

FACT SHEET

Proposed Class I Non-Hazardous Waste Underground Injection Well Permit and Dakota Aquifer Exemption

**Minnkota Power Cooperative, Inc. (MPC)
Milton R. Young Station
Oliver County, ND**

North Dakota Department of Environmental Quality UIC Permit No. ND-UIC-111

NDDEQ Contact: Carl Anderson
Groundwater Protection Program Manager
North Dakota Department of Environmental Quality
Division of Water Quality
4201 Normandy Street
Bismarck, ND 58503-1324
701-328-5213

MPC Contact: Scott Hopfauf
Environmental Superintendent
Minnkota Power Cooperative, Inc.
3401 24th St SW
Center, ND 58530
(701) 794-7220

PERMIT BACKGROUND INFORMATION

Minnkota Power Cooperative, Inc. (MPC) operates the Milton R. Young Station (MRY Station) is located approximately 6 miles southeast of Center and adjacent to Nelson Lake in Sections 4 and 5, Township 141N, Range 83 W (Figure 1). The MRY Station is a two-unit, lignite coal-based power plant with a 705-megawatt generating capacity.

MPC and its partners are pursuing the construction of a carbon capture and storage project adjacent to MRY Station, known as Project Tundra. The project will treat the flue gas from Units 1 and 2 to capture approximately 95 percent of the carbon dioxide emissions from each flue; the carbon dioxide will be injected into up to three Class VI injection wells. Up to two Class I injection wells will be used to manage non-hazardous process waters generated from the carbon capture process that will be co-mingled with existing non-hazardous process waters at MRY. The Class I wells will be located on the existing well pad near the proposed Class VI wells (Figure 2).

The North Dakota Department of Environmental Quality (NDDEQ) has received a permit application from MPC requesting to dispose of non-hazardous process fluids generated from operations at the MRY Station and may include existing plant waste streams and Project Tundra waste streams into two Class I non-hazardous waste underground injection wells (FREEMAN-1 and RUBEN-1). MPC anticipates that they will require a permitted injection rate of 1,500 gallons per minute (gpm) to dispose of the projected quantity of wastewater generated at their facility.

Permit ND-UIC-111 will authorize the injection of waste fluids into the injection wells for a period of five (5) years, beginning from the effective date of the final Permit.

FACILITY INFORMATION AND INJECTION ACTIVITY

Well Location. North Dakota Underground Injection Permit ND-UIC-111 (Permit) authorizes MPC (Permittee) to dispose of existing plant wastewater and Project Tundra wastewater into two (2) Class I non-hazardous waste underground injection wells (FREEMAN-1 and RUBEN-1). MPC anticipates that they will require a permitted injection rate of 1,500 gallons per minute (gpm) to dispose of the projected quantity of wastewater generated at their facility.

Initially, waste fluids will be injected into the FREEMAN-1 well. If it is determined that the injection capacity of the FREEMAN-1 well is not capable of meeting the disposal needs of the facility, or if MPC decides that an additional well will provide needed redundancy or operational flexibility, then the RUBEN-1 well will be drilled.

Wastewater Description. The permitted waste stream consists of non-hazardous process fluids generated from operations at the MRY Station and may include existing plant waste streams and Project Tundra waste streams consistent with the table below.

Category	Waste Stream
Existing Plant Waste Streams	• Low-pressure ash water • Nelson Lake water • Flue gas desulfurization (FGD) blowdown • Plant stormwater • Fireside boiler cleaning water (during unit outages)

	• Precipitation collected in coal combustion residual (CCR) surface impoundments
Project Tundra Waste Streams	• Combined wastewater to FGD scrubber pond • Water treatment blowdown • Compressed air blowdown • Wet electrostatic precipitator discharge • Purge stream • Condensate from dehydration unit

The proposed waste streams will be tested to ensure that only non-hazardous wastes are injected into the wells.

Class I Injection Well Information. The anticipated required flow rate for wastewater disposal at MRY Station is 1,500 gpm. If the FREEMAN-1 well cannot achieve a flow rate of 1,500 gpm, or if MPC decides that an additional well will provide needed redundancy or operational flexibility, then MPC will construct and operate a second well (RUBEN-1). If the RUBEN-1 well is constructed, the maximum injection rate in each well will be 1,100 gpm.

