

**REGION 5 UNDERGROUND INJECTION CONTROL
CLASS V PERMIT APPLICATION INSTRUCTIONS**

(From: INSTRUCTIONS B Attachments / EPA Form 7520-6)

A. AREA OF REVIEW METHODS: Not Applicable

B. MAPS OF WELLS/AREA AND AREA OF REVIEW:

- 1) Submit a topographic map (approximate scale 1:400) extending at least one mile beyond the property boundaries of the facility, clearly showing the following:
 - a) The facility and all water intake (such as water supply wells) and discharge (drainage, sewer, discharges to ponds, lakes, ditches, streams or rivers, etc.) structures, including all surface and subsurface piping;
 - b) All hazardous waste treatment, storage, or disposal area(s) within one-quarter mile of the facility's property boundaries; and
 - c) All wells (including injection wells, water supply wells and drinking water wells), springs and other surface water bodies listed in public records or otherwise known to the applicant within one-quarter mile of the facility's property boundaries.
- 2) Submit the following information on all public and private water wells (active and/or plugged) listed in public records or otherwise known to the applicant that lie within one-quarter mile of the property boundaries (A copy of the form filed with the public agency is acceptable.):
 - a) Type of well;
 - b) Record of well completion, including construction details;
 - c) Location;
 - d) Date drilled;
 - e) Total depth of the well;
 - f) Name of the aquifer at the total depth of the well;
 - g) The amount of water (in gallons per minute) yielded by the aquifer; and
 - h) Records of well closure for each plugged well.
- 3) Submit a list of the names and addresses of all landowners within one-quarter mile of the facility boundaries (this requirement may be waived by the Director for densely populated areas).

C. CORRECTIVE ACTION PLAN AND WELL DATA: Not Applicable

D. MAPS AND CROSS SECTION OF USDWs:

Submit appropriately scaled and labeled maps and cross sections detailing the geologic structure of the local area, including:

- 1) All Underground Sources of Drinking Water (USDWs) within one-quarter mile of the facility's property boundaries. The vertical limits of the cross sections detailing the geologic structure should extend at least 50 feet below the lowermost USDW affected by injection operations;
- 2) The direction of water movement in each USDW which may be affected by injection operations at this facility;

Note: A USDW is defined as an aquifer or its portion which contains fewer than 10,000 mg/l of total dissolved solids.

E. NAME AND DEPTH OF USDWs (Class II): Not Applicable

F. MAPS AND CROSS SECTIONS OF GEOLOGIC STRUCTURE OF AREA:

Submit appropriately scaled and labeled maps and cross sections detailing the geologic structure of the local area, including:

- 1) Geologic structure of the local area (including the lithology of the injection interval); and
- 2) Generalized maps illustrating the regional geologic setting.

G. GEOLOGICAL DATA ON INJECTION AND CONFINING ZONES (Class II): Not Applicable

H. OPERATING DATA:

- 1) Submit the following information (in tabular form) for each Class V injection well:
 - a) Average and maximum daily volumes of fluids entering the well (gallons);
 - b) Average and maximum monthly volumes of fluids entering the well (gallons);
 - c) The source(s) of fluid(s) entering the well and volume of fluid(s) from each source;
 - d) Material Safety Data Sheets (if available) or the brand name(s) and description(s) of all fluid(s) that have the potential of entering the well; and
 - e) The percentage of fluid from each source entering the well.
- 2) Submit a fluid analysis of the waste stream for all injected fluids such that the nature of the fluid is characterized completely. The waste fluids must not result in the movement of fluid containing any contaminant into USDWs, if the presence of that contaminant may cause a

violation of any primary drinking water regulation or may otherwise adversely affect human health.

Note: This means that for motor vehicle waste disposal wells, before any motor vehicle service related wastewater is discharged into the ground, it must not exceed any primary drinking water regulation (Maximum Contaminant Levels or MCLs) or other health-based standards at the point of injection (40 CFR Sections 144.3 and 146.3). The equipment and procedures used to obtain, transport and analyze the samples should follow a Quality Assurance plan which has been submitted to and approved by our office.

I. FORMATION TESTING PROGRAM: Not Applicable

J. STIMULATION PROGRAM: Not Applicable

K. INJECTION PROCEDURES:

- 2) Describe how the fluids move through the system from generation of the wastewater to the release of the fluids into the subsurface from the injection well, including any treatment the fluids receive at any point before injection.
- 3) Include descriptions and specifications of any equipment that might be used to inject fluid (e.g., pumps) and injection pressures if applicable.

