

EPA Seeks Comments on Injection Well Permit

Permit Number:
UT22460-12874

How to Comment:

The public notice and comments due date is posted at EPA Region 8 UIC program's website:

<https://www.epa.gov/node/99201#public-notice>.

The public will have 30 days from the start of the public notice to provide comments on the proposed permit action.

Submit your comments in writing or by phone to the EPA contact listed below during the comment period. Please reference the applicant's name and permit number(s). You may also comment during a public hearing if one is held.

EPA Contact:

Fraser Evans

Email: evans.fraser@epa.gov

Phone: (303) 312-6299

Public Hearing

No public hearing is planned at this time. During the comment period, you may ask EPA, using the methods described in the "How to Comment" section of this fact sheet, to hold a formal public hearing. Your request must identify issues to be raised. When there is significant public interest, EPA will hold a hearing to receive public comments and will publish a notice at least 30 days prior.

Additional Information

For additional information, please consult the EPA contact listed above. To learn more about EPA's Underground Injection Control program, or to join our mailing list, visit

<https://www.epa.gov/uic/underground-injection-control-epa-region-8-co-mt-nd-sd-ut-and-wy>.

Applicant: Middle Fork Energy Uinta, LLC

Site Location: Uintah County - UT

FACT SHEET

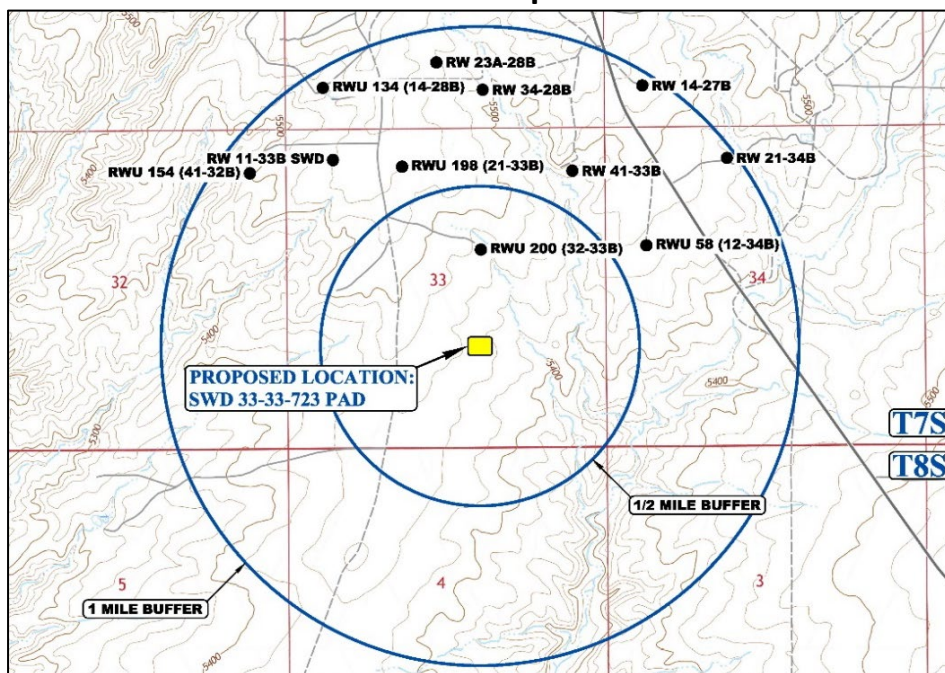
Summary

EPA proposes to approve Middle Fork Energy Uinta, LLC's request to construct and operate a Produced Fluid Disposal (2D) well under an individual permit. Injection will occur into the Birds Nest Aquifer formation at depths between approximately 3,070 feet and 3,493 feet below ground surface.

Basis for Draft Permit Conditions

The proposed permit conditions are based on the applicable regulatory provisions of 40 CFR parts 2, 124, 144, 146 and 147, which are designed to protect public health and drinking water from unsafe underground injection practices. Well specific restrictions are derived, in accordance with these provisions, from an evaluation of data gathered from pertinent sources. This information is outlined in the administrative record, which includes data that the applicant was required to submit as part of the permit application process. EPA considered the adequacy of the minimum or standard monitoring and testing requirements in the draft permit. These requirements are important for detecting potential endangerment given the well construction, local geology, identification of available Underground Sources of Drinking Water (USDWs) water quality data, characterizations of the injected fluid, and operator compliance history.

