

United States Environmental Protection Agency (EPA) Region 2
Direct Implementation Underground Injection Control (UIC)
Water Division Program Guidance
for Voluntary Closures of Class V Wells without Individual Permits

EPA [UIC Regulations](#) require that closures of all Class V injection wells be conducted in a manner that protects underground sources of drinking water (USDWs) and complies with all applicable Federal, State, and local regulations related to removal of materials from the well and adjacent to the well (see, 40 C.F.R. §§ 144.12(a) and 144.82). Closures of large-capacity cesspools and motor vehicle waste disposal wells are required under additional regulations (see, 40 C.F.R. §§ 144.84, 144.85, 144.88 and 144.89). Owners and operators must also comply with other pertinent State and local cleanup objectives.

To ensure UIC Class V well closures are conducted in a manner that does not contaminate USDWs, the EPA Region 2 UIC Program has developed this closure guidance¹ for voluntary closures of Class V wells without individual permits that are being overseen by a qualified environmental professional:

- A. Well-System Diagram:** Fully investigate and document the injection well system. Identify all sources of discharges and final discharge points, including drains, piping, processing units such as oil/water separators or septic tanks, and final discharge mechanisms such as cesspools, septic systems, drywells/overflow drywells, leach fields, subsurface fluid distribution systems, open underground pipe, dug holes, or improved sinkholes.
- B. Description of business and all fluids injected:** Identify all fluids that are entering, have entered, or could have entered the Class V well(s). This should be based on an understanding of the current or past facility use, such as the activities conducted at the facility; and the chemicals and wastes used, generated, disposed of and/or stored at the facility, or suspected to have been used, generated, disposed or stored. This may also be based on analytical results for pertinent wastewater, sludge and/or soil sampling. Identify the Standard Industry Code(s) (SIC) and North American Industry Classification System (NAICS) codes for the current use or, if vacant, the immediate prior use of the well(s).
- C. Verification of connection between drain and UIC well:** Verify all connections between all drains and the injection well(s) (e.g., cesspool, septic system, drywell/overflow drywell, leach field, subsurface fluid distribution system, open underground pipe, dug hole, improved sinkhole). Verification is to be done by a qualified environmental professional.
- D. Plug Emplacements and Drain Closure:** Install proper plug emplacements for the well(s) (if applicable). Permanently plug pipes entering and exiting the well and close the drains(s).
- E. Contaminant removal:** Pump, excavate, or otherwise remove all contaminated liquids, sludges, and contaminated soil from within, beneath and around the Class V injection well(s) until: (1) visibly clean soil is reached; or (2) structural integrity of the excavation or

¹ EPA Region 2 may determine that a full Closure Plan and Report submittal is necessary.

buildings/structures near the excavation, may be compromised; or (3) ground water is encountered in sufficient quantities to preclude additional excavation.

If there is a treatment tank (e.g., oil-water separator, septic tank) or associated piping in the drainage system discharging to the injection well(s), the contents of the tank(s) and piping must also be cleaned out and disposed of properly by a licensed hauler. Any cleaning of tank(s) or piping must be done in a manner that does not release contaminants into the environment.

If a point of compromised structural integrity is reached or ground water flow precludes removal of all contamination, soil borings or other remedial methods may be required to delineate the extent of any remaining contamination within, beneath or around the injection well(s). In such cases, continue your work, notify EPA via e-mail to: region2_uic@epa.gov, and case handler, if known, and document in Final Report.

F. On-site storage of excavated material: Use proper on-site storage for excavated material while awaiting proper disposal of all wastes (soil, gravel, sludge, liquids, or other materials) removed from the Class V well system (e.g., drain, treatment tank and injection well). Use a waste storage methodology that ensures contaminants are not released back into the environment during the period of storage. Dry soils and other dry wastes may be stored on, and covered by, secured heavy gauge plastic, or stored in roll-off containers designed for such a use. Liquid wastes must be stored in covered drums, tanks or roll-off containers designed to contain such wastes.

G. Waste characterization: Characterize all excavated material (soil, gravel, sludge, liquid or other materials) for disposal purposes, and dispose of or otherwise manage in accordance with all applicable Federal, State, and local requirements.

