

Dave Kubeczko - DNR

From: Dave Kubeczko - DNR
Sent: Wednesday, August 30, 2017 12:19 PM
To: Dave Kubeczko - DNR
Subject: TEP Rocky Mountain LLC, Federal RU 31-17 Pad, NWNE Sec 17 T7S R93W, Garfield County, Form 2A#401058467 Review

Importance: High

Categories: Operator Correspondence

Discussed COAs with Operator on 08-30-17 and received verbal concurrence and acknowledgement.

Scan No. 2108204 CORRESPONDENCE 2A #401058467

From: Dave Kubeczko - DNR [mailto:dave.kubeczko@state.co.us]
Sent: Wednesday, August 30, 2017 11:12 AM
To: vschoeber@terraep.com; Jeff Kirtland
Subject: TEP Rocky Mountain LLC, Federal RU 31-17 Pad, NWNE Sec 17 T7S R93W, Garfield County, Form 2A#401058467 Review
Importance: High

Vicki and Jeff,

I have been reviewing the TEP Rocky Mountain LLC (Terra) Federal RU 31-17 Pad **Form 2A #401058467**. Based on COGCC's review, the following revision has been made to the Form 2A:

COGCC has revised: Date planned to commence construction: from 09/01/2017 to 09/04/2017 and Estimated date that interim reclamation will begin: from 06/01/2019 to 06/04/2019.

COGCC will attach the following conditions of approval (COAs) to the Form 2A based on the information and data Terra has submitted on or attached to the Form 2A prior to passing the Oil and Gas Location Assessment (OGLA) review.

Planning: The following 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 and c. Notice of Construction or Major Change)**; operator shall notify the COGCC 48 hours prior to onsite flowline/pipeline testing (flowlines from wellheads to separators to onsite blowdown tank; take away pipelines to nearby well pad and tank battery; 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 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.

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 well pad location re-construction, as well as

during drilling, completion, and production 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 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 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 [or equivalent] with an impervious liner) to contain any spilled or released material around temporary or permanent condensate and produced water storage tanks.

COA 48 - Since condensate and produced water storage tanks are not planned to be constructed on this well pad location, operator shall submit a scaled as-built drawing (plan view with distances) of this well pad location (showing wellheads, pumping jacks or gas lift pumps [if installed], onsite flowlines, offsite pipelines, and production facilities [separators, etc.]) and the nearby production facility location to which the condensate and produced water will be sent to via underground pipelines (showing wellheads [if present], onsite flowlines, offsite pipelines, pumping jacks or gas lift pumps [if installed], condensate 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 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. Operator has indicated that the cuttings will be disposed of 'OFFSITE' to one of three previously approved oil and gas locations. No 'ONSITE' disposal of cuttings will be allowed without prior approval of a Waste Management Plan (submitted via a Form 4 Sundry Notice) specifying 'ONSITE' disposal and where the cuttings will be placed on the location. After drilling and completion operations have been completed, if any of the WBM drill cuttings will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), they must be sampled and meet the applicable standards of Table 910-1. No liners (if used) are allowed to be disposed of with the drill cuttings. 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 (TEP's permitted Cuttings Trench locations or nearby locations) shall occur without prior approval of a Form 4 Sundry Notice specifying disposal location and waste characterization method. Commercial disposal of drill cuttings will also require notification to COGCC via a Form 4 Sundry Notice.

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.

Emissions Mitigation: The following COA will apply:

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 COAs will apply to this Form 2A Permit if any temporary surface (COAs 45, 49, 54, and 55) or buried permanent (COA 45) flowlines and/or offsite pipelines (poly or steel) are used during operations at this oil and gas location as well as nearby well pad locations:

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.

COA 49 - Operator must routinely inspect the entire length of the surface pipeline to ensure integrity. Operator shall conduct daily inspections of surface poly pipeline routes for leaks during active transfer of fluids and implement best management practices to contain any unintentional release of fluids along all portions of the surface pipeline route where temporary pumps and other necessary equipment are located. Inspections shall be conducted by viewing the length of the pipeline; operator will endeavor to minimize surface disturbance during pipeline monitoring. In addition, pump stations along the surface poly or steel pipeline route will be continuously monitored when operating in order to swiftly respond to such a failure.

COA 54 - Operator will implement BMPs necessary to mitigate a potential for a release of fluids to impact streams, intermittent streams, ditches, and drainage crossings. For these crossings: if poly pipe is used on the surface, operator will ensure appropriate containment by either installing over-sized pipe "sleeves" which extend the length of the crossing and beyond to a distance deemed adequate to capture (catchment basins) and/or divert any possible release of fluids and prevent fluids from reaching the stream or drainage; installing over-sized pipe "sleeves" which extend the length of the crossing and installing shut off valves on either side of crossing instead of catchment basins; or develop an alternative means for containment. For all other pipeline materials, operator will implement BMPs necessary to mitigate a potential for E&P fluids not to reach groundwater or flowing surface water.

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 the temporary surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.

Terra does not need to respond to this email unless you have questions or issues with any of these COAs, which are similar and/or identical to COAs placed on all well pad and production facility (central tank battery) locations in Garfield County. The COGCC OGLA review task will be passed on 08-30-17, with the Form 2A and associated Form 2s being sent to final approval this week. 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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06/10/16 - location onsite by COGCC, CPW, BLM, and operator;

08/30/17 - location does not fall within Sensitive Wildlife Habitat (SWH) or Restricted Surface Occupancy (RSO) areas based on COGCC's Online GIS map, therefore, no CPW consultation is required; location does fall within a CPW / Terra Wildlife Management Plan area;

08/30/17 - Initiated / Completed OGLA Form 2A review by Dave Kubeczko;

08/30/17 - sent email to operator indicating that the following COAs will be placed on the Form 2A - notification, fluid containment and spill/release BMPs, construction BMPs, sediment and dust control access road, cuttings containment and management, odor control, flowback to tanks only, as-built drawing, temporary pipeline placement/inspection/containment, and pipeline testing;

revised: Date planned to commence construction: from 09/01/2017 to 09/04/2017 and Estimated date that interim reclamation will begin: from 06/01/2019 to 06/04/2019;

08/30/17 - passed OGLA Form 2A review by Dave Kubeczko with notification, fluid containment and spill/release BMPs, construction BMPs, sediment and dust control access road, cuttings containment and management, odor control, flowback to tanks only, as-built drawing, temporary pipeline placement/inspection/containment, and pipeline testing COAs.