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DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
Water Quality Branch
Water Supply Unit
Ground Water Management Section
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CLASS II PERMIT APPLICATION ATTACHMENT GUIDANCE

Minimum information to be included in attachments that must be submitted with permit applications for individual or area authorization of Class II well operation or plugging and abandonment allowed under Rule 0400-45-6.

I. Individual Well Permits

A. Produced Water Disposal Operational Permits

1. Area of Review Description – Submit a detailed description of the area of Review for each Class II well that meets the requirements of Rule 0400-45-6-.09(3) and that provides information equivalent to Rules 0400-45-6-.10(3)(b) and .11(1)(b). In the case of a well already drilled, this description must include appropriate logs of the well with the proposed injection zone marked. For wells to be drilled, the description must include a statement of the proposed injection zone and the approximate depth and elevation of this zone. The area of review description for each Class II well must provide and justify the method(s) used to determine the size of the area of review.

2. Commercial Producibility – Provide sufficient information to assure that the subject Class II well will inject into a zone from which hydrocarbons have been previously produced. If the subject well is located in a field or project containing a zone(s) from which hydrocarbons have not previously been produced, submit sufficient information to demonstrate that the injection zone is a zone containing commercially producible quantities of hydrocarbons. Submission of information on commercial producibility is necessary to assure that ground water within the injection zone is classified according to Rule 0400-45-6-.11 (1)(a).
3. Corrective Action – Provide a map and a tabulation of data as described in Rule 0400-45-6-.10(3)(b)1. Also, submit a Corrective Action Plan, if necessary. Corrective Action Plans shall comply with Rule 0400-45-6-.09 (5).
4. Construction Data – Submit sufficient information to assure that well Construction will comply with Rule 0400-45-6-.11(2), (3), and (4). Include a detailed description of the proposed injection system including the type and construction of the injection well and a schematic diagram of the well showing the casing and cementing program with an appropriate explanation.
5. Class II Testing – Submit logs, plans, and information as described in Rule 0400-45-6-.11(5) for injection well and formation testing.
6. Operational Data – Provide information regarding the maximum and average daily rate and volume of injected fluid, the maximum and average injection pressures, the nature and pressure of the annulus fluid, and the physical and chemical nature (including corrosiveness and density) of the injected fluid. Also submit proposed methodology for collecting and reporting representative values for the above operational data.
7. Monitoring Program – Submit a plan for a proposed monitoring program to fulfill the requirements of Rule 0400-45-6-.11(6).

8. Contingency Plans – Submit detailed contingency plans to prevent pollution of surface water or any ground water classified pursuant to Rule 0400-45-6-.04 resulting from any failure of the well or associated equipment.
9. Plugging and Abandonment Plan – Submit Plugging and Abandonment Plan that meets the Standards and Requirements of Rule 0400-45-6-.09(6), (7), (8) and (9). This plan shall also contain a detailed cost estimate for plugging and abandonment.
10. Financial Responsibility – Submit a surety bond or other evidence of financial responsibility as required by Rule 0400-45-6-.09(10).
11. Provide a statement that the proposed Class II well will be completed in such a manner to insure that the injected substances are injected into the proposed injection zone and that provisions have been made for adequate protection of formation(s) containing ground water classified pursuant to Rule 0400-45-6-.04 and any other zone of commercial value. This statement should contain a brief summary of the information contained in the application attachments that verify that injection only occurs in the injection zone and that adequate protection for ground water classified pursuant to Rule 0400-45-6-.04 is provided.
12. Copies of well logs of all wells in AOR, these may be submitted electronically.

B. Enhanced Recovery Operational Permits

1. General Information – Submit information equivalent to that in I.A. through 1-11 of this Application Attachments Guidance.
2. Reservoir Description – Applications for Class II enhanced recovery wells must also include a description of the reservoir to be enhanced and a statement relative to the necessity for the use of wells to enhance production of oil or

natural gas. This reservoir description is in addition to the Area of Review Description, but may make reference to portions of the description of the area.

