

Dave Kubeczko - DNR

From: Dave Kubeczko - DNR
Sent: Wednesday, February 15, 2017 11:29 AM
To: Dave Kubeczko - DNR
Subject: FW: <EXTERNAL> SandRidge Exploration & Production LLC, Rabbit Ears 0681 23 Pad, SWNE Sec 23 T6N R81W, Jackson County, Form 2A#401101898 Review

Categories: Operator Correspondence

Scan No. 2108059 CORRESPONDENCE 2A#401101898

From: Spence Laird [mailto:slaird@sandridgeenergy.com]
Sent: Monday, January 23, 2017 12:11 PM
To: Dave Kubeczko - DNR
Subject: RE: <EXTERNAL> SandRidge Exploration & Production LLC, Rabbit Ears 0681 23 Pad, SWNE Sec 23 T6N R81W, Jackson County, Form 2A#401101898 Review

I have distributed the COA's to the SD group and SandRidge agrees to the COAs and will adhere to the Venting and Flaring Rules and Policy. I will forward to you our Rule 604.c.(2). Mitigation Measures BMP's.

And yes, I will forward you the approved BLM APD's as soon as I receive them.



From: Dave Kubeczko - DNR [mailto:dave.kubeczko@state.co.us]
Sent: Sunday, January 22, 2017 9:46 PM
To: Spence Laird
Cc: Laci Bevans
Subject: <EXTERNAL> SandRidge Exploration & Production LLC, Rabbit Ears 0681 23 Pad, SWNE Sec 23 T6N R81W, Jackson County, Form 2A#401101898 Review

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Spence,

I have been reviewing the SandRidge Exploration & Production LLC (SandRidge), Rabbit Ears 0681 23 Pad **Form 2A# 401101898**. Based on COGCC's review, the following updates, revisions, and corrections have been made to the Form 2A:

COGCC has revised Consultation Section to indicate that the location does not fall within any sensitive wildlife habitat (SWH) areas; the SWH boxed has been unmarked;

COGCC has revised: Date planned to commence construction: from 12/12/2016 to 01/30/2017;
COGCC corrected 'LOCATION IDENTIFICATION' Existing Ground Elevation from 8313' to 8308' based on survey data on the Construction Layout Drawings attachment; and
COGCC corrected distances from Wellhead to Building from 1738' to 1737'; from Wellhead to Building Unit from 1738' to 1737'; and Wellhead to Property Line from 996' to 950'; based on COGCC's review of the survey data on the Location Drawing attachment and review of COGCC's Online GIS Map, 2015 Aerial Photo layer.

COGCC would also like to attach to the Form 2A the following COAs based on the information and data SandRidge has submitted on or attached to the Form 2A prior to passing the Oil and Gas Location Assessment (OGLA) review.

Planning: The following condition of approval (COA) 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)** and **Rule 316C. COGCC Form 42. FIELD OPERATIONS NOTICE (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 lines associated with truck loading 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 90 - Water Well Groundwater Testing: In addition to the three groundwater sampling events required in Rule 609. STATEWIDE GROUNDWATER BASELINE SAMPLING AND MONITORING (initial sampling conducted within 12 months prior to setting conductor pipe in a well or the first well on a multi-well site; the first subsequent sampling event conducted at the same locations between 6 and 12 months; with a second subsequent sampling event at the same locations conducted between 60 and 72 months following completion of the well or the last well on a multi-well site), operator shall conduct two additional groundwater sampling events; one during drilling of the well(s) and one within 3 months of completion of the well(s). The groundwater sampling events shall be conducted at the following three (3) stock/domestic/household water wells that are located within approximately one-half mile of the proposed oil and gas location:

(1) Permit No. 91638-Van Valkenburg, William J; stock water well; TD - 100' bgs; SWL - 50' bgs; Pumping Rate - 5 gpm; located approximately 1699'' to the E-SE (upgradient);

(2) Permit No. 105771-Maxwell, Max R & Jean E; domestic water well; TD - 102' bgs; Screened/Perforated Interval - 80' to 102' bgs; SWL - 70' bgs; Pumping Rate - 15 gpm; located approximately 2428'' to the S (upgradient); and

(3) Permit No. 72176- Valkenburg, William J; household water well; TD - 60' bgs; Screened/Perforated Interval - 50' to 60' bgs; SWL - 12' bgs; Pumping Rate - 15 gpm; located approximately 2926'' to the NW-W (downgradient).

