

EPA Seeks Comments on Reissuance of two Class I Non-Hazardous Disposal Well Permits

Consumers Energy Zeeland Generation Station
Zeeland, Michigan

December 2024

How to comment

You may comment on the proposed permit reissuance approval in writing. Please refer to Consumers Energy, MI-139-11-0004 & MI-139-11-0005.

Submit your comments, identified by Docket ID No. EPA-R05-OW-2024-0467 at:

<https://www.regulations.gov/docket/EPA-R05-OW-2024-0467>.

If you are unable to submit electronically to the docket, please call Moira Shaughnessy-Salazar at 312-886-0272 for instructions on how to comment.

Comment Period

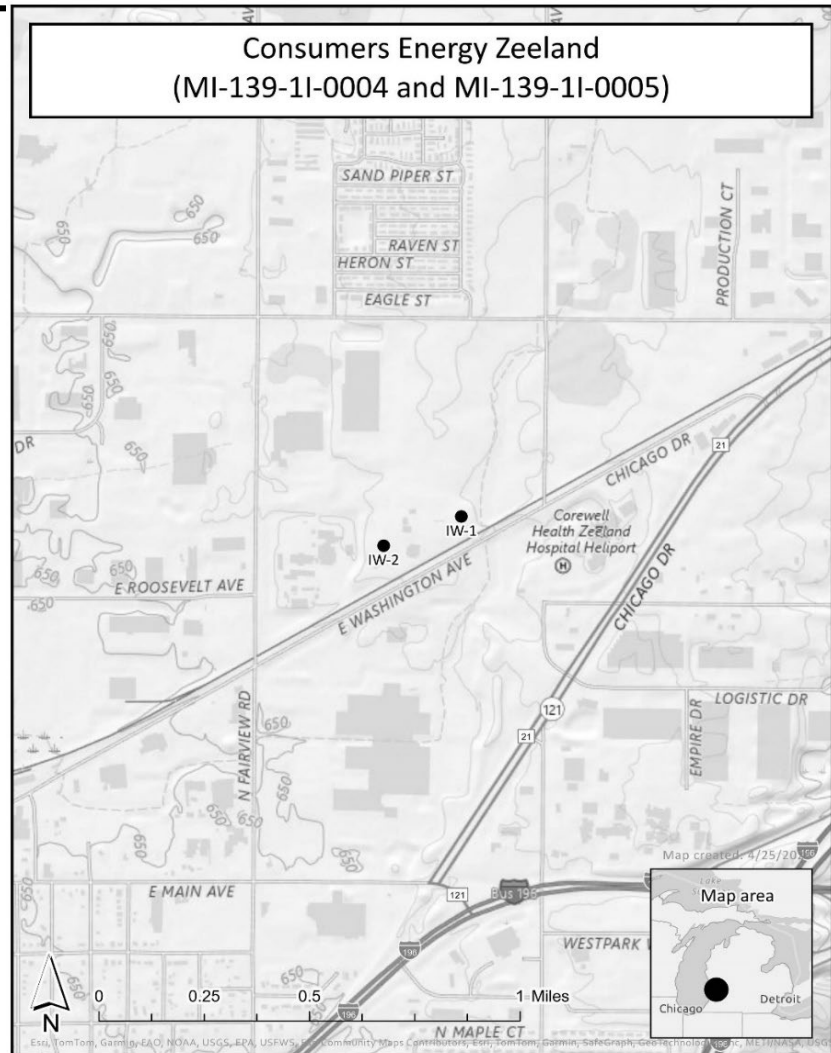
EPA will accept written comments until 11:59 PM on January 23, 2025.

To view the draft permits go to:

<https://www.epa.gov/node/88753#public-notices>

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-5-il-mi-mn-oh-and-wi#public-notices>



The U.S. Environmental Protection Agency (EPA) plans to approve a request from Consumers Energy for reissuance of two Class I Non-Hazardous underground injection permits for two wells located at the Zeeland Generating Station facility at 425 N. Fairview Rd., Zeeland, MI 49464. The permits authorize Consumers Energy to dispose of wastewater generated at its combined-cycle electric power generation facility.