C. Hydrocarbon Storage Operational Permits

1. General Information – Submit information equivalent to that in I.A. through 1-11 of this Application Attachments Guidance.
2. Reservoir Map – Submit a map showing the known areal extent of the reservoir to be used for storage and the locations of all wells or test holes known to extend into or through the proposed reservoir.
3. Geologic Information – Submit a series of maps and geologic cross-Sections showing the known subsurface position and structure of the reservoir, the nature of the horizontal and vertical boundaries of the reservoir, and the thickness of the reservoir.
4. Existing Well Information – Submit a tabulation of the type, construction, depth, and current condition of each well or test hole located within the area covered by the reservoir map described in I.C. 2 of this Application Attachments Guidance.
5. Plugging Plan – Provide a detailed description of the procedures to be used to plug or work over the existing reservoir wells or test holes to prevent migration of injected substances into any aquifer other than the proposed storage reservoir.
6. Reservoir Integrity – Provide detailed description of the method, procedures, and devices for testing the integrity of the proposed reservoir to contain the injected substances within the bounds of the reservoir.

II. Area Permits

If an Area Permit is sought for Class II activities, submit information, in an area context, equivalent to that described in I.A., B., or C. of this Applications Attachments Guidance. However, in providing this information, the following must be provided or addressed in area permit application attachments:

- A. The “Area of Review Description” for Class II area permits must also provide Sufficient information for the Department to define the area within which the injections will be authorized by the area permit.
- B. The information described in I.A., B., or C. of this Attachments Guidance regarding Construction, monitoring, reporting, operation, and abandonment must be provided for each injection well in the proposed area. However, wells with equivalent construction, monitoring, reporting, operation, and abandonment characteristics may be grouped together in the application and a single description of the information required for each of these topics will suffice.
- C. Each injection well in the field must be accurately located on the map described in II A. 2 (Corrective Action) of this application attachments guidance.
- D. Documentation that each injection well is in the same well field, facility site, reservoir, project, or similar unit in the state.
- E. Documentation that the waste to be injected at each well is not hazardous.
- F. Documentation that every injection well in the field will be operated by the same owner or operator.

III. **Plugging and Abandonment Permits**

Attachments to all Class II Plugging and Abandonment permit applications, whether for an individual well or for an area, must contain the following:

- A. A summary of the reasons for abandonment.

- B. An updated copy of the previously approved plugging and abandonment plan(s) with any plan modifications deemed necessary.
- C. Current evidence of financial responsibility.

CLASS II REPORTING REQUIREMENTS

Reports associated with operation or plugging and abandonment of Class II wells.

I. Testing Requirements

At least once every five years after construction, injection wells shall be tested to assure their continued mechanical integrity. The results of these tests shall be reported to the Department upon completion. Refer to Rule 0400-45-6-.11(5)(d) for tests that shall be conducted to demonstrate mechanical integrity.

II. Reporting Requirements

- A. Annual Report – Submit an annual report to the Department summarizing the results of monitoring required under Rule 0400-45-6-.11(6). It shall include monthly records of injected fluid and any major changes in characteristics or sources of injected fluid.
- B. Notification – The following events shall be reported to the Department:
 - 1) The date and time of initial, three-year, or special tests will commence in order that such tests may be witnessed by a representative of the Department.
 - 2) The date of commencement of injection operations in any well.
 - 3) Within 30 days after the date of permanent cessation of hydrocarbon storage operations or discontinuance of injection operations into any other well, the operator shall notify the Department of the date of discontinuance and the reasons therefor.

III. Plugging and Abandonment Permits

- A. Final Report – Submit a Final Report upon completion and abandonment of a well or wellfield. It shall include at least daily construction reports, certification of completion in accordance with approved plans and specifications by a person knowledgeable and experienced in the field, and evidence that a surveyor's plot of the location of the abandoned wells has been recorded in the county courthouse property records.