If a well needs corrective maintenance or to be shut-in for testing, the injectate will be managed in the second well, properly stored on-site, or properly disposed of off-site.

The Permittee is authorized to conduct injection activity in the FREEMAN-1 and RUBEN-1 wells in accordance with the provisions of Chapter 33.1-25-01 (Underground Injection Control Program) of the North Dakota Administrative Code and with the limitations, requirements, and other conditions set forth in this Permit.

FREEMAN-1 Injection Well. The FREEMAN-1 injection well will be installed within a stratigraphic test well (Freeman 1 well) that was drilled under a sundry notice issued by the North Dakota Industrial Commission (NDIC). The Freeman 1 well was drilled for the purposes of collecting a representative water sample from the Inyan Kara Formation at the proposed injection site and for future conversion into the FREEMAN-1 Class I injection well.

The Freeman 1 stratigraphic test well is constructed with a 16-inch outside diameter (OD) conductor casing set from ground surface to an approximate depth of 77 feet below ground surface (bgs), an 11-3/4-inch OD surface casing set from ground surface to approximately 1,359 feet bgs, and an 8-5/8-inch OD production casing that extends from ground surface to a depth of approximately 3,917 feet bgs.

The production casing is perforated at three intervals (3,649 to 3,669, 3,743 to 3,781, and 3,785 to 3,823 feet bgs) within the permeable sandstone intervals of the Inyan Kara Formation. The Inyan Kara Formation is part of the Dakota Group, which also includes the Mowry, Newcastle, and Skull Creek Formations. While various terms have been used to describe this geologic unit, including the Lower Cretaceous aquifer, Inyan Kara Group, and Lakota Formation, it is generally acceptable to simply reference it as the "Dakota aquifer".

The uppermost perforated injection interval in Well #1 is approximately 2,444 feet below the lowermost underground source of drinking water (USDW), the Fox Hills Sand.

To place the Freeman 1 stratigraphic test well into "Temporary Abandoned Drilled to Total Depth" (TATD) status, a retrievable bridge plug was set at a depth of 3,520 feet bgs and was topped off by 10 feet of sand and 30 feet of cement. The mechanical integrity of the well in the temporary plugged state was demonstrated with a pressure test witnessed by NDIC staff.

The Freeman 1 stratigraphic test well will be converted to the FREEMAN-1 Class I injection well by removing the retrievable bridge plug and injecting wastewater through a 6-5/8-inch OD tubing with a packer set at an approximate depth of 3,599 feet bgs, or approximately 50 feet above the top of the targeted injection zone. The annulus between the injection tubing and production casing (the casing-tubing annulus) will be filled to the surface with an inhibited brine.

The maximum permitted injection rate for the FREEMAN-1 well is 1,500 gpm under the one injection well scenario, and the maximum permitted volume will be 1.89×10^{10} gallons over a twenty-year period. If MPC elects to drill a second injection well (RUBEN-1), the maximum injection rate in the FREEMAN-1 well will be reduced to 1,100 gpm, and the permitted maximum injection volume will be 1.38×10^{10} gallons over a twenty-year period.

RUBEN-1 Injection Well. If MPC elects to drill a second injection well for additional injection capacity, redundancy, or operational flexibility, the RUBEN-1 injection well will be installed at a location approximately 300 feet northwest of the FREEMAN-1 injection well. The construction details of the RUBEN-1 well will be similar to those of the FREEMAN-1 well. The maximum injection rate for the RUBEN-1 well is 1,100 gpm and the permitted maximum injection volume is 1.38×10^{10} gallons over a twenty-year period.

GEOLOGY AND HYDROGEOLOGY

Geology

The following tabulation summarizes the geologic formations that were encountered during drilling of the Freeman 1 stratigraphic test well.