Site Map



Final Decision and Right to Appeal

EPA will consider all comments received during the comment period and any hearing held, and then issue a final decision. You have the right to appeal the decision if you make an official comment during the comment period or participate in a public hearing. If you have this right to appeal, the first appeal must be made to the Environmental Appeals Board within 30 days after the final permit decision has been issued. The final decision can be appealed in federal court only after all agency review procedures have been exhausted. Please refer to 40 CFR §124.19, which outlines the appeal process.

Principal Facts Considered

Area of Review (AOR) Analysis: The fixed AOR radius about the injection well is 0.50 mile. EPA considered the injection volume, hydrogeology, population, groundwater use and dependence, and historical practices to determine the appropriateness of the size of the AOR. Within the AOR, there is one plugged and abandoned well. EPA considered the potential for this well to serve as a conduit for fluid migration out of the injection zone and endanger USDWs to determine if corrective action is needed. AOR results found no wells in need of corrective action at this time.

Site Geology: The Birds Nest Aquifer is the injection zone, between the approximate depths of 3,070 feet and 3,493 feet below ground surface. The confining zone immediately above the injection zone is the Evacuation Creek Member of the Green River Formation from an approximate depth of 2,702 feet to 3,070 feet, and is free of known transmissive faults or fractures within the AOR. The Utah Geological Survey, a division of the State of Utah Department of Natural Resources Special Study No. 144, "Moderately Saline Ground Water in the Uinta Basin, Utah", approximates the depth to the base of the moderately saline groundwater (3,000-10,000 mg/L TDS) to be at 5,100 feet at the proposed location. EPA considered the geologic characteristics of and relationships between the injection zone, confining zone, and lowermost USDW within the AOR to determine the suitability of the geologic setting for injection, long term containment, and isolation of injected fluids from USDWs.

Injection Pressure: The initial injection pressure is limited to a maximum of 370 psi to prevent injection pressures from initiating new or propagating existing fractures in the confining zone, and from causing movement of injection or formation fluids into USDWs. EPA calculated a protective limit using the formula included in the permit along with site-specific values of 3,070 foot depth to the top of the proposed uppermost perforation, injection fluid specific gravity of 1.011, and injection zone fracture gradient of 0.58. By setting a maximum pressure based on the fracture gradient in the injection zone as a protective limit, this will ensure that the integrity of the overlying confining zone is maintained.

Injection Well Construction: The well will be constructed so that injection occurs through tubing set within the innermost casing in a manner that is protective of USDWs. The well is designed to be mechanically sound, to provide adequate zonal isolation, and to be monitored for mechanical integrity during operations. Well components include layers consisting of tubing, casing, and cement where tubing size, tubing type, cement quality, cement placement, and cement quantity were also considered. The well will be monitored to ensure that there are no leaks and to confirm that injected fluids are reaching the intended injection zone. EPA considered the suitability of construction materials and well design for the injection activity, including the prevention of corrosion from injected fluids. The well will be drilled to an approximate depth of 3,621 feet. A schematic of the well is included in Attachment I of the Draft Permit.

Financial Assurance and Plugging and Abandonment: Adequate financial resources needed to permanently plug and abandon the well must be demonstrated. The applicant has utilized a Rider with a value of \$59,344 added to an existing Surety Bond to demonstrate their ability to cover these costs. EPA considered the well construction and site geology in determining the sufficiency of the plugging and abandonment plan(s) in protecting USDWs. EPA also considered the adequacy of the surety of resources provided to plug the well in a manner that is protective of USDWs. A schematic of the proposed plugging of the injection well is included in Attachment VI of the Draft Permit.

Seismic Activity (Earthquakes): EPA considered the potential for hazards regarding seismic activity within the vicinity of the site and found no concerns.

Historical Property: EPA considered its obligations under the National Historic Preservation Act and found its proposed permit action will have no impacts on or related to historical properties within the area of potential effect.

Endangered Species: EPA considered its obligations under Endangered Species Act and found its proposed permit action will not affect any listed species or critical habitat.