

## **Objective Criteria Review Memo *Verdad Resources, LLC, Safi 1224, Form 2A 402010466***

This summary explains how COGCC staff conducted its technical review of the Verdad Resources, LLC (Verdad), Safi 1224, Form 2A, doc no 402010466 within the context of SB 19-181 and for the required Objective Criteria. This proposed Location is for fourteen wells, fourteen separators, twenty oil tanks, ten produced water tanks, and meets the following Objective Criteria:

1. (Criteria #5.c) The proposed Location lies within a Sensitive Area for water resources (within an area of potential shallow groundwater and proximity to surface water); and
2. (Criteria #8) The proposed Location is expected to contain 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 and 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 5.c:** Oil and Gas Locations within a Sensitive Area for water resources.

**Site Specific Description of Applicability of Criteria 5.c:** The Location is in a sensitive area due to the proximity of shallow groundwater. Estimated depth to groundwater is at 23 feet based on a water well located approximately 33 feet north of the location. An irrigation ditch is approximately 29 feet north of the location.

**Site Specific Measures to Address Criteria 5.c:** Verdad has placed BMPs on the Form 2A for protection of the shallow groundwater at the Location. Above-ground tanks will be in steel-bermed containment with a liner and separators will be on one to two feet of compacted roadbase and within a metal berm. The proposed Location will be inspected daily for leaks or spills. Grading, ditch and berms, and sediment traps with armored inlets and outlets on the north side and southeast corner of the Location will be installed to minimize impacts to nearby surface water features.

**Summary:** Verdad provided BMPs that address the protection of groundwater and surface water. The BMPs include engineering controls (construction, containment, and remote well shutoffs) and administrative controls (inspections and a leak detection plan).

**Criteria 8:** The proposed Location is expected to contain 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 conversations with the operator, there will be twenty oil tanks and ten water tanks on location.

**Site Specific Measures to Address Criteria 8:** Verdad reduced the tank count on this Location from twenty-eight oil tanks to twenty oil tanks and reduced the water tank count from fourteen tanks to ten tanks. Verdad provided BMPs to reduce the impact of this Location on surrounding residences or the environment. These include design and

engineering controls including remote shut-in capabilities on the wells, the use of a MLVT for completions operations, automated tank gauges to minimize the number of times that a thief hatch will be opened and reduce vapor emissions from tanks, green completions, directing rig lighting away from residential units, the use of quiet frac fleets, sound walls to the south and west, and odor controls. Verdad also committed to daily audio, visual, olfactory inspections of production equipment, and the use of water trucks for dust control. As part of their WOGLA application, an emergency action plan will be created.

**Summary:** During the technical review process, COGCC staff requested additional information and clarification regarding the majority of Verdad's BMPs. The information received has been added to the application materials. Verdad reduced the number of tanks that they intend to install on the Location. Verdad provided enhancements and clarifications to the originally proposed BMPs. Multiple engineering controls and administrative controls were provided.

**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.