

Objective Criteria Review Memo – Nickel Road Operating LLC BLEHM PAD, Form 2A #402449623

This summary explains how COGCC staff conducted its technical review of the Nickel Road Operating LLC BLEHM PAD, Form 2A #402449623 within the context of SB 19-181 and for the required Objective Criteria. This proposed Location is for 32 wells, 13 oil tanks, 32 separators, 5 water tanks, and meets the following Objective Criteria:

1. (Criteria 5c) Oil and Gas Locations within: a Sensitive Area for water resources.
2. (Criteria 8) Oil and Gas Locations with storage of hydrocarbon or produced liquid in more than 18 tanks or in excess of 5,200 barrels.

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.

Brief background on location: Nickel Road originally proposed a MOORE Pad location southwest of the currently proposed BLEHM Pad. The MOORE Pad was within 1500' of a building unit and was within 1500' of a platted subdivision. COGCC OGLA Staff and COGCC Director encouraged Nickel Road to review alternate locations that were further away from existing and planned building units. After analyzing a collection of alternate locations, Nickel Road has now proposed this BLEHM Pad that is greater than 1500' from both building units and platted subdivisions.

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

Site Specific Description of Applicability of Criteria 5c: Based on the technical review and desktop evaluation the location is proposed in a sensitive area for water resources due to estimated shallow ground water (7' bgs) and 48' away from the Larimer County Canal.

Site Specific Measures to Address Criteria 5c: The Operator provided the following BMPs to mitigate being located in a sensitive area for water resources:

- Stormwater Management Controls: Operator will implement and maintain BMPs to control stormwater runoff in a manner that minimizes erosion, transport of sediment offsite, and site degradation. Typical stormwater BMPs installed include a perimeter ditch and berm with sediment traps and installation of wattles where necessary.
- Spill & Leak Containment: Daily inspections of tanks and fittings. Secondary containment will surround any trucks during completions activities that carry, mix, or add chemicals to the flow stream as well as connections that could possibly leak fluid.
- Remote Capabilities: Location will be equipped with automated remote monitoring, tank level indicators, and remote shut-in capabilities.

- Tank and Separator Containment: A steel containment berm or structure lined with an impermeable liner and will be erected around the oil and water storage tanks to contain and provide secondary containment for 150% of the largest single tank. An 18" corrugated steel containment berm will be constructed around the separator area. Separator skids will be placed on compacted road base.
- Rig Liner: will employ a drive-on reinforced secondary containment liner during drilling, completion and flowback operations. This liner has elevated side panels that function as temporary berms during these phases of operations. The liner will be configured for each of the operations and will ensure that all potential sources for leaks are positioned on the impermeable liner material.

Summary: Nickel Road provided BMPs that address possible impacts to the sensitive area for water resources. The BMPs include: ditch and berm with sediment traps and wattles; containment for tanks, separators, and completions equipment; leak inspections; rig liner; and remote monitoring/shut-in capabilities.

Criteria 8: Oil and Gas Locations with storage of hydrocarbon or produced liquid in more than 18 tanks or in excess of 5,200 barrels.

Site Specific Description of Applicability of Criteria 8: Based on the technical review and desktop evaluation, the location is planned for 13 oil tanks and five water tanks at 500 bbls each, for a total onsite volume of 9000 bbls.

Site Specific Measures to Address Criteria 8: In addition to the BMPs mentioned above in the Criteria 5c discussion, the Operator provided the following information regarding an emergency response plan:

- Emergency Response Plan on file with Weld County OEM, provided to and approved by Poudre Valley Fire Protection District.

Summary: Nickel Road provided BMPs that address possible impacts to having more than 5200 bbls of storage on location. The BMPs include containment for tanks, separators, and completions equipment; leak inspections; remote monitoring/shut-in capabilities; and an emergency response plan with the local emergency responders.

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.