

Objective Criteria Review Memo Bonanza Creek North Platte T-23 Form 2A, Document #401994845

This summary explains how COGCC staff conducted its technical review of the Bonanza Creek Form 2A, document #401994845, within the context of SB 19-181 and for the required Objective Criteria. This is a new Location for a well pad facility with ten wells, ten pump jacks, and 21 separators. The proposed construction of this Location meets the following Objective Criteria:

- (Criteria #5.c) The proposed Location lies within a Sensitive Area for water resources within proximity to surface water and in an area of potential shallow groundwater.

COGCC staff met with the Director to discuss whether the Objective Criteria were sufficiently addressed and whether the Form 2A could be approved with the proposed Best Management Practices (BMPs) and applied Conditions of Approval (COAs). The following sections provide details regarding the evaluation of each criterion.

Criteria #5.c: Oil and Gas Locations within a Sensitive Area for water resources.

Site Specific Description of Applicability of Criteria 5.c: The proposed Location is in a sensitive area due to the potential for shallow groundwater. Estimated depth to groundwater is 19 feet based on the static water levels reported for water wells within the vicinity of the proposed Location. The closest down gradient surface water feature is an existing roadside ditch 56 feet south of the proposed Location.

Site Specific Measures to Address Criteria 5.c: The Operator will implement the following Best Management Practices (BMPs) to address the Sensitive Area for water resources:

1. Compacted road base surface constructed to a minimum of 4 inches in thickness to prevent fluids migrating into shallow ground water.
2. Produced fluids will not be stored on site. All produced fluids will be routed through separation equipment and piped to an offsite tank battery at an existing remote facility. Separators have built-in containment to protect shallow ground water.
3. Wellhead automation and SCADA system in place for remote monitoring and shut in.
4. Leak Detection (LDAR), spill prevention, control, and countermeasure (SPCC) plan, and stormwater management plan (SWMP) in place, installation of control measures, and including regular inspections.
5. A portable containment liner will be placed under the drilling rig during drilling activities; use of portable containment beneath the liquid storage and mixing equipment during completions and flowback activity.
6. Operator will use portable containment beneath temporary produced liquid storage tanks during flowback. This will protect shallow groundwater from any potential spills during completion activity. When flowback activity is complete, the containment and temporary produced liquid storage tanks will be removed and transferred to the next location.

Summary: During the technical review process, and in light of SB 19-181, COGCC staff requested additional information and clarification regarding Bonanza Creek's BMPs for addressing siting conditions and protecting sensitive water resources.

Bonanza Creek will use a combination of control measures; including a leak detection system, use of secondary containment with liners for production equipment; and conduct routine inspections as its personnel perform site operations. The site will be constructed with at least 4-inches of compacted road base to reduce to prevent vertical migration of a potential spill to impact to shallow ground water.

Director Determination: *Based on the Objective Criteria review. The Director has determined that this permit application meets the standard for protection of public health, safety, welfare, the environment and wildlife resources set by SB 19-181.*