Interval Name	Stratigraphic Formations	Estimated Depth of Top of Unit (feet below ground surface)	Estimated Depth of Bottom of Unit (feet below ground surface)
Upper Confining Unit	Cretaceous confining system: Skull Creek, Newcastle, Mowry, Belle Fourche, Greenhorn, Carlile, Niobrara, and Pierre Shale	1,205	3,649
Injection Interval	Inyan Kara formation (often referred to as the Dakota Aquifer)	3,649	3,823
Lower Confining Unit	Jurassic confining system: Piper, Rierdon, and Swift	3,823	4,705

Hydrogeology of Proposed Injection Zone and Confining Zones

The proposed wells would inject wastewater into the Inyan Kara Formation in the interval from approximately 3,649 to 3,823 feet below ground surface (bgs). The Inyan Kara formation is part of the Dakota Group, which also includes the Mowry, Newcastle, and Skull Creek formations. While various terms have been used to describe this geologic unit, including the Lower Cretaceous aquifer, Inyan Kara Group, and Lakota Formation, it is generally acceptable to simply reference it as the "Dakota aquifer".

A Dakota aquifer water sample was collected from the Freeman 1 stratigraphic test hole contained a total dissolved solids (TDS) concentration of 3,480 mg/L. Consequently, an aquifer exemption is required to inject MRY Station's plant process water into the Dakota aquifer. The NDDEQ intends to request the EPA to exempt a portion of the Dakota aquifer beneath MRY Station.

The uppermost perforated injection interval is approximately 2,444 feet below the lowermost underground source of drinking water (USDW), the Fox Hills Sand. The USDW is isolated from the Dakota aquifer by a shaley, Cretaceous confining unit composed of the Pierre, Niobrara, Carlile, Greenhorn, Belle Fourche, and Mowry formations (listed in descending order). Data collected during the drilling of the stratigraphic test well at the site indicated that this grouped unit is approximately 4,415 feet thick in the vicinity of the proposed injection wells. The predominant formation in the Cretaceous confining unit is the Pierre shale, which is approximately 1,000 feet thick in the vicinity of the proposed injection wells. The other formations, although not as thick, also act as effective confining units.

The Dakota aquifer is underlain by the Swift formation, which is comprised primarily of shale interbedded with siltstone and sandstone. The thickness of the Swift formation in the vicinity of MRY Station is estimated to be between 400 and 500 feet.

INJECTION INFORMATION

The waste fluids are authorized to be injected into one interval consisting of the Inyan Kara Formation between approximately 3,649 and 3,823 feet below ground surface (bgs). The uppermost perforated injection interval is approximately 2,444 feet below the closest currently identified underground source of drinking water (USDW), the Fox Hills Sand.

DRAFT PERMIT CONDITIONS

This Fact Sheet summarizes the site-specific Permit conditions. The following section references refer to corresponding sections in NDDEQ Permit ND-UIC-111. General permit conditions for which the content is mandatory and not subject to site-specific differences (based on 40 CFR Parts 124, 144, 146, and 147) are not included in this Fact Sheet.

Section IV – Well Construction Requirements

Casing and Cementing

(Condition 1)

The construction details that will be summarized in the Injection Well Construction Completion Report will be incorporated into the Permit and will be binding on the Permittee. Any proposed changes to the construction of the wells must be submitted to the Department for review and written approval.

Injection Tubing and Packer Specifications

(Condition 2)

The wells shall have a tubing and packer constructed of materials of sufficient quality and strength for the proposed injection activity.

Monitoring Devices

(Condition 3)

The primary method of monitoring shall be continuous monitoring of the injection pressure (at the wellhead), casing-tubing annulus pressure (at the wellhead), and the injection rate and total volume. Prior to commencement of injection activities, the operator shall install and maintain in good operating condition the following equipment:

- (1) Injection Pressure Monitoring Device. The injection pressure will be monitored using a digital, continuous reading pressure monitoring device in the injection tubing at the wellhead.
- (2) Wellhead Annulus Pressure Monitoring Device. The wellhead pressure of the casing-tubing annular space will be monitored using a digital, continuous reading pressure monitoring device in the wellhead casing-tubing annulus. The casing-tubing annulus shall be maintained with an inhibited brine fluid that is under a differential pressure of at least 100 pounds per square inch (psi) compared to wellhead injection pressure. The annulus pressure may be maintained above or below the wellhead injection pressure as long as the absolute differential pressure is at least 100 psi. The annulus pressure can be transitioned from positive differential (annulus pressure greater than the wellhead tubing pressure) to a negative differential (annulus pressure less than the wellhead tubing pressure) or the reverse in 60 minutes without being in violation of the minimum 100 psi differential pressure requirement. The minimum annulus differential pressure of 100 psi must be restored within 60 minutes. A mineral oil freeze blanket, or other fluid as approved in writing by the Director, may be circulated from surface to below frost level at completion to prevent freezing and possible equipment failure during winter months.
- (3) Well Shutdown Switch. The maximum surface injection (tubing) pressure at the wellhead shall not exceed 1,050 psi (calculated using the anticipated specific gravity of the injectate). Any increase in pressure that exceeds the allowable injection pressure shall result in an immediate shutdown of the injection pump.
- (4) Flow Meters. Flow meters and digital, continuous recording devices shall be installed in the injection line immediately upstream of the wellhead to track and document disposal fluid flow rates and total fluid volumes.
- (5) Fluid Sampling Ports. The injection line shall be equipped with a sampling port and appropriate connections to facilitate the periodic collection of injection fluid samples for chemical analysis. The sampling point shall be in an unobstructed portion of the injection line.

Section V - Well Logging and Testing Requirements

Cement Evaluation Log

(Condition 4)

Cement Evaluation Log. A cement evaluation log will be completed after the well is constructed to verify the adequacy of the cement placement. Cement evaluation logs may include cement bond log/variable density log (CBL/VDL), Ultrasonic Imaging (USI) log, or other method approved by the Director. The method used must be approved by the Director prior to completing the evaluation. If a conventional cement bond log is completed, interpretation of the log will be in accordance with EPA Region 8 Guidance No. 34 – Cement Bond Logging and Interpretation. The Permittee shall also run a new cement evaluation log following any remedial work or repair work that involves cementing.

Mechanical Integrity Testing

(Condition 5)

Mechanical integrity testing will be completed prior to commencement of injection and will be conducted at least every five years or whenever there has been a well workover. All mechanical integrity testing will be conducted in accordance with the requirements of 40 CFR 146.8 – Mechanical Integrity. The types of tests conducted to verify the mechanical integrity of the well must be approved in advance by the Department.

Pressure Fall-Off Test

(Condition 6)

Pressure Fall-Off Test. A pressure fall-off test is required for Class I operations [40 CFR 146.13 (d) (1)] and must be performed at least once every twelve months to detect any significant loss of fluids due to fracturing in the injection and/or confining zone and to aid in determining the lateral extent of the injection plume. The test shall conform to the test plan provided to the Department. The Permittee shall analyze test results and provide a report with an appropriate narrative interpretation of the test results, including an estimate of reservoir parameters, information on any reservoir boundaries, an estimate of the well skin effect, and a summary of reservoir flow conditions. The report shall also compare the test results with the previous year's test data and shall be prepared by a knowledgeable analyst.

Section VI - Well Operating Parameters

The injection of non-hazardous waste fluids into the proposed Class I underground injection wells will be covered under the authority of Permit ND-UIC-111 and is authorized subject to the conditions herein.

Injection Rate

(Condition 7)

This Permit authorizes injection into a maximum of two wells. The maximum instantaneous injection rate in the FREEMAN-1 Class I injection well shall be 1,500 gpm, or 1,100 gpm if RUBEN-1 has been constructed. The maximum instantaneous injection rate in the RUBEN-1 well is 1,100 gpm.

Injection Interval

(Condition 8)

Injection is limited to the Inyan Kara Formation, a Cretaceous sandstone unit, in the approximate interval from 3,649 to 3,823 feet bgs. The uppermost perforated injection interval is approximately 2,444 feet below the base of the lowermost underground source of drinking water (USDW), the Fox Hills Sand.

Injection Pressure

(Condition 9)

The wellhead injection pressure shall not exceed 1,050 psi (calculated using the anticipated specific gravity of the injectate) to ensure that fracturing of the injection zone and confining zone does not occur. A step-rate injection test will be completed following the commencement of injection to verify that the maximum permitted wellhead pressure does not fracture the injection formation. The injection pressure may be modified if the step-rate injection test indicates that fractures in the formation do not occur at a higher injection pressure.

