NORTH DAKOTA
DEPARTMENT of HEALTH

GENERAL GUIDANCE
FOR
PERMITTING CLASS I UNDERGROUND INJECTION WELLS

This document is intended to provide general guidance for permitting Class I nonhazardous waste injection wells in North Dakota. Additional information can be obtained by contacting the North Dakota Department of Health's (NDDoH) Underground Injection Control (UIC) Program at 701.328.5210.

Well Description

Class I injection wells are used to inject hazardous waste, nonhazardous waste, radioactive waste, and other industrial and municipal waste fluids below the lowermost formation containing an underground source of drinking water located within one-quarter mile of the well location. This document discusses the permitting of wells used to inject waste fluids that are classified as "non-hazardous." The NDDoH should be contacted if the injection of waste considered to be "hazardous," as defined under Code of Federal Regulations (CFR) Part 261, Section 261.3, is proposed.

Permitting Authority

In North Dakota, all Class I injection wells require an underground injection permit (injection permit) from the NDDoH. Permitting requirements are summarized in North Dakota Administrative Code Chapter 33-25-01 (Underground Injection Control Program) and in 40 CFR Part 146 (Underground Injection Control Program: Criteria and Standards), Subparts A (General Provisions) and B (Criteria and Standards Applicable to Class I Wells).

Pre-Project Planning

The permitting process can be complicated and require a substantial amount of time and effort. Permitting process delays can occur when all required information is not submitted with the permit application, or if the information is not complete enough to determine that the proposed injection will not endanger underground sources of drinking water (USDW). For well owners, it is very important to retain the services of a consultant who has experience in the underground injection well permitting process.

In some instances, it may be prudent to schedule a meeting or phone conference to discuss the project and identify any issues that may complicate the permitting process. In the past, some applicants have prepared and submitted a brief feasibility study to the NDDoH for review and comment before the actual permit application is submitted.

Permit Application

Any person who is required to have a Class I injection permit shall complete, sign and submit a permit application to the NDDoH UIC Program, 918 East Divide Avenue, 4th Floor, Bismarck, North Dakota, 58501-1947. The NDDoH will review the permit application for general administrative completeness and to ensure all

required submittal information is included in the application package. This review will be completed within 30 days of receiving the permit application.

A detailed technical review will commence when the NDDoH determines that all required components have been submitted with the permit application. This process generally takes 60 to 120 days, depending on the completeness of the submittal package. The NDDoH may request the submittal of additional information or clarification of material included in the permit application package. An initial decision on whether or not the NDDoH proposes to permit the well will be made following the complete technical review of the proposed injection.

Draft Permit and Fact Sheet

If the NDDoH determines that issuance of an injection permit is warranted, a draft permit and fact sheet will be prepared. The draft permit will contain the following:

- All required permit conditions
- Compliance schedule
- Monitoring requirements
- All specific requirements for:
    - Construction
    - Corrective action
    - Operation, monitoring and sampling
    - Reporting
    - Plugging and abandonment
    - Financial responsibility
    - Mechanical integrity
    - Any other conditions required by the NDDoH

A fact sheet will be prepared and submitted to the applicant and any other person requesting a copy. The fact sheet will include:

- Brief summary of the facility
- Proposed injection activities
- Type, quality and quantity of the proposed injection fluids
- Discussion of the basis for the draft permit conditions
- Description of the procedures the NDDoH will use to reach a final decision regarding the proposed injection
- Names and contact information for people who can be contacted for additional information

Public Notice and Comment

If the NDDoH proposes to issue the injection permit, a public notice will be issued to inform the public about the decision and offer an opportunity to provide comments or request a public hearing. The public notice will describe the location and proposed function of the well, in addition to providing other information regarding operation, reporting, etc. The public comment period will extend for a period of thirty (30) days. If a public hearing is requested, the NDDoH will schedule and conduct the hearing at a location near the facility. The public comment period will be automatically extended until the close of the public hearing. In most cases, in an effort to reduce the time of the permitting process, the public hearing is scheduled near the end of the public

comment period rather than waiting to see if the public request the hearing. If no public comments are received, the public hearing may be cancelled by the NDDoH.

Following the public comment period, the NDDoH will make a final permit decision. Once the decision is made, a formal response to the comments received during the public comment period will be prepared by the NDDoH. The response will specify which provisions of the draft permit, if any, have been changed in the final permit decision and the reason for the change. The response will also briefly describe and address all significant comments on the draft permit received during the public comment period or during the public hearing, if applicable.

Authorization to Drill, Construct, and Test

If the NDDoH determines that an injection permit will be issued, the permittee will be allowed to drill, construct and test the well. Although specific approval is not needed in North Dakota to drill and construct a well, authorization is required by the NDDoH if well testing includes any injection of fluids into the well. The results of well testing must be submitted to the NDDoH so that final permit conditions can be established.

Well Completion and Testing Report

Within 90 days after completion of the well, the permittee shall submit a completion report to the NDDoH. At a minimum, the report must include:

- Name and location of the well
- Information on the construction of the well
- Information on the injection zones and the type of completion treatment performed on each zone
- Injection rates
- Injection pressures and type of injection fluid
- Copies of all open hole wireline or geophysical logs run on the well

Final Permit Approval and Authorization to Inject

The data collected during well drilling and testing will be incorporated into the final permit. Injection activities cannot commence until the facility's Class I Injection Permit is signed by the director of the NDDoH Division of Water Quality.

Special Circumstances – Aquifer Exemptions

In some cases, an exemption may be required to allow injection into an aquifer. Injection is generally allowed into any aquifer located below the lowermost underground source of drinking water as long as the total dissolved solids (TDS) concentration in the aquifer is equal to or greater than 10,000 milligrams per liter (mg/l). If the TDS concentration in an aquifer is more than 3,000 mg/l and less than 10,000 mg/l, an aquifer exemption may be required.

Aquifer exemptions are granted by the United States Environmental Protection Agency (EPA) in accordance with the provisions of 40 CFR 146.4 (Criteria for Exempted Aquifers). The specific process for evaluating aquifer exemptions is summarized in EPA Guidance 34 - Guidance for Review and Approval of State Underground Injection Control (UIC) Programs and Revisions to Approved State Programs.

If it is determined that an aquifer exemption is required, the permittee must provide all required information to the NDDoH for review and comment. Once all the information is received and reviewed and the NDDoH

determines that an aquifer exemption is applicable, the NDDoH will prepare an aquifer exemption request package for submittal to the EPA.

The process for obtaining an aquifer exemption can add a significant amount of time to the Class I well permitting process. Therefore, it is important that the applicant provide as much aquifer information as possible during the preplanning process discussed above. This information will assist in determining whether or not an aquifer exemption may be required.

Permit Review Timeline

The permit application review and approval process generally takes between six and eight months to complete, provided the permit application package is complete and detailed and there are no other unforeseen delays. This timeframe can be highly variable and could be significantly longer depending on (1) the completeness of the application and (2) the response time of the applicant to NDDoH requests for additional information or clarification. Consequently, the applicant should retain the design services of a well-qualified consultant to prepare the application package. The NDDoH can provide potential applicants with a list of consultants who have permitted Class I wells in North Dakota.