The groundwater sample locations shall be surveyed in accordance with **Rule 215**. Sampling and analysis shall be conducted in conformance with **Rule 609. STATEWIDE GROUNDWATER BASELINE SAMPLING AND MONITORING**. Additional test(s) may be required if changes in water quality are identified during follow-up testing. The Director may require further water well sampling at any time in response to complaints from water well owners. Copies of all test results described above shall be provided to the Director and the landowner where the water quality testing well is located within three (3) months of collecting the samples used for the test. The analytical data and surveyed well locations shall also be submitted to the Director in an electronic data deliverable format. Documented refusal to grant access by well owner or surface owner shall not constitute a violation of this COA.

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; 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.

COA 24 - The design/build of any perimeter berm or fluid management structures shall be sized, constructed, and compacted sufficiently to contain and/or manage potential fluid releases during operations in a manner that prevents or controls potential sedimentation and scouring on adjacent lands and drainages. Such design/build of perimeter berms or fluid management structures may include, but are not limited to the following: on location berms; diversion ditches; enhanced vegetation; or other design features necessary to achieve the goal of protecting adjacent lands and drainages from potential sedimentation and scouring.

COA 44 - The access road will be constructed and maintained as to not allow 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 oil and/or produced water storage tanks.

COA 48 - If oil and produced water storage tanks are not constructed on location, operator shall submit a scaled as-built drawing (plan view with distances) of this oil and gas location (showing wellheads, pumping jacks, onsite flowlines, offsite pipelines, and production facilities [separators, etc.]) and the nearby production facility location to which the oil and produced water will be sent to via underground pipelines (showing wellheads, onsite flowlines, offsite pipelines, pumping jacks, oil and produced water storage tanks, and other production facilities) within 30 calendar days of construction of the production equipment on either or both locations.

Drilling/Completions: The following condition of approval (COA) will apply:

COA 11 - A closed loop system must be implemented during drilling (as indicated on the Form 2 and Form 2A). All cuttings generated during drilling with oil based mud (OBM) must be segregated from water/bentonite based mud-(WBM-) generated drill cuttings and placed separately on the well pad. All OBM-generated drill cuttings must be kept in tanks/containers, or placed on a lined/bermed portion of the well pad; prior to disposition. The moisture content of any OBM-generated drill cuttings in a tank, cuttings containment area, or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. The operator has indicated that 'Cuttings Disposal' will be "OFFSITE" and that the 'Cuttings Disposal Method' will be "COMMERCIAL DISPOSAL" (as shown in the 'DRILLING WASTE MANAGEMENT PROGRAM SECTION' of the Form 2A). All liners associated with oil-based drilling mud and OBM-generated drill cuttings must be disposed of offsite per CDPHE rules and regulations. Any changes to drill cuttings management and disposal at this location will require submittal (via a Form 4 Sundry Notice) and approval of a Waste Management Plan detailing the changes (specifying cuttings characterization methods, cuttings management, amendment, and onsite disposal location[s]).

COA 12 - The moisture content of water/bentonite-based mud (WBM) generated cuttings during drilling of the surface casing intervals, that will be 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 of the 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. 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. Operator has indicated that commercial disposal of cuttings will be the method of disposal for all drill cuttings.

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.

COA 33 - Operator shall follow all requirements of COGCC's current policy - **NOTICE TO OPERATORS, Rule 912. VENTING OR FLARING PRODUCED NATURAL GAS – STATEWIDE, dated January 12, 2016**; and to **Rule 912. VENTING OR FLARING NATURAL GAS. a. thru e.** in regards to venting and flaring.