Annular Fluid

(Condition 10)

The casing-tubing annulus shall be filled with a fluid containing corrosion inhibitors. A pressure with a differential (positive or negative) from wellhead injection pressure of at least 100 psi, measured at the surface, shall be maintained on the annulus to detect well malfunctions. The annulus pressure can be transitioned from positive differential (annulus pressure greater than the wellhead tubing pressure) to a negative differential (annulus pressure less than the wellhead tubing pressure) or the reverse within 60 minutes without being in violation of the minimum 100 psi differential pressure requirement. The minimum annulus differential pressure of 100 psi must be restored within 60 minutes. For 60 minutes after the pressure differential drops below 100 psi, the Permittee can conduct troubleshooting and proceed to restore a minimum 100 psi pressure differential. If a minimum 100 psi pressure differential cannot be achieved within 60 minutes, the Permittee shall notify the Department and commence shut-in procedures on the well. The Permittee may continue to operate the well under flow conditions that maintain a minimum 100 psi pressure differential.

Injection Fluid

(Condition 11)

The injected wastewater stream shall consist of the stream specified in the Permit. However, with prior written approval from the Department, injection of wastewater streams other than those specified may be allowed if (1) the wastewater stream is compatible to the original waste stream, (2) the wastewater is non-hazardous, and (3) the wastewater stream will not interfere with the operation of the facility or its ability to meet Permit conditions.

Section VII – Injection Well Monitoring

Environmental Protection Agency (EPA) regulations (40 CFR Part 146.13) require continuous monitoring and recording of injection pressure, flow rate and volume, and tubing/casing annulus pressure. The Permittee is also required to analyze the water quality of the injected fluids.

Pressure Gauges and Recording Devices

(Condition 12)

Pressure gauges shall be maintained in proper operating conditions at all times on the injection tubing and on the casing-tubing annulus at the wellhead. Continuous recording devices shall be maintained in proper operating conditions at all times to record injection tubing pressures, injection flow rates, injection total volumes, and casing-tubing annulus pressures.

Injection Fluid Monitoring

(Condition 13)

A complete chemical analysis shall be completed for the waste fluids prior to commencement of injection to confirm the classification of the waste as non-hazardous. This complete analysis shall include the parameters specified in Lists A and B, summarized in Attachment A of the Permit. The Department will establish an on-going sampling program to ensure the waste fluids injected into the well are non-hazardous.

Section VIII – Ambient Monitoring Program

Pressure Fall-Off Test

(Condition 14)

Minimum requirements are annual monitoring of the pressure buildup in the injection zone, including a shutdown of the well for a time sufficient to conduct a valid observation of the pressure fall-off curve. The zone of influence to date, the reservoir transmissivity, and the reservoir skin factor shall be calculated and submitted with the results of the pressure fall-off test.

The Department may also require any additional monitoring, based on a site-specific assessment of the potential for fluid movement from the well or injection zone and on the potential value of monitoring wells to detect such movement.

Section IX – Proposed Changes and Well Workovers

Notification

(Condition 15)

The Permittee shall give at least two (2) weeks advance notice to the Department of any planned physical alterations or additions to the permitted wells. A major alteration or workover shall be considered any work performed that affects the well casing, packer, or tubing. The notification shall be in writing and shall include plans for the workover. For emergency workover or well service, 24-hour prior notification to the Department will be provided with the proposed work plan also submitted for review.

Reporting

(Condition 16)

The Permittee shall provide all records of well workovers, logging, or other test data to the Department as part of the quarterly report for the period in which the activity was completed. The report should include the reason for the workover or change and the details of the work performed.

Mechanical Integrity

(Condition 17)

A demonstration of mechanical integrity (casing-tubing annulus pressure test) shall be performed within thirty (30) days of completion of any change or workover and prior to resuming injection activities.

