NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
Underground Injection Control

FACT SHEET

(pursuant to NAC 445A.874)

Permit Number: UNEV96200
Permittee Name: Grant Canyon Oil and Gas, LLC
Project Name: Blackburn
Permit Type: Underground Injection Control Individual Permit
Injection Well Type: UIC Class II
Permitee Address: 5299 DTC BLVD, Suite 840, Greenwood Village, CO 80111
Proposed Action: Renewal of Existing Permit
Associated Permits: Previously NVS000000001
Reporting Frequency: Quarterly

Description of Discharge

Approved injection wells
Blackburn # 3 - is permitted for both ambient air and water injections for the purposes of enhanced recovery and water disposal.
Blackburn #12 - is permitted water injections for the purposes water disposal.
Blackburn #14 - is permitted for ambient air injection for the purposes of enhanced recovery.
Blackburn #16 – is permitted for ambient air injection for the purposes of enhanced recover.

Location:
Township 27N, Range 52E, Sections 7 & 8, Eureka Co. Nevada
Blackburn #12, #14 and #16 are in Section 7, Blackburn #3 is in Section 8

Characteristics:
All fluid injectate is produced in conjunction with conventional oil production. Oct. 2007 TDS = 1730 mg/l / Dec 2000 TDS = 1700 mg/l / Jan 1993 TDS = 1700 mg/l / Feb 1986 TDS = 1810 mg/l. Elevated levels in 1984 samples of TDS (2,368 mg/l), sodium (745 mg/l), chloride (735 mg/l), sulfate (320 mg/l) and pH (7.4) are present. Chemical treatment for various reasons such as scale and corrosion inhibition may be needed. Such chemical treatment will require approval by the Division prior to use.

Synopsis

2008: The applicant has requested permitting for water injection into Blackburn#12 and enhanced recovery via air injection into Blackburn #14. Blackburn #3 has been requested to be permitted for both water disposal and ambient air injection.

Blackburn #3 will have a separate injection line for the air and water which will allow for water or air injections; co-injections are not permitted at this time. The construction of the co-injection system is uncertain and hasn't been submitted to the UIC program and will be reviewed later. During times of co-injection there will be some corrosion concerns. If the permittee were to co-inject air and water for an extended period, an IPC tubing string will be installed to maintain mechanical integrity in the corrosive environment of an air/water mixture. Blackburn has noted that water disposal via Blackburn #3 would be used as a back-up to Blackburn #12. A booster compressor will be used to inject the air; however, co-injection could be used to assist air injection in case the booster compressor was offline. The

permittee shall monitor the wellhead injection pressure and limit it to prevent adverse impacts to the well's integrity or hydrofracturing of the formation(s) under all injection conditions. In addition, for water disposal purposes, the maximum wellhead pressure shall not exceed 1800 psig, and additional external integrity testing (e.g. radioactive tracer survey) will be required if pressure reaches 1,400 psig. Expected pressures are ~ 1050 psig at 3 bbls/min rate.

2007: The applicant has requested renewal and modification of permit UNEV96200. The application has requested a total of four (4) injection wells be permitted under the renewed permit, for both disposal of produced water and for enhanced recovery work. Blackburn #12 will remain the primary disposal well, and Blackburn #3 will be tested for enhanced recover purposes using air and for backup disposal purposes. The other two injection wells would be named later as needed within the section identified above.

1996: The applicant has requested renewal of UIC permit UNEV96200 (previously #NVS000000001) to inject into well Blackburn #12, Blackburn Field, Eureka County, Nevada. The only wells known to exist within the area of review are associated with oil production. Injectate fluids are produced in conjunction with conventional oil production activities from other wells in the area. The average injection rate will be 6,000 (previously 5,000) barrels of water (1 barrel = 42 gals.) per day. The maximum pressure allowed at the well will be 1,000 psig. The existing well has undergone testing and has demonstrated mechanical integrity.

Timeline

2025: Renewal
2014 March: Discussion on fracking well #16, and disposal of pump back water to well #12
2010 February: Minor modification – permit transfer and changes to well #3
2009 August: Blackburn well #16 approved for air injection
2008 February: Permit Renewed
Blackburn well #14 approved for air injection
Blackburn well #3 approved for air injection
2007 December: Testing of Blackburn well #3 for air injection
1996: Permit renewed
1991: Permit renewed
1986: Original permit issued

Receiving Water

The injection zone for the Blackburn well #12 is within the Devonian Nevada Formation at or below 8,134 feet. This zone has been characterized by water analysis and by other injection wells in the area to be high in total dissolved solids and to contain hydrocarbons. A quarter-mile zone around has aquifer exemption pursuant to NAC 445A.855 until such time as the well is removed from injection status and/or plugged. Injection zones for Blackburn #3 are the Indian Wells Formation, Chainman Formation, and Devonian Nevada Formation. TDS values in #3 have ranged from 1,800-2,500 in certain zones, and up to 3,600 ppm blended (BLM file). Blackburn #14 injection zone is the Devonian Nevada Formation; perforations in this well exist in the Chainman Formation.

Procedures for Public Comment

Pursuant to NAC 445A.890.5 through NAC 445A.877, public notice of Underground Injection Control permit applications and proposed drafts is being posted on the NDEP website, and mailed to any interested persons on our mailing list, to (1) solicit written comments or objections to determinations of the Director

regarding the application or permit and (2) provide the opportunity for a public hearing, if the Director determines that there is a significant level of interest from the applicant, any affected state, any affected interstate agency, the regional administrator, or any interested agency, person, or group of persons. A hearing request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted. Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted to accordance with NAC 445A.238 and the final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Any person wishing to submit comments or request a hearing must do so by email/mail, which must be sent/postmarked or hand delivered within thirty (30) days to:

Nevada Division of Environmental Protection
Bureau of Water Pollution Control | Permits Branch
Attn: Underground Injection Control Permit Writer
901 S. Stewart Street, Suite 4001
Carson City, NV 89701

Proposed Determination

The Division has made the tentative decision to renew the existing permit.

Rationale for Permit Requirements

Permit requirements will verify that the quality of water injected remains constant and confirm that injection of water does not adversely affect the existing hydrologic regime.

Special Conditions and Monitoring Requirements

For special conditions, see Part I.A of the permit. For monitoring requirements, see Attachment 1 of the permit.

Revised by: Lisa Aleman, July 22, 2025