

From: Koepsell, Arthur
To: ["Michael.Bergstrom@shell.com"](mailto:Michael.Bergstrom@shell.com)
Subject: Freeman 3-24 Form 2A# 400256794, SWEPI LP
Date: Wednesday, May 23, 2012 1:29:00 PM

Michael,

The COGCC is reviewing the Form 2A (#400256794) for the SWEPI Freeman 3-24 location, located in the NWSW Sec 24 T27S R69W Huerfano County, Colorado. The COGCC requests additional information and acknowledgement of conditions of approval prior to passing the Oil and Gas Location Assessment (OGLA).

Date to start interim reclamation

The latest that SWEPI can begin interim reclamation is 3/1/2013. The date to begin interim reclamation should be changed to 3/1/2013.

Conditions of Approval:

- Provide notice to COGCC 48-hours prior to commencement of construction activities via form 42.
- Provide notice to COGCC 48-hours prior to commencement of Hydraulic Fracturing activities via form 42.
- The operator will conduct baseline sampling of (at a minimum) the two (2) closest water wells. The operator may conduct additional groundwater monitoring at their own discretion.

Laboratory analysis at a minimum will include the following: pH (lab) TDS Conductivity (lab, not resistivity) SAR calculation Ca, K, Mg, Na, As, B, Ba, Cd, Cr, Cu, Fe, Mn, Pb, Se (all total recoverable) Br, Cl, F, SO₄, Alkalinity (Total, HCO₃ and CO₃ – all expressed as CaCO₃) benzene toluene ethyl benzene o-xylene m- + p-xylene, Dissolved Methane, MBAS, DRO, GRO. Field parameters including pH, Temperature and Conductivity shall be recorded prior to collecting the sample for laboratory analysis. Field observations such as odor, water color, sediment, bubbles and effervesce shall also be included.

If free gas or a dissolved methane concentration level greater than one (1) milligrams per liter (mg/l) is detected in a water well, gas compositional analysis and stable isotope analysis of the methane (carbon and deuterium) shall be performed to determine gas type (biogenic or thermogenic). If the methane concentration increases by more than five (5) mg/l between sampling periods, or increases to more than ten (10) mg/l, the operator shall notify the Director and the owner of the water well immediately. If thermogenic methane concentrations increase between sampling periods, the operator shall submit to the Director an action plan to determine the source of the increase.

The selected sampling locations will be sampled again 1 year, 3 years and 6 years after completion. Post completion sampling of water wells will consist of the same analyte list as the pre-drilling program. Copies of all test results, field parameters and field observations described above shall be provided to the Director, and the water well owner within three (3) months of collecting the samples. The analytical data and surveyed sample locations shall also be submitted to the Director in an electronic data deliverable format approved by Director.

Participating in the COGA voluntary baseline water quality monitoring program meets the requirements of this COA.

- Flowback and stimulation fluids must be sent to tanks. The flowback and stimulation fluid tanks must be placed on the well pad in an area with additional down gradient perimeter berming sufficiently impervious to contain any spilled or released material (per Rule 604.a.(4)). Tanks used for flowback must be equipped with emission reducing devices during flowback.
- Emissions from condensate, crude oil, and produced water tanks and from glycol dehydrators shall be controlled by a device capable of 95% control efficiency of VOC. The device(s) shall be maintained to allow maximum efficiency during operations. If necessary, a permit from the Colorado Department of Public Health and Environment, Air Pollution Control Division, for the tank(s), Dehydrator(s) and control device(s) shall be obtained.

Please feel free to contact me if you have any questions or concerns.

Thanks,

Arthur

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