Section X – Reporting

Quarterly Reports

(Condition 18)

The Permittee shall file quarterly reports within thirty (30) days after the last day of March, June, September, and December of each year. The report shall include:

1. Monthly average, maximum and minimum values for injection pressure, injection rate and volume, and annular pressure for each well. The report shall include summary graphs of the data collected during the reporting period.
2. Results of analyses of the injected fluids.
3. Graphical plots of continuous injection and annulus pressures (shown on the same plot) for each well.
4. Graphical plots showing continuous injection rates for each well.
5. Graphical plots showing the cumulative injection volumes for each well.
6. Any other information requested in writing by the Department.

The results of periodic tests of mechanical integrity, annual ambient monitoring, and well workovers shall be submitted as part of the first quarterly report following their completion.

Additional Reports

(Condition 19)

The results of mechanical integrity tests, pressure fall-off tests, and well workovers shall be submitted as part of the first quarterly report following their completion.

General Reporting

(Condition 20)

The Permittee shall report orally within twenty-four (24) hours from the time (1) monitoring or other information indicates that any contaminant may cause an endangerment to an USDW, and/or (2) information is obtained that indicates noncompliance with a Permit condition or a malfunction of the injection system (e.g., loss of mechanical integrity) which may cause fluid migration into or between USDWs.

A written report shall follow within five (5) days. The written report shall contain a description of the noncompliance and its causes, the period of noncompliance (including exact date and times), and if the noncompliance has not been corrected, the anticipated time it is expected to continue. Steps shall be taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

Non-Compliance Reporting

(Condition 21)

The Permittee shall report all other instances of noncompliance at the time monitoring reports are submitted. The reports shall contain the information listed above.

Compliance Reporting

(Condition 22)

In the event that the Permittee is placed on a compliance schedule, a report of compliance or noncompliance with the requirements of the schedule shall be submitted no later than fourteen (14) days following each schedule date.

Omissions Reporting

(Condition 23)

If the Permittee becomes aware that he failed to submit any relevant facts in a Permit application or submitted incorrect information, he shall promptly submit such facts and information to the Department.

Conversion/Abandonment Reporting

(Condition 24)

The Permittee shall notify the Department at least sixty (60) days before conversion or abandonment of the disposal wells.

Section XI - Recordkeeping

Monitoring Records

(Condition 25)

The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by the Permit, and records of all data used to complete the application for the Permit for a period of at least five (5) years from the date of the sample measurement, report, or application submittal.

Injection Fluid Records

(Condition 26)

The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used to complete the application for this Permit for a period of at least five (5) years from the date of the sample measurement, report, or application. Records of monitoring information shall include:

1. The date, exact place and time of sampling or measurements.
2. The name of individual(s) who performed the sampling or measurements.
3. The date(s) analyses were performed.
4. The name of the laboratory and individual(s) who performed the analyses.
5. The analytical techniques or methods used.
6. The results of such analyses.

The Permittee shall retain all records concerning the nature and composition of injected fluids for five (5) years after completion of plugging and abandonment procedures.

Section XII – Plugging and Abandonment

Notification

(Condition 27)

The Permittee shall notify the Department in writing sixty (60) days prior to commencing plugging operations. The plugging and abandonment procedure shall be in accordance with an Injection Well Closure Plan approved by the Department.

Abandonment Report

(Condition 28)

Within sixty (60) days after plugging the well, the Permittee shall submit a report to the Department. The person who performed the plugging operation shall certify the report as accurate and the report shall consist of either (1) a statement that the well was plugged in accordance with the plan, or (2) where actual plugging differed from the plan, a statement that specifies the different procedures followed.

Section XIII - Financial Responsibility

Surety Performance Bond

(Condition 29)

The Permittee is required to maintain continuous financial responsibility and resources to close, plug, and abandon the injection wells as provided in the plugging and abandonment plan. If only one well is constructed, the cost for plugging and abandonment is estimated as \$319,000 (inflated over the period between 2025 and 2030). The cost for plugging and abandoning two wells is estimated at \$638,000 (inflated over the period between 2025 and 2030). The Permittee will provide an appropriate financial assurance mechanism prior to completing the FREEMAN-1 injection well and prior to drilling the RUBEN-1 injection well, if MPC elects to drill RUBEN-1. Evidence that the financial assurance mechanism remains in effect must be submitted to the Department annually.

