

From: Koepsell, Arthur
To: ["bheard@sierra-engineering.net"](mailto:bheard@sierra-engineering.net)
Subject: Brown 28-24-49 1 Form 2A Document # 2237553, Auburn Operating
Date: Tuesday, September 04, 2012 10:57:00 AM

William,

The COGCC is reviewing the Form 2A (#2237553) for the Auburn Operating Company Brown 28-24-49 1 location, located in the NENE Sec 28 T24S R49W Bent County, Colorado. The COGCC requests the following changes regarding the data submitted on or attached to the Form 2A prior to passing the Oil and Gas Location Assessment (OGLA).

Facilities

The form 2A indicates that there will not be any pits built on the location; however the location drawing and construction layout drawing indicate a pit will be constructed on the location. Please correct the discrepancy between the form 2A and the attached drawings. If there is not going to be a pit on the location the drawing will need to be corrected prior to passing the form 2A.

Sensitive Area Determination

Due to the close proximity of surface water (intermittent stream 200 feet north) the location is considered a sensitive area. COGCC staff has amended the sensitive area determination to yes.

Hydrology map

Based on a review of aerial photos on the COGCC website additional features that need to shown on the hydrology map. In addition to the intermittent stream to the north, there is an intermittent stream and stock pond to the south east and an intermittent stream to the west that should be included on the hydrology map.

Per rule 303.d.(3).D the map or drawing should show all surface waters and riparian areas within one thousand (1,000) feet of the proposed oil and gas location, with a horizontal distance and approximate bearing from the oil and gas location.

Conditions of Approval

Operator must implement site-specific best management practices in accordance with good engineering practices, including, but not limited to, construction of a berm or diversion dike, site grading, or other comparable measures, sufficient to protect the intermittent stream located approximately 200 feet north of the oil and gas location from a release of drilling, completion, produced fluids, and chemical products.

Prior to drilling, operator shall sample one well, spring, or surface water feature within a one (1) mile radius of the proposed oil and gas location (Preferably the Well shown on the attached Location Drawing). Testing preference shall be given to water wells and springs over surface water.

The sample location shall be surveyed in accordance with Rule 215.

Initial baseline testing shall include laboratory analysis of pH, total dissolved solids (TDS), specific conductivity (SC), sodium adsorption ratio (SAR) calculation, calcium (Ca), potassium (K), magnesium (Mg), sodium (Na), arsenic (As), boron (B), barium (Ba), cadmium (Cd), chromium (Cr), copper (Cu), iron (Fe), manganese (Mn), lead (Pb), selenium (Se). All metals analyzed for total recoverable; bromide (Br), chloride (Cl), fluoride (F), sulfate (SO₄), alkalinity (total, HCO₃, and CO₃ – all expressed as CaCO₃), benzene, toluene, ethyl benzene, o-xylene, m- + p-xylene (BTEX), dissolved methane, diesel range organics (DRO), gasoline range organics (GRO). Sampling shall be performed by qualified individuals using methods consistent with commonly accepted environmental sampling procedures. Field observations such as pH, temperature, specific conductance, odor, water color, sediment, bubbles, and effervescence 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).

The selected sampling location will be sampled again 1 year 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.

Please feel free to contact me if you have any questions or concerns regarding the form 2A.

Thanks,

Arthur

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