

## Dave Kubeczko - DNR

---

**From:** Dave Kubeczko - DNR  
**Sent:** Tuesday, November 08, 2016 11:25 AM  
**To:** Dave Kubeczko - DNR  
**Subject:** Caerus Piceance LLC, Mesa N23-697 Pad, SESW Sec 23 T6S R97W, Garfield County, Form 2A#401104804 Review

**Categories:** Operator Correspondence

Scan No. 2108001      CORRESPONDENCE      2A #401104804

---

**From:** Reed Haddock [mailto:[rhaddock@caerusoilandgas.com](mailto:rhaddock@caerusoilandgas.com)]  
**Sent:** Monday, October 31, 2016 11:08 AM  
**To:** Dave Kubeczko - DNR  
**Subject:** RE: Caerus Piceance LLC, Mesa N23-697 Pad, SESW Sec 23 T6S R97W, Garfield County, Form 2A#401104804 Review

Dave:

Caerus is "ok" with these proposed COA's. Reed

---

**From:** Dave Kubeczko - DNR [mailto:[dave.kubeczko@state.co.us](mailto:dave.kubeczko@state.co.us)]  
**Sent:** Friday, October 28, 2016 2:39 PM  
**To:** Reed Haddock <[rhaddock@caerusoilandgas.com](mailto:rhaddock@caerusoilandgas.com)>  
**Subject:** Caerus Piceance LLC, Mesa N23-697 Pad, SESW Sec 23 T6S R97W, Garfield County, Form 2A#401104804 Review

Reed,

I have been reviewing the Caerus Piceance LLC (Caerus). Mesa N23-697 Pad **Form 2A #401104804**. COGCC would like to attach the following conditions of approval (COAs) based on the information and data Caerus has submitted on or attached to the Form 2A prior to passing the Oil and Gas Location Assessment (OGLA) review.

**Planning:** The following conditions of approval (COAs) will apply:

**COA 91** - In addition to the notifications required by COGCC listed in the **Northwest Notification Policy (Notice of Intent to Construct a New Location, Notice of Intent to Spud Surface Casing, and Notice of Intent to Commence Hydraulic Fracturing Operations)** and **Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (a. Notice of Intent to Conduct Hydraulic Fracturing Treatment and c. Notice of Construction or Major Change)**; operator shall notify the COGCC 48 hours prior to pipeline testing (flowlines from wellheads to separators to tanks; permanent buried take away pipelines; and/or any temporary surface lines used for hydraulic stimulation and/or flowback operations) using the Form 42 (as described in **Rule 316C.m. Notice of Completion of Form 2/2A Permit Conditions**). The appropriate COGCC individuals will automatically be email notified.

**COA 99** - Operator shall comply with all provisions of the **NOTICE TO OPERATORS (NTO) DRILLING WELLS WITHIN ¾ MILE OF THE RIM OF THE ROAN PLATEAU IN GARFIELD COUNTY - PIT DESIGN, CONSTRUCTION, AND MONITORING REQUIREMENTS, dated June 12, 2008**.

**COA 37** - The operator shall submit, via a Form 4 Sundry Notice, and receive approval of, a reuse and recycling plan per Rule 907.a.(3), prior to any offsite reuse/recycling of cuttings.

**Based on proximity of the well pad to downgradient surface water (streams and/or intermittent streams located 362' to the east-southeast, and 547' to the west), and due to the highly fractured nature of the surface material and near surface geologic material in the area (Uinta Formation) around the Roan Rim, this location has been designated a "sensitive area".**

**Construction:** The following conditions of approval (COAs) will apply:

**COA 23** - Operator must ensure secondary containment for any volume of fluids contained at the well site during drilling and completion operations (as shown on the Construction Layout Drawings and Location Drawing attachments); including, but not limited to, construction of a berm or diversion dike, diversion/collection trenches within and/or outside of berms/dikes, site grading, or other comparable measures (i.e., best management practices [BMPs] associated with fluid containment/control as well as stormwater management for the control of run-on and run-off) sufficiently protective of nearby surface water. Any berm reconstructed at the well pad location will be stabilized, inspected at regular intervals as required by CDPHE (at least every 14 days and after precipitation events), and maintained in good condition. The design/build of any perimeter berm shall be sized, constructed, and compacted sufficiently to contain fluids during drilling operations, as well as all fluids contained in temporary frac tanks during completion operations.