PROPOSED DAKOTA AQUIFER EXEMPTION

The Department proposes to request the Environmental Protection Agency approve an aquifer exemption for a portion of the Dakota aquifer underlying the MRY Station, in accordance with the provisions of North Dakota Administrative Code (NDAC) 33.1-25-01.

The EPA considers aquifers that have a total dissolved solids (TDS) concentration of less than 10,000 milligrams per liter (mg/L) and that either are, or could be in the future, used for drinking water purposes to be potential “underground sources of drinking water” (USDW). If certain criteria (summarized in NDAC 33.1-25-01) are met (e.g., the TDS concentration of water within the aquifer is greater than 3,000 mg/L and less than 10,000 mg/L), the EPA can “exempt” an aquifer and approve the injection of wastewater into it. A water sample collected from the Dakota aquifer in a stratigraphic test hole drilled at the facility contained a total dissolved solids (TDS) concentration of 3,480 mg/L. Consequently, an aquifer exemption is required to inject MRY Station’s plant process water into the Dakota aquifer.

Minnkota submitted an Aquifer Exemption Request to the Department to allow the injection of MRY Substation’s plant wastewater into the Dakota aquifer. The proposed area of the exemption is a fixed 1.9-mile radius circle around the proposed injection wells. This fixed radius represents the maximum radius of fluid displacement over a twenty-year injection period. The aquifer exemption request is based on several criteria, including (1) the TDS concentration of water within the aquifer is greater than 3,000 mg/L and less than 10,000 mg/L, (2) the Dakota aquifer does not currently serve as a

source of drinking water in Oliver County and (3) it is economically impractical as a future source of drinking water due to the depth of the aquifer and the cost for treatment and distribution. The information presented in the Aquifer Exemption Request supports the exemption for a portion of the Dakota aquifer in the vicinity of the MRY Station.

PUBLIC INVOLVEMENT

Public Comment Period

Public Notice number ND-2025-022 was issued on October 30, 2025, inviting comments on the Draft Permit developed for MPC. Comments should be directed to the North Dakota Department of Environmental Quality, Division of Water Quality, 4201 Normandy Street, Bismarck, ND 58503-1324. All information received on or before December 14, 2025 will be considered prior to final consideration on issuing an approval to construct and operate the FREEMAN-1 and RUBEN-1 wells.

Public Hearing

The Department has tentatively scheduled a Public Hearing on the Draft Permit on December 9, 2025 at 4:00 pm Central Time at the North Dakota Department of Environmental Quality, Room 208, 4201 Normandy Street, Bismarck, ND. The Public Hearing will be held if there is sufficient public interest pertaining to the proposed Draft Permit or if a Public Hearing is specifically requested in writing. The specific issues to be raised should be stated in a request for a Public Hearing. If sufficient public interest is not raised and a Public Hearing is not requested by December 1, 2025, the Public Hearing will be cancelled. Please check the North Dakota Department of Environmental Quality website (deq.nd.gov) or call the Department at 701-328-5210 on or after December 2, 2025 for confirmation of the Public Hearing.

Additional Information

The Permit Application, Aquifer Exemption Request, Draft Permit, and Fact Sheet are available for review during the hours of 8:30 a.m. to 4:30 p.m., Monday through Friday, at the North Dakota Department of Environmental Quality, Division of Water Quality, 4201 Normandy Street, Bismarck, North Dakota. Copies of this Public Notice and the Draft Permit are also on the Department's website at: <http://deq.nd.gov>. Anyone requiring special access or accommodation to review the documents may contact the Department at 701-328-5210.

NDDEQ Non-Discrimination Statement

The Department will consider every request for reasonable accommodations to provide an accessible meeting facility or other accommodation for people with disabilities, language interpretation for people with limited English proficiency (LEP), and translations of written material necessary to access programs and information. Language assistance services are available free of charge to you. To request accommodations, contact the NDDEQ Non-discrimination Coordinator at 701-328-5210 or deqEJ@nd.gov. TTY users may use Relay North Dakota at 711 or 1800-366-6888.

