

## **Objective Criteria Review Memo - Bison Oil & Gas II LLC**

**Stampede Fed 8-60 4-9-1 -- Form 2 Application for Permit to Drill (APD) Doc# 402237653**

**Stampede Fed 8-60 4 -- Form 4 Sundry to update Location BMPs Doc# 402293417**

**Approved Form 2A Oil & Gas Location Assessment (Doc# 401442541, approved 06/26/2018)**

**Location ID# 455627**

This memo summarizes COGCC's technical review of the subject well within the context of SB 19-181 and the required Objective Criteria. Bison O&G II has refilled APDs for this location to increase the interwell distance between wells on the pad.

For Oil & Gas Locations approved prior to SB 19-181, the Objective Criteria apply to any wells proposed on those approved or existing Oil & Gas Locations. This APD meets the following Objective Criteria:

1. (Criteria 5c) Oil and Gas Locations within: a Sensitive Area for water resources. The estimated depth to groundwater at the location is 12 feet.
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. The Form 2A lists 20 oil tanks and 10 water tanks planned for this location.

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:** The estimated depth to groundwater at the location is 12 feet.

**Site Specific Measures to Address Criteria 5c:** The Operator provided the following BMP updates via form 4 Sundry to mitigate against possible risks by from having a location within a Sensitive Area for water resources:

- Storm water controls will be constructed in a manner that is consistent with good engineering practices. BMP's used are determined and installed prior to construction and may vary according to the location. Storm water controls will remain in place until the pad is stabilized or reaches final reclamation.
- 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.
- AVO inspections will occur weekly, and LDAR inspections are performed quarterly, or at the required frequency of County or State regulations. All records will be kept readily available.

**Summary:** Bison O&G II provided BMPs that address possible impacts to having a location within a Sensitive Area for water resources. The BMPs include stormwater controls constructed with good engineering practices, liners under drilling rig, and leak detection inspections.

**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:** The Form 2A lists 20 oil tanks and 10 water tanks (750 bbl tanks, 22,500 bbl tank storage onsite) planned for this location.

**Site Specific Measures to Address Criteria 8:** The Operator provided the following BMP updates via form 4 Sundry to mitigate against possible risks by having a large number of tanks onsite:

- Tank berms shall be constructed of steel walls with a minimum containment capacity of 100% of the single largest storage vessel and have an engineered synthetic liner technology that maintains impermeability and is puncture resistant under exposure to UV rays, weather extremes, and chemicals commonly encountered in oil and natural gas production and provides protection of the liner seams.

In addition to the above mentioned BMP, the Operator provided the following information regarding the location and plans to mitigate impacts:

- An Emergency Response Plan was previously submitted and approved from both the local emergency responders and Weld County's Director of Emergency Management prior to receiving the approved WOGLA. The Emergency Response Plan includes general field wide, site specific safety protocol, and a tactical response plan.

**Summary:** Mallard provided BMPs that address possible impacts to having a large number of tanks onsite. The BMPs include lind containment around tanks and coordination with 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.