

**Objective Criteria Review Memo Kerr McGee Oil & Gas Onshore, SBJ 22-13HZ doc no 402376823**

This summary explains how COGCC staff conducted its technical review of the Kerr McGee Oil & Gas Onshore (Kerr McGee), SBJ 22-13HZ, Doc no 402376823, within the context of SB 19-181 and for the required Objective Criteria. This proposed Location is for 13 wells, 13 separators, 1 condensate tank, 4 water tanks, temporary water tanks, and other production equipment. The proposed Location meets the following Objective Criteria:

1. (Criteria #1) The proposed Location lies within 1,500 feet of a Building Unit or High Occupancy Building, which include Urban Mitigation Area (UMA) and Large UMA Facility (LUMAF) location. (the closest Building Unit is an estimated 332 feet from the Oil and Gas Location);
2. (Criteria #3) Oil and Gas Locations within 1,500 feet of a municipal boundary, platted subdivision or county boundary ( the Town of Berthoud); and
3. (Criteria #5.c.) Sensitive Environment for Shallow Groundwater and proximity surface water.

COGCC staff met with the Director to discuss the Objective Criteria for the Form 2A 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 1:** Oil and Gas Locations within 1,500 feet of a Building Unit or High Occupancy Building, which include Urban Mitigation Area (“UMA”) and Large UMA Facility (“LUMAF”) locations.

**Site Specific Description of Applicability of Criteria 1:** Based on the technical review and desktop evaluation, staff identified three Building Units within 1,500 feet of the Location and six total Building Units within 2,000 feet of the Location. The nearest residential Building Unit is approximately 350 feet to the east of the Location.

**Site Specific Measures to Address Criteria 1:** Kerr McGee sent out the 305.a. and 305.c. notifications to all Building Unit owners within 1,000 feet of the nearest well or equipment, as well as the health notifications to all Building Units within 2,000 feet of the Location. One Building Unit owner, who is also the tenant farmer for the field, had questions regarding the mid-stream pipeline locations and the irrigation ditch that flows through the Location, their view, lighting, and fencing. Kerr McGee is the surface owner, and is working with the tenant farmer to ensure the irrigation ditch is restored as part of the interim reclamation processes. As part of the WOGLA process, Kerr McGee has a waiver from the nearest Building Unit owner. Kerr McGee provided information that they are working with the mid-stream operator to install the mid-stream sales lines for minimum impact to the tenant farmer. Kerr McGee has provided BMPs such as low odor oil based mud, noise mitigation on the north, east, south and west sides of the

Location, minimal permanent lighting, emission control devices, leak detection, minimal tanks and piping of fluids and gas off Location.

COGCC staff has added Conditions of Approval (COA) to the Form 2A for Noise, Light, Odor, and Dust, and an air monitoring plan to be submitted via Form 4 sundry for Director approval prior to construction of the proposed Location. The plans will describe how the Kerr McGee will achieve compliance with the 400-series Rules adopted by the Commission on November 23, 2020.

**Summary:** During the technical review process, COGCC staff requested additional information and clarification regarding Kerr McGee's proposal and BMPs for odors, lighting, and leak detection. The information received has been added to the application materials. KMG provided enhancements and clarifications to the proposed BMPs.

**Criteria 3:** Oil and Gas Locations is within 1,500 feet of a municipal boundary, platted subdivision, or county boundary.

**Site Specific Description of Applicability of Criteria 3:** The Town of Berthoud is approximately 750 feet west.

**Site Specific Measures to Address Criteria3:** Kerr McGee is going through the WOGLA process. Kerr McGee sent notifications to the Town of Berthoud describing the proposed Location with maps and equipment lists in January and April of 2020. The Town of Berthoud did not respond or comment on the Form 2A. Kerr McGee will have an Emergency Response plan and is working with Emergency Responders through the WOGLA process.

Kerr McGee has a 24-hour hotline service and signs posted for public outreach as well as sending notifications to all residents within 2,000 feet of the Location.

**Summary:** Kerr McGee has provided outreach to residents and bordering municipal governments. A 24-hour hotline number has been provided via mailings and will be posted on all signs for the Location. Kerr McGee is working with the jurisdiction governments for access and haul routes and has an emergency plan in place with the local responders.

**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 water resource area for proximity to surface water and shallow groundwater. There is an irrigation ditch that transects the proposed Location. A floodplain is located approximately 220 feet south and the Little Thompson River is approximately 300 feet to the south of the proposed Location. Groundwater is estimated to be approximately 13 feet below ground surface based on monitoring wells in the area.

**Site Specific Measures to Address Criteria 5.c:** Kerr McGee is the surface owner, but has a tenant farmer. Kerr McGee plans to remove the irrigation ditch that transects the proposed Location during drilling and construction. They are working with the tenant farmer to ensure the irrigation ditch transecting the proposed Location is restored as part of interim reclamation. Kerr McGee has placed BMPs on the Form 2A for protection of proximate surface water and potential shallow groundwater at the proposed Location. BMPs include secondary containment with above-ground tanks in steel-walled containment with a liner and the separators in a steel-walled containment. The location will use automation technology to monitor the tanks on the location. Kerr McGee also provided a stormwater BMP that includes pad grading, and a ditch and berm to divert runoff to sediment traps on location.

**Summary:** KMG provided BMPs that address ground water resources and environmental protections. The BMPs include engineering controls (construction and containment) and administrative controls (inspections and a leak detection plan). They will also restore the irrigation ditch that will be removed during construction and drilling.

**Director Determination:** Based on the information provided, the Best Management Practices committed to by the operator, and the Conditions of Approval proposed, The Director has determined that this application and variance request are protective of public health, safety, welfare, the environment and wildlife resources and can be approved.