 2014 at 4:13 PM
To: Naomi <naomi@maralexinc.com>
Cc: Jim Graves <mrinc20@qwestoffice.net>, "D. Craig Heydenberk" <esi.craig@sopris.net>, RONALD FROBEL <geosynthetics@msn.com>, Alex Fischer <alex.fischer@state.co.us>, "Spencer - DNR, Stan" <stan.spencer@state.co.us>, "Werkmeister, Wayne" <wwerkmeister@blm.gov>, Julia Christiansen <jchristi@blm.gov>, kacey Conway <kconway@blm.gov>, "Potter, Oneita" <opotter@blm.gov>

Naomi,

Thanks for providing a copy of the Site Assessment analytical results. The results show no indication of hydrocarbon impact in any of the samples analyzed. There is no indication either that produced water had infiltrated beneath the liner on the Northwest wall of the pit, which is the side with more than 60 patches, and therefore the area with more probabilities of being impacted. The only evidence of impact was found on the two samples taken outside of the fence, in areas completely void of vegetation. In these two areas, the Sodium Absorption Ration (SAR) values were 110 and 270, whereas all other samples had SAR values between 16 and 31 (SAR should be < 12 according to COGCC Table 910-1. Footnote states that consideration will be given to background values). These areas covered with impacted sediments from the pit area will have to be scraped or treated to reduce the SAR values.

No other remediation work is required at this time but COGCC may require additional investigation if new evidences suggest the potential for environmental impact.

The following COAs that define the path forward were included in the Form 27 Site Assessment and Remediation Work Plan (REM # 8494):

> **Conditions of Approval:** 1. Maralex will submit the results of the Site Investigation and Remediation Work Plan in a report to the COGCC via e-form 04, no later than August 15, 2014 (Per Proposed Time Schedule). The report will include a cover letter and 1) the analytical report and tabulated results with a figure that indicates the exact location of the sampling, 2) the liner inspection report, 3) conclusions and recommendations, and 4) **a proposed date for the submittal of the Form 28 (E & P Waste Management Facility).** 2. Samples will be collected to a depth of 6 inches and 2 to 3 feet bgs (two samples per location) at five locations on the northeast side of the pit (preferably near a patch). 3. Samples will be collected to a depth of 1 to 2 feet bgs: a) Between the western corner of the pit and the tank berm, b) Two samples from outside the fenced area, on the Northeast and Southeast side of the pit respectively, preferably where sediment from the pit area has been deposited. 4. One sample will be collected next to the leak detection sump at the depth of the bottom of the sump. 5. Three samples on the side of the pit, the sample near the tank, and the one near the sump will be analyzed for all Table 910-1 parameters. All other samples may be analyzed for TPH, BTEX and inorganics (EC, SAR, and pH) only. 6. Maralex will notify the COGCC 10 working days in advance of any planned activity, so that COGCC staff or its consultants have the time to plan a join visit to the Site with Maralex.

Note: Maralex will need the approval of BLM and of COGCC to reuse the Roan Creek Evaporation pit as a Centralized Evaporation Facility. Approval from COGCC will require the submittal and approval of a Form 28 (Centralized E&P Waste Management Facilities). See Rules 908 for details of the requirements.

Thanks,
Carlos

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

COLORADO
Oil & Gas Conservation Commission
Department of Natural Resources

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[Quoted text hidden]

3 attachments

- **Table 910-1 Comparison Roan Creek Pond.pdf**
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