**COA 28** - The location is in an area of moderate to high run-on/run-off potential; therefore standard stormwater BMPs must be implemented; prior to, during, and after construction, as well as during operations; at this location to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and /or stormwater run-off.

**COA 44** - The access road will be constructed and maintained as to not allow any sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.

**COA 76** - Strategically apply fugitive dust control measures, including encouraging established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.

**COA 58** - Berms or other containment devices shall be constructed to be sufficiently impervious (corrugated steel with poly liner) to contain any spilled or released material around permanent condensate and produced water storage tanks.

**Drilling/Completions:** The following conditions of approval (COAs) will apply:

**COA 11** - The moisture content of water/bentonite based mud (WBM) generated drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. After drilling and completion operations have been completed, any WBM drill cuttings that will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), must meet the applicable standards of Table 910-1. After the drill cuttings have been amended (if necessary) and placed on the well pad, sampling frequency of the drill cuttings (to be determined by the operator) shall be representative of the material left on location. No offsite disposal of cuttings to another oil and gas location shall occur without prior approval of a Waste Management Plan (submitted via a Form 4 Sundry Notice) specifying disposal location and waste characterization method.

**COA 57** - The nearby hillside must be monitored for any day-lighting of drilling fluids throughout the drilling of the surface casing interval.

**COA 25** - Flowback and stimulation fluids must be sent to enclosed tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline storage vessel, or other open top containment located on the well pad; or into tanker trucks for offsite disposal. No open top tanks can be used for initial flowback fluids containment. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material. No additional downgradient berming is required if operator constructs a sufficiently sized perimeter berm.

**COA 26** - Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated.

**Material Handling and Spill Prevention:** The following conditions of approval (COAs) will apply to the Form 2A:

**COA 45** - Operator shall pressure test pipelines (flowlines from wellheads to separators to tanks; and any temporary surface lines used for hydraulic stimulation and/or flowback operations) in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network, and tested annually, unless agreed to by both parties that the flowlines can be managed under an approved COGCC variance.

**Underground Injection Control (UIC):** The following conditions of approval (COAs) will apply to the proposed injection well [N23 697 SWD](#) and any temporary or permanent equipment onsite used for injection:

**COA 2** - Approval of this Form 2A and the subsequent Form 2 for the injection well (N23 697 SWD) does not authorize operator the right to inject. Authorization to inject into the selected Formation(s) requires approval of both the Form 31 and the Form 33.

**COA 46** - Operator will use qualified containment devices for all appropriate chemicals/hazardous materials and injection equipment (pumps) used onsite during the operation of the injection well.

**COA 41** - All tanks and aboveground vessels containing fluids must have secondary containment structures. All secondary containment structures/areas must be lined. Operator must ensure a minimum of 110 percent secondary containment for the largest structure containing fluids within each bermed area at the facility during operations. The construction and lining of the secondary containment structures/areas shall be supervised by a professional engineer or their agent.

**COA 51** - Operator shall equip and maintain on all tanks an electronic fluid level monitoring device.

**COA 22** - Unless otherwise determined by COGCC staff (COGCC Engineering Staff) that a water sample of the proposed injection formation(s) is(are) not required, before hydraulic stimulation of the injection well, operator shall collect a groundwater sample from the target Formation(s); that will be indicated on the future Form 2 for the injection well; and analyze for total dissolved solids (TDS); submit laboratory analytical results to COGCC (emails: [bob.koehler@state.co.us](mailto:bob.koehler@state.co.us) and [arthur.koelspell@state.co.us](mailto:arthur.koelspell@state.co.us)).

COGCC would appreciate your concurrence with attaching these COAs to the Form 2A permit prior to passing the OGLA review. If you have any questions, please do not hesitate to call me at (970) 309-2514 (cell), or email. Thanks.

Dave

David A. Kubeczko, PG  
Oil and Gas Location Assessment Specialist  
Western Colorado



Colorado Oil & Gas Conservation Commission  
Northwest Area Office  
796 Megan Avenue, Suite 201  
Rifle, CO 81650  
FAX: (970) 625-5682  
Cell: (970) 309-2514  
[dave.kubeczko@state.co.us](mailto:dave.kubeczko@state.co.us) | [www.colorado.gov/cogcc](http://www.colorado.gov/cogcc)

 *Please consider the environment before printing this e-mail*