

Dave Kubeczko - DNR

From: Dave Kubeczko - DNR
Sent: Monday, April 11, 2016 2:27 PM
To: Dave Kubeczko
Subject: Caerus Piceance LLC, Mesa E25-697 Pad, SWNW Sec 25 T6S R97W, Garfield County, Form 2A#400981717 Review

Categories: Operator Correspondence

Scan No 2107801 CORRESPONDENCE 2A#400981717

From: Reed Haddock [mailto:rhaddock@caerusoilandgas.com]
Sent: Thursday, April 07, 2016 1:40 PM
To: Dave Kubeczko - DNR
Subject: RE: Caerus Piceance LLC, Mesa E25-697 Pad, SWNW Sec 25 T6S R97W, Garfield County, Form 2A#400981717 Review

Dave:

Caerus is fine with these COA's. Reed

From: Dave Kubeczko - DNR [mailto:dave.kubeczko@state.co.us]
Sent: Wednesday, March 30, 2016 4:16 PM
To: Reed Haddock <rhaddock@caerusoilandgas.com>
Subject: Caerus Piceance LLC, Mesa E25-697 Pad, SWNW Sec 25 T6S R97W, Garfield County, Form 2A#400981717 Review

Reed,

I have been reviewing the Mesa E25-697 Pad **Form 2A #400981717**. COGCC would like to attach the following conditions of approval (COAs) based on the information and data Caerus Piceance LLC (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; 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**. At a minimum, all pits (if constructed) must be lined.

COA 98 - Operator shall submit, via a Form 4 Sundry Notice, the "Reference Area Map" and the "Reference Area Photos" attachments within 12 months of the date of approval of this Form 2A. The reference area pictures shall be taken during the growing season (after snow has melted).

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.

In addition, based on proximity of the well pad to surface water (intermittent streams located 482' to the southwest and 485' to the northwest), and due to the highly fractured nature of the surface material in the area around the Roan Rim, this location will be 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, Location Drawing, Proposed BMPs, and Facility Layout 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 constructed 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 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.

Underground Injection Control (UIC): The following conditions of approval (COAs) will apply to the proposed injection well **Mesa-E25-SWD** and any temporary or permanent equipment onsite used for injection:

COA 2 - Approval of this Form 2A and the **Form 2#400955602** for the injection well 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 (Bob Koehler) that a water sample of the proposed injection formation is not required, before hydraulic stimulation of the injection well, operator shall collect a groundwater sample from the target Formations (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 and arthur.koelspell@state.co.us).

COGCC would appreciate your concurrence with attaching the COGCC 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



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