

Department of Environmental Quality

To protect, conserve, and enhance the Quality of Wyoming's environment for the benefit of current and future generations.

Todd Parfitt, Director

December 5, 2013

Mr. Michael Thomas **Uranerz Energy Corporation** 1701 East "E" Street Casper, WY 82605

RE:

Uranerz Energy Corporation – NICH DW-1 Injection Well Permit 10-392

Authorization to inject

Dear Mr. Thomas:

We are in receipt of the documentation of your completion and MIT test results for the NICH DW-1. WDEQ and EPA concur that an aguifer exemption (AE) is not required for the Teapot formation at this location because TDS concentrations exceed 10,000 mg/L. WDEQ and EPA further concur that aquifer AE's are required for the Teckla and the Parkman formations. In a letter dated November 27, 2013 (attached), EPA formally approved the proposed aguifer exemptions for the NICH DW-1.

A review of the existing permit and permit requirements indicates no permit compliance issues. Therefore, this letter hereby authorizes you to inject according to the conditions and requirements detailed within permit 10-392 which expires on October 22, 2022 (unless extended by the Administrator).

The Underground Injection Control Program was promulgated to prevent serious problems caused by direct discharges to groundwater. Your cooperation with the Program is sincerely appreciated.

If you have any questions please call Ursula Williams of this office at 675-5643.

Sincerely,

Don Fischer PG #2852

North District Geologic Supervisor

Groundwater Section

Cc:

Mark Thiesse, Groundwater Section Manager

File Chron





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8

1595 Wynkoop Street DENVER, CO 80202-1129 Phone 800-227-8917 http://www.epa.gov/region08

NOV 27 2013

Ref: 8P-W-UIC

Mr. Kevin Frederick
Wyoming Department of Environmental Quality
Water Quality Division
Herschler Building
122 West 25th Street
Chevenne, Wyoming 82002

Re: Uranerz Energy Corporation
Nichols Ranch ISR Project – NICH DW-1
Teckla and Parkman Aquifer Exemptions
Johnson County, Wyoming

Dear Mr. Frederick:

The U.S. Environmental Protection Agency Region 8 Water Program office has received water quality data for the Class I injection well NICH DW-1. The EPA previously responded on October 16, 2012, to Wyoming Department of Environmental Quality's (WDEQ's) request for aquifer exemption approvals for the Teckla, Teapot and Parkman formations (TTP). The EPA's response stated that the information supported the aquifer exemptions, however the aquifer exemptions would not be granted until a determination was made as to the status of the TTP as underground sources of drinking water (USDWs). The data provided for NICH DW-1 shows that the total dissolved solids (TDS) of the Teckla and Parkman formations are less than 10,000 mg/L and therefore require exemptions, and the Teapot formation does not qualify as a USDW.

APPROVAL OF PROPOSED AQUIFER EXEMPTION: Based on review of the supporting information provided by the WDEQ, the EPA hereby approves a non-substantial program revision to include exemption of a portion of the Teckla and Parkman formations surrounding NICH DW-1. (See 40 CFR §§ 144.7 & 145.32.) The depths and extent of the aquifer exemptions are as follows:

The portions of the Teckla and Parkman formations one-quarter (1/4) mile from the NICH DW-1 wellbore and are at approximate depths of 7,650 to 7,800 feet and 8,380 to 8,670 feet, respectively.

Based on our review of the information provided, the EPA concurs with the WDEQ's conclusions concerning the aquifer exemption criteria listed below:

• it does not currently serve as a source of drinking water (40 CFR §146.4(a)), and

• it is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical (40 CFR §146.4(b)(2).)

This approval applies to the location and the injection activities described herein. Additional approvals may be required for additional injection activities.

OVERVIEW: The NICH DW-1 is located in Sec. 17, T43N, R76W in Johnson County, Wyoming, and will serve as a disposal well for the liquid waste generated by uranium mining activities at the Nichols Ranch In-Situ Recovery (ISR) project. The Teapot and Parkman aquifers produce sufficient quantity of ground water to supply a public water system and the total dissolved solids is approximately 7,700 and 7,280 mg/L, respectively. The TDS of the Teapot was found to be approximately 16,000 mg/L and therefore not a USDW.

Currently, there are no known domestic drinking water wells completed into either the Teckla or Parkman formations within six miles of the NICH DW-1. Overlying and underlying confining aquitards have been identified to isolate the injection zone. The overlying Lewis Shale is approximately 350 feet thick and the underlying Steel (Cody) Shale is generally 800 to 900 feet in the Nichols Ranch ISR project area.

Should you have questions or concerns, please contact Wendy Cheung of my staff at (303) 312-6242.

Sincerely,

Howard M. Cantor, for

Assistant Regional Administrator

Office of Partnerships and Regulatory Assistance