

Dave Kubeczko - DNR

From: Dave Kubeczko - DNR
Sent: Friday, January 20, 2017 8:23 AM
To: Dave Kubeczko - DNR
Subject: SWN Production Company LLC, Welker 6-92 1-2H11 Pad, SESE Sec 2 T6N R92W, Moffat County, Form 2A#401116856 Review

Categories: Operator Correspondence

Scan No. 2108040 CORRESPONDENCE 2A#401116856

From: Sydney Hansen [mailto:Sydney_Hansen@SWN.COM]
Sent: Tuesday, January 03, 2017 12:16 PM
To: Dave Kubeczko - DNR; SWN Sand Wash
Cc: Cheryl Rowell
Subject: RE: SWN Production Company LLC, Welker 6-92 1-2H11 Pad, SESE Sec 2 T6N R92W, Moffat County, Form 2A#401116856 Review

Dave,

SWN Production Company agrees to the COA's as stated.

Thanks,

Sydney Hansen
Regulatory Analyst
O: 832 796 7874
C: 832 627 4071

From: Dave Kubeczko - DNR [mailto:dave.kubeczko@state.co.us]
Sent: Thursday, December 22, 2016 3:54 PM
To: SWN Sand Wash <swnsandwash@swn.com>
Cc: Cheryl Rowell <Cheryl_Rowell@SWN.COM>
Subject: SWN Production Company LLC, Welker 6-92 1-2H11 Pad, SESE Sec 2 T6N R92W, Moffat County, Form 2A#401116856 Review

Sydney,

I have been reviewing the Welker 6-92 1-2H11 Pad **Form 2A #401116856**. Based on COGCC's review, the following updates, revisions, and corrections have been made to the Form 2A:

COGCC corrected Size of location after interim reclamation in acres from 1.10 to 1.51 based on COGCC's review of the Construction Layout Drawings;

COGCC corrected distance to nearest water well from 5280' to 4472' and depth to groundwater from 112' below ground surface (bgs) to 60' bgs; based on COGCC's review of the COGCC Online GIS Map and the Division of Water Resources water well information for water well Permit No. 220708-Denis Marchbanks, Domestic Well (located approximately 4472' to the east southeast), Total Depth: 390' bgs, Perforated Interval: 330' to 370' bgs, Static Water Level: 59' bgs, and Pump Rate of 3 gpm;

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

with minor revisions, were placed on the original Form 2A #400615185 (approved on 08-16-14; OGCC ID #438580). Due to changes in operations, additional or completely revised COAs have been added.

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, 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; b. Notice of Spud; 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.

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, reconstruction and maintenance of the existing berm and diversion/collection trenches within and/or outside of the berms, site grading, or other comparable measures 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), kept free of weeds, and maintained in good condition. The 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 44 - The access road will be 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.

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; take away pipelines from onsite separators and 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 flowlines/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.

COA 55 - Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing pipelines. This will reduce surface disturbance.

In addition, COGCC requests that SWN 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.

The following comment was placed on the original **Form 2A #400615185** by CPW on 06-27-14 (COGCC has attached a copy of the email correspondences associated with the CPW desktop consultation for this location):

“Wildlife Concerns: *This location is within Pronghorn Winter Concentration Area, Mule Deer Critical Winter Range, and Elk Winter Concentration Area Sensitive Wildlife Habitat (SWH). On 6/26/2014 the operator agreed to the following BMPs by email:*

All construction and drilling activities within big game winter range will be conducted outside the period of December 1 to April 15.

Conduct post-development well site visitations to between the hours of 10:00 am and 3:00 pm and reduce well site visitations between the period of December 1 to April 15 for big game winter range.

Establish company guidelines to reduce wildlife-vehicle collisions on roadways. Slow speeds and increased awareness among employees and contractors will help reduce impacts.

If water is obtained from nearby rivers or streams, screen suction hoses to exclude fish.

Do not, under any circumstance, return unused water back to rivers, streams, ponds or irrigation ditches.

Properly dispose of water to eliminate the risk of spreading aquatic nuisance species.

Sanitize water suction hoses and water transport tanks using one of the following methods. Discard and rinse water at an appropriately permitted disposal facility.

- a. Remove all mud and debris from equipment and spray/soak equipment with a 1:15 solution of disinfection solution containing the following ingredients:*
- i. Dialkyl dimethyl ammonium chloride, 5-10% by weight;*
 - ii. Alkyl dimethyl benzyl ammonium chloride, 5-10% by weight;*
 - iii. Nonyl phenol ethoxylate, 5-10% by weight;*
 - iv. Sodium sesquicarbonate, 1-5%;*
 - v. Ethyl alcohol, 1-5%; and*
 - vi. Tetrasodium ethylene diaminetetraacetate, 1-5%; and*
 - vii. Water, keeping the equipment moist for at least 10 minutes and managing rinsate as a solid waste in accordance with local, county, state, or federal regulations; or*
- b. Spray/soak equipment with water greater than 140 degrees Fahrenheit for at least 10 minutes.*

Approved: Taylor Elm, 6/27/2014, 9:44"

Although the surface owners have indicated in the SUA and a separate letter that they do not want any CPW Wildlife BMPs associated with their property(ies), SWN as the operator, does have the option to review these Wildlife BMPs and determine if they would be willing to adhere to any of them. Please review these Wildlife BMPs and determine if any of them are appropriate for this location. If so, please indicate which could be placed on the 'Operator BMP/COA' tab, BEST MANAGEMENT PRACTICES section of the current Form 2A that is "IN PROCESS". If the operator does not agree to any Wildlife BMPs, then please state that in your reply to this email.

Please respond to this email indicating that you have read the policy and rules concerning venting and flaring and will adhere to both. COGCC would appreciate your concurrence with attaching the COGCC COAs (and any wildlife BMPs that SWN believes are appropriate for this location) 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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