

Objective Criteria Review Memo - Bison Oil & Gas II LLC

Hale Fed 8-60 22-23-7 -- Form 2 Application for Permit to Drill (APD) Doc# 401897263

Hale 8-60 22-23 -- Form 4 Sundry to update Location BMPs Doc# 402217768

Approved Form 2A Oil & Gas Location Assessment (Doc# 401347214, approved 12/17/2017)

Location ID# 453379

This memo summarizes COGCC's technical review of the subject well within the context of SB 19-181 and the required Objective Criteria. Prior to the implementation of SB 19-181, the Form 2A and APDs for 16 wells proposed for this Oil & Gas Location were submitted and approved. Bison Oil & Gas II LLC has now submitted this subject refile APD for this approved, built, Oil & Gas Location.

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 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 approved Form 2A indicates there will be 32 oil tanks and 2 water tanks.

The following sections provide details regarding the evaluation of each criterion:

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 approved Form 2A indicates there will be 32 oil tanks and 2 water tanks.

Site Specific Measures to Address Criteria 8: Operator confirmed that the location was originally permitted for 32 oil tanks and 2 water tanks, but would actually only have "1 750 bbl test water tank, 1 750 bbl test oil tank, 4 750 bbl bulk water tanks, 10 750 bbl bulk oil tanks".

The Operator also submitted a Form 4 Sundry doc# 402217768 to add the following BMP's to the location:

- 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.
- Tank berms shall be constructed of steel walls with an engineered synthetic liner and designed to contain 100% of the capacity of the largest tank (or manifolded tanks) with the addition of rain water from a 25-year 24-hour storm event and 5% additional freeboard to account for any small piping or equipment that may be in containment. The engineered secondary containment system will be constructed of a perimeter of

walls that are post driven into the ground around a flexible geotextile base. All components will then be sprayed with a polyurea liner technology. This liner technology maintains impermeability and puncture resistance under exposure to UV rays, weather extremes, and chemicals commonly encountered in oil and natural gas production, and provides seamless protection. All berms will be visually checked weekly at a minimum to a maximum of daily to ensure proper working condition.

- AVO inspections will occur weekly, and LDAR inspections are performed quarterly. All records will be kept readily available.
- 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.
- Per the Weld County WOGLA approval process- a proposed haul route and vehicle/truck traffic estimations has been provided to the Department of Public Works for review and approval prior to the issuance of an approval WOGLA or Access Permit.
- Green Completions - Test separators and associated flow lines, sand traps and emission control systems shall be installed on-site to accommodate green completions techniques. When commercial quantities of salable quality gas are achieved at each well, the gas shall be immediately directed to a sales line or shut in and conserved. If a sales line is unavailable or other conditions prevent placing the gas into a sales line, the operator shall not produce the wells without an approved variance per Rule 805.b. (3)C.

Additionally, this location is in a rural area, with no Building Unit within a 5280 feet of the location. Therefore, the risk to Public Safety from a fire or explosion is deemed to be low.

Summary: Bison Oil & Gas II LLC provided BMPs that address possible impacts of having numerous tanks onsite. The BMPs include: using remote monitoring/shut-in systems, containment around tank areas, AVO inspections, an Emergency Response Plan, development of a haul route, and commitment to Green Completions.

Additional Information:

- This APD is being refiled to update the wellbore configuration and Unit Spacing. Spacing Order 535-1202 was approved on 7/31/2019. This APD is one of 12 total refile APD's for this location.

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.