

Objective Criteria Review Memo – Bison Oil & Gas II LLC Grotheer 5-61 11B, Form 2A #401949727

This summary explains how COGCC staff conducted its technical review of the Bison Oil & Gas II LLC Grotheer 5-61 11B, Form 2A #401949727 within the context of SB 19-181 and for the required Objective Criteria. This proposed Location is for 10 wells, 20 oil tanks, 10 separators, 10 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.

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 uncertainty about the depth to groundwater has led the Operator to determine this location as being in a Sensitive Area for water resources.

Site Specific Measures to Address Criteria 5c: The Operator provided the following BMPs to mitigate potential impacts to water resources:

- Storm water controls (typically, a ditch and berm system) will be constructed around the perimeter of the site prior to construction.
- Operator shall install a 30mil reinforced polyethylene liner, or liner of comparable material, under the drilling rig and associated equipment for use during drilling operations.
- Tanks and all visible pipelines and valves etc. are inspected daily.
- Lined containment for the tank and separator areas.

Summary: Bison Oil & Gas II provided BMPs that address possible impacts to the sensitive water resources. The BMPs include stormwater management controls, liners under equipment, leak inspections, and lined containment.

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 submitted Form 2A, this location is planned for a proposed 20 oil tanks and 10 water tanks.

Site Specific Measures to Address Criteria 8: In addition to the previously mentioned BMPs, the Operator also provided a BMP for remote monitoring:

- Operator shall use a Supervisory Control and Data Acquisition (SCADA) system in conjunction with tank level indicators which have the ability to automatically shut in wells during an upset condition.
- For this location, the Emergency Response Plan was approved by both Wiggins Fire Protection District & Weld County's Director of Emergency Management.

Summary: Bison Oil & Gas II provided BMPs that address possible impacts to having a large storage volume of produced fluids onsite. The BMPs include lined containment for the tank area, remote monitoring with tank level indicators which have the ability to automatically shut in wells, and in place Emergency Response Plan.

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.