Material Handling and Spill Prevention: The following condition of approval (COA) will apply:

COA 45 - Operator shall pressure test pipelines (flowlines from wellheads to separators to tanks; pipelines from onsite separators to offsite storage 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.

In addition, COGCC requests that SandRidge review the attached policy (**NOTICE TO OPERATORS, Rule 912. VENTING OR FLARING PRODUCED NATURAL GAS - STATEWIDE, January 12, 2016**) and the following rule about venting and flaring:
912. VENTING OR FLARING NATURAL GAS

- a. The unnecessary or excessive venting or flaring of natural gas produced from a well is prohibited.
- b. Except for gas flared or vented during an upset condition, well maintenance, well stimulation flowback, purging operations, or a productivity test, gas from a well shall be flared or vented only after notice has been given and approval obtained from the Director on a Sundry Notice, Form 4, stating the estimated volume and content of the gas. The notice shall indicate whether the gas contains more than one (1) ppm of hydrogen sulfide. If necessary to protect the public health, safety or welfare, the Director may require the flaring of gas.
- c. Gas flared, vented or used on the lease shall be estimated based on a gas-oil ratio test or other equivalent test approved by the Director, and reported on Operator's Monthly Report of Operations, Form 7.
- d. Flared gas that is subject to Sundry Notice, Form 4, shall be directed to a controlled flare in accordance with Rule 903.b.(2) or other combustion device operated as efficiently as possible to provide maximum reduction of air contaminants where practicable and without endangering the safety of the well site personnel and the public.
- e. Operators shall notify the local emergency dispatch or the local governmental designee of any natural gas flaring. Notice shall be given prior to flaring when flaring can be reasonably anticipated, or as soon as possible, but in no event more than two (2) hours after the flaring occurs.

Operator shall also adhere to the BMPs listed on the Operator BMP/COA Tab as well as to the following rule: **Rule 604.c.(2). A. thru W.:**

604. SETBACK AND MITIGATION MEASURES FOR OIL AND GAS FACILITIES, DRILLING, AND WELL SERVICING OPERATIONS

c. Mitigation Measures. The following requirements apply to an Oil and Gas Location within a Designated Setback Location and such requirements shall be incorporated into the Form 2A or associated Form 2 as Conditions of Approval.

(2) Location Specific Requirements – Designated Setback Locations. Subject to Rule 502.b., the following mitigation measures shall apply to any Well or Production Facility proposed to be located within a Designated Setback Location for which a Form 2 Application for Permit to Drill or Form 2A Oil and Gas Location Assessment is submitted on or after August 1, 2013: In particular, the operator should provide site-specific BMPs and/or mitigation measures for the following items **highlighted in yellow**:

- A. Noise.**
- B. Closed Loop Drilling Systems – Pit Restrictions.**
- C. Green Completions – Emission Control Systems.**
- D. Traffic Plan.**
- E. Multi-well Pads.**
- F. Leak Detection Plan.**
- G. Berm construction.**
- H. Blowout preventer equipment (“BOPE”).**
- I. BOPE testing for drilling operations.**
- J. BOPE for well servicing operations.**
- K. Pit level indicators.**

- L. Drill stem tests.
- M. Fencing requirements.
- N. Control of fire hazards.
- O. Loadlines.
- P. Removal of surface trash.
- Q. Guy line anchors.
- R. Tank specifications.
- S. Access roads.
- T. Well site cleared.
- U. Identification of plugged and abandoned wells.
- V. Development from existing well pads.
- W. Site-specific measures.

Please respond to this email indicating that you have read the policy and rules concerning venting and flaring and will adhere to both; and provide site-specific BMPs addressing nuisance issues and provide to COGCC (an example of site-specific BMPs for guidance has been attached to this email). COGCC would also appreciate your concurrence with attaching the COAs to the Form 2A prior to passing the OGLA review. In addition, could SandRidge provide COGCC with the COAs and wildlife stipulations that BLM has attached to this location (or when you receive them if the federal APDs have not yet been approved). If you have any questions, please do not hesitate to call me at (970) 309-2514 (cell), or email. Thanks.

Dave

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Western Colorado



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