H. Minimum sampling and analytical requirements:

a. Following removal of all contaminants as in E. above, post excavation endpoint samples are to be taken and analytical results compared to “**Table 1 Region 2 UIC Cleanup Objectives**” (available on the [Region 2 UIC Webpage](#)). (Note that other more stringent State and local cleanup objectives may apply). Specific sampling and analytical requirements are dependent on the type of well structure and type of facility at which the well is being remediated:

i. **Drywells, Leach Pits, Cesspools, Open Pipes, Floor Drains discharging directly into the ground, and Similar Structures.** Collect at least one representative end-point soil sample after all contaminated liquids, sludges and soils have been removed from in, around and below the well at a depth of 6 inches to 1 foot below the base of the excavation and, based on best professional judgement and field observations, from any other appropriate location(s) and depth(s).

ii. **Drainfields, Tile fields, Leachfields and Similar Subsurface Fluid Distribution Structures.** Collect at least one representative end-point soil sample post excavation of contaminated soil at a depth of 6 inches to 1 foot below the base of the excavation

and, based on best professional judgement and field observations, from any other appropriate location(s) and depth(s).

- b. Collect and analyze the samples in a manner consistent with the most current procedures outlined in EPA’s compendium of analytical and sampling methods titled “Test Methods for Evaluating Solid Waste, Physical/Chemical Method,” also known as [SW-846](#). Ensure integrity of the sample during collection, transport and analysis. If ground water is encountered during the remediation, collect at least one representative ground water sample.
- c. At a minimum, analyze samples for the constituents listed below based on facility type and include all contaminants that could enter the ground water as a result of the owner/operator’s activities—meaning any other site-specific contaminants of concern:

Compound	Analytical Method	
	Soil/Wastewater/Sludge	Ground Water
Volatile Organic Compounds (VOCs)	EPA Method 8260	EPA Method 524
Semi-volatile organic compounds (SVOCs)	EPA Method 8270	EPA Method 525
Arsenic, cadmium, chromium, lead, barium, mercury, selenium, and silver	EPA Method 200.7	EPA Method 200.7 or 200.8
Any other site- specific contaminants of concern (such as other metals, pesticides and herbicides). See industry specific types below:		
Funeral Home Waste Disposal Wells	Phenol, 2-methylphenol and 4-methylphenol	EPA Method 8270 or 8041
	Formaldehyde Copper	EPA Method 8315 EPA Method 200.7 EPA Method 8315 EPA Method 200.7 or 200.8

- d. Analyze samples at a certified laboratory utilizing EPA approved methods for all contaminants that could enter the ground water as a result of the owner/operator’s activities. The laboratory’s Practical Quantitation Limit (PQL) achieved for all samples should be at or below the corresponding “**Table 1 Region 2 UIC Cleanup Objectives**” (available on the [Region 2 UIC Webpage](#)).

- I. Backfill and Permanent Closure:** Backfill and permanently close the well. Use clean inert soil or sand as backfill. If backfilled before endpoint results, removal of the backfill may be necessary if endpoint sampling results indicate that additional remediation is required. Comply with all State and local requirements for safely permanently closing the well.
- J. Final Report:** Prepare a Final Closure Report within 30 days of completing the closure. The Final Closure Report is to be kept on record at the Facility site address and at the office of the authorized representative of the owner/operator overseeing the closure and is to be made

available upon request by EPA. Do not submit Final Closure Report to EPA unless requested. EPA may make this request at any time during or after the well closure process. In the Final Closure Report include at a minimum: clean-out and closure procedures used; the name, address and telephone number of all entities that supplied backfill material; a summary table comparing the analytical results to “**Table 1 Region 2 UIC Cleanup Objectives**” (available on the [Region 2 UIC Webpage](#)) by sample and identifying any exceedances; full laboratory report for all analytical results (including quality control analyses, sample dilution if any, clear identification of sample location and depth, chain of custody and detection levels achieved); and waste disposal manifests.

K. Inventory and Certification: Notify EPA Region 2 when the well(s) are permanently closed, via e-mail to: region2_uic@epa.gov. Upon satisfactory submittal of the updated Online Inventory and the signed Certification (see certification language in section b below), EPA Region 2 will acknowledge receipt and update the UIC inventory record which will complete the well closure process. Include in the e-mail notification:

- a. Date the updated Online Inventory form with explanatory comments was submitted and, if not previously submitted, additional inventory information in the “**USEPA Region 2 Supplemental Instructions for Completing EPA Form 7520-16 Inventory of Injection Wells**” (available on the [Region 2 UIC Webpage](#)); and
- b. The following statement accompanying the updated inventory information and signed by an authorized representative of the owner/operator overseeing the closure:

“The Class V injections well(s) have been closed in a manner consistent with this guidance; and in a manner that protects underground sources of drinking water and complies with all applicable laws and regulations related to removal of materials from the well and adjacent to the well (see, 40 C.F.R. §§ 144.12(a), 144.82, 144.84, 144.88 and 144.89).

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Name and Official Title (Please type or print)

Signature

Date Signed
