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REM# 11150

Please reference document numbers 401563262 for previous submittal.

Caerus collected 10 soil samples from the 2 identified pits prior to reclamation activities. Results of the pit samples identified EC, SAR, and pH to be present above COGCC Table 910-1 concentration levels.

FAQ 31 consideration

Some of the pit assessment samples and all the Arsenic samples identified an exceedance to the COGCC Table 910-1 concentration level of 0.39 mg/kg. Background arsenic concentrations from a location (Facility ID 316370) within the same BLM Lease unit is of similar concentrations to the 6502 location which are provided on the attached table. The concentrations are within the 1.25 times the background concentration an amount accepted by COGCC. The Colorado Department of Public Health and Environment (CDPHE) has prepared a risk management guidance document for evaluating arsenic concentrations in soil and has identified an average arsenic concentration within Colorado to be 11 mg/kg (CDPHE, <https://www.colorado.gov/pacific/cdphe/air-water-soil-remedial-objectives>). The study identified that if there is no reason to suspect arsenic or arsenic containing materials were used onsite, then an arsenic concentration below 11 mg/kg is not a chemical of concern. Based on process knowledge during the drilling, completion, and production process, Caerus does not use arsenic or arsenic containing materials. Caerus has analyzed produced water samples from multiple fields within the area which have not demonstrated elevated concentrations of arsenic to be found in produced water. Following the flowchart provided in the Risk management guidance, Caerus believes these elevated concentrations are due to background concentrations found in the soil. Caerus is requesting consideration for FAQ 31 and the CDPHE Risk Management Guidance for Evaluating Arsenic Concentrations in Soil as site and background soil samples have demonstrated naturally occurring arsenic in the soil above the COGCC Table 910-1 concentration levels.

FAQ 32 consideration

Caerus is requesting consideration for COGCC Table 910-1 concentration levels for electrical conductivity (EC), sodium adsorption ratio (SAR), and pH under guidelines set forth under FAQ 32 as all impacts are greater than 3 feet below ground surface and the site has been full reclaimed. Caerus believes the request for FAQ 32 consideration is acceptable as there are minimal potential receptors in the area and environmental impacts to these receptors are unlikely. The site is on BLM land and the access road has been reclaimed. The nearest surface water drainage is a dry drainage and is located approximately 450 feet to the north of the site. Groundwater at the site is estimated to be greater than 250 feet below ground surface.

At the time of reclamation Caerus ensured all elevated concentrations of EC, SAR, and pH were buried below at least three feet of native soil to ensure agronomic growth.