Federal regulations for underground injection wells list standards for construction, geology, location (siting), operating conditions, and record keeping to protect supplies of underground drinking water from contamination caused by injection wells. Federal regulations also require Class I wells to inject waste into an area below the deepest underground source of drinking water (USDW). All Class I wells must be cased and cemented to prevent the movement of fluids into or between USDWs.

Site Geology

The injection zone for the two wells includes the Franconia Formation, Dresbach Formation, Eau Claire Formation, and Mount Simon Sandstone/upper Precambrian. The range for injection for IW-1 (MI-139-11-0004) is from 5052 feet below ground level (BGL) to 6775 feet BGL. The range for injection for IW-2 (MI-139-11-0005) is from 5040 feet BGL to 6630 feet

BGL. The confining zone is located directly above the injection zone and acts as a buffer between the injection zone and the lower most USDW to help ensure that there is not movement upward. The confining zone consists of the top of the Utica Shale, Trenton Formation, Black River Formation, Glenwood Formation, St. Peter Sandstone Formation, Foster Formation, and the Trempealeau Formation.

An USDW is an aquifer or part of an aquifer that contains water with less than 10,000 milligrams per liter of total dissolved solids. The deepest USDW is the Marshall Sandstone located 246 feet below the surface. There are adequate confining layers between the injection zone and the Marshall Sandstone to prevent the movement of injected fluid into underground sources of drinking water.

Technical Background

Facility Background: The Class I Non-Hazardous wells are used for the disposal of wastewater generated at the combined-cycle generation facility at the Zeeland Generating Station. The wastewater is non-hazardous and generated from water treatment and cooling tower operation and maintenance. The construction design of the injection wells meets the regulatory criteria of 40 C.F.R. § 146.22.

Area of Review (AOR): The AOR is a circle of 2-mile radius from each injection well. There are 27 non-freshwater wells located within the 2-mile radius of the AOR. Of the 27 wells, 26 are plugged and abandoned oil and gas wells. The last well is a test well that is also plugged and abandoned. There are also 6 freshwater wells located within a ¼ mile radius of the Zeeland Generating Station. None of these wells penetrate the confining zone, which is approximately 3,000ft below the surface, and there are no significant threats to USDWs from these penetrations in the AOR. No new artificial penetrations have been recorded since the previous reissuance of these permits in 2013. These wells were built in 2002 and have both been subject to independent technical review in which the integrity and construction have been evaluated.

Maximum Injection Pressure: EPA has set a limit on injection pressure to prevent fracturing of the injection zone rock formation. The maximum allowable injection pressure for each well was calculated by EPA by factoring the depth of the injection zone, the highest specific gravity of the injected fluid, and the fracture gradient of the rock formation. The calculated maximum permitted injection pressure is 1,352 psig for IW-1 (MI-139-1I-0004) and 1,348 psig for IW-2 (MI-139-1I-0005).

Financial Assurance: In accordance with 40 C.F.R. § 146.24(d), the permit includes a plugging and abandonment plan for an environmentally protective well closure at the time of cessation of operations. Consumers Energy has demonstrated adequate financial resources to plug and abandon these wells with a Letter of Credit from J.P. Morgan Chase valued for \$381,850.

Intent to Issue Permits: Review of the permit applications indicate no significant environmental impacts should result from the reissuance of these two permits. In accordance with provisions of the Safe Drinking Water Act (SDWA) and attendant regulations incorporated by EPA under Title 40 of the Code of Federal Regulations at parts 124, 144, 146, and 147, EPA intends to reissue a permit for each of the wells. Part C of the SDWA specifically mandates regulation of the underground injection of fluids through wells to assure that the quality of the underground sources of drinking water is protected. Section 1421 of the SDWA requires the EPA to administer underground injection control (UIC) programs in the states which do not have approved UIC programs. Michigan has not acquired primacy over the UIC program for Class I injection wells, therefore EPA is administering the permit program pursuant to regulations at 40 C.F.R. Part 147.

Administrative Record

To request review of Administrative Record files or for additional information please contact Moira Shaughnessy-Salazar at 312-886-0272 or shaughnessysalazar.moira@epa.gov.

Legal Notice

You have the right to appeal any final permit decision if you make an official comment during the comment period or participate in the public hearing. A public hearing is not planned at this time.

The first appeal must be made to the Environmental Appeals Board; only after all agency review procedures have been exhausted may you file an action in the appropriate Circuit Court of Appeals.