L. CONSTRUCTION PROCEDURES: Not Applicable

M. CONSTRUCTION DETAILS:

- 1) Submit a properly scaled and labeled map of the facility locating all Class V injection wells and all potential sources (for example, floor drains and shop sinks) receiving fluids that might be injected into the wells.
- 2) Submit a flow chart depicting the source(s) of all injected fluids. The chart should include:
 - a) Entry of source material into the facility;
 - b) All processes within the facility which generate fluids which are disposed of into the well(s);
 - c) Treatment processes (if any) and ultimate disposal to the well(s);
 - d) Points at which the injection fluid may be sampled; and
 - e) Provide a narrative explaining the diagram.
- 3) Submit schematic and/or other appropriate drawings of the surface and subsurface construction details for each Class V well and its associated surface and subsurface interconnections within the facility boundaries. The drawings should include:
 - a) The location, composition and dimensions of structures such as tanks, conduits, screens, casing or other subsurface structures, etc.;

- b) Injection well depth and diameter;
 - c) Name of the formation(s) into which each well injects fluids;
 - d) Date the construction or installation of each well was completed; and
 - e) Narrative information describing the diagram to ensure clarity.
- 4) Submit the following information concerning each Class V well from the date of installation or construction to the present:
- a) Date of initial operation of the well;
 - b) Date(s) of modifications/additions or conversion of the well (if applicable); and
 - c) Projected date(s) for completion and operation (proposed wells only).

N. CHANGES IN INJECTED FLUID: Not Applicable

O. PLANS FOR WELL FAILURES: Not Applicable

P. MONITORING PROGRAM:

A monitoring program must be developed to ensure that injection operations at the facility do not result in the movement of fluid containing any contaminant into USDWs, if the presence of that contaminant may cause a violation of any primary drinking water regulation or may otherwise adversely affect human health. The monitoring program should include:

- 1) A monitoring plan, outlining the steps necessary to prevent the movement of fluid containing any contaminant into USDWs. The frequency of analysis of the facility's wastewater must be included;
- 2) Any proposed pretreatment of the waste stream, including levels to which each constituent will be reduced. Please note that compliance with federal standards may not be sufficient to satisfy local and state requirements. It is your responsibility to determine whether you are in compliance with all applicable regulations;
- 3) The location(s) of any wastewater monitoring point(s) before the fluid is injected into the subsurface from the well and the technical basis for choosing the location(s);
- 4) The location(s) of any ground water monitoring well(s) (taking into account the direction of water movement in each USDW) and the technical basis for choosing the location(s);
- 5) A description of the proposed construction of any monitoring well(s), including appropriate construction details similar to those requested for the injection well(s) in Part M of these instructions;
- 6) A description of the proposed sampling of any ground water monitoring well(s), including

the sampling frequency of each well and the technical basis for that frequency. The velocity of water movement in each affected USDW and the volume of injected fluid must be taken into account in determining the minimum sampling frequency; and

- 7) If injection operations are likely to impact a USDW which is currently being used as a primary drinking water source within one-quarter mile of the facility's property boundaries, the monitoring plan MUST include a sampling plan for the drinking water wells.

Q. PLUGGING AND ABANDONMENT PLAN:

Describe how the Class V well will be closed in a manner that prevents the movement of fluid containing any contaminant into a USDW, if the presence of that contaminant may cause a violation of any primary drinking water regulation or otherwise adversely affect the health of persons. Include a schematic and/or other appropriate drawings of the construction details for each Class V well showing how the well will be closed. The plan should include (as appropriate):

- 1) The type, number, and placement of any plugs to be used;
- 2) The type, grade and quantity of any cement (or other material) to be used;
- 3) Describe the method to be used to place any plugs; and
- 4) Describe how any soil, gravel, sludge, liquids, or other materials removed from or adjacent to the well will be disposed or otherwise managed according to applicable requirements.

R. NECESSARY RESOURCES:

- 1) Submit evidence, such as a surety bond, trust agreement, or financial statement to verify that the financial resources necessary for closure of each well are available.

S. AQUIFER EXEMPTIONS: Not Applicable

T. EXISTING EPA PERMITS:

Submit a list of any federal (or delegated state or local) permits or approvals received or applied for that apply to this facility. For example, permits from the Hazardous Waste Management Program under the Resource Conservation and Recovery Act (RCRA) and National Pollutant Discharge Elimination System (NPDES) permits under the Clean Water Act (CWA).

U. DESCRIPTION OF BUSINESS:

Submit a brief description of the nature of the business.

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