

## Underground Injection Control (UIC) Class V Well Closure Within EPA Region 10 (Alaska, Idaho, Oregon, and Washington)

The U.S. Environmental Protection Agency, pursuant to 40 C.F.R. §§ 144.12(a) and 144.82, requires that closures of all Class V injection wells be conducted in a manner that protects underground sources of drinking water and complies with all applicable laws and regulations related to removal of materials from and adjacent to the well.

The EPA recommends that entities receive approval from the EPA on a well closure plan prior to initiating well closure. Closures of certain Class V injection wells, such as motor vehicle waste disposal wells and large-capacity cesspools, are required to comply with additional regulations. Pursuant to 40 C.F.R. § 144.88, entities must notify the EPA a minimum of thirty (30) days before closing a motor vehicle waste disposal well or large-capacity cesspool using the “Pre-Notification Form 7520-17.”<sup>1</sup> The EPA recommends that well closure plans be submitted to the EPA as early as possible before the proposed start date of the well closure activities.

For facilities seeking the EPA’s approval to convert their motor vehicle waste disposal well to a sanitary wastewater Class V well, 40 C.F.R. § 144.89(b) describes the regulatory requirements for such a conversion. Additionally, entities must provide the information below and must illustrate, at a minimum, that sampling confirms soil within the injection zone is clean.

The EPA is likely to approve a well closure plan if it contains the information described below which is neither an exclusive nor exhaustive set of requirements. Closure plans are evaluated on a case-by-case basis and the EPA may require additional information prior to approval.

The well closure plan must provide evidence that the non-sanitary waste discharge has permanently ended and, at minimum, provide the following information:

- A. A schematic diagram displaying the injection well system that identifies all drains, piping, processing units such as oil/water separators, septic tanks, and final discharge mechanisms such as drywells, leachfields, log cribs, and open underground pipe.
- B. A detailed description of all fluids which enter, or have entered, the Class V well.
- C. A detailed description identifying the connections between all drains at the facility and the injection well (cesspool, drywell, open pipe or leachfield) and descriptions of the planned disconnections between the well and the piping, including photographing disconnections, well removal and soil sampling locations.
- D. A description of plug emplacements (if applicable).
- E. A detailed description of how all contaminated liquids, sludge, and soil will be removed from the point of injection in and around the Class V injection well.
- F. A sampling plan that documents the conditions observed and sampled at the point of injection until clean soil is reached, or until structural integrity of the excavation or buildings or other significant structures near the excavation, may be compromised. The

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<sup>1</sup> [https://www.epa.gov/sites/default/files/2019-05/documents/owner\\_or\\_operator\\_class\\_v\\_well\\_preclosure\\_notification\\_form\\_epa\\_form\\_7520\\_17.pdf](https://www.epa.gov/sites/default/files/2019-05/documents/owner_or_operator_class_v_well_preclosure_notification_form_epa_form_7520_17.pdf)

sampling plan should describe the proposed methods used for visual, olfactory, and photo-ionization detection as well as sample collection and analytical methods. The sampling plan should also include a quality assurance project plan or QAPP.

- G. A detailed description of on-site storage while awaiting proper disposal of contaminated liquids, sludge, soil, and other materials removed from the Class V well system.
- H. A detailed description of how all wastes will be characterized for disposal purposes in accordance with Federal, State, and local regulations.
- I. If the soil sample results note an exceedance of cleanup standards, additional samples may be required to understand the extent of contamination. The point of injection sample should be analyzed according to well use and injectate constituents.

Recommended EPA methods are included below:

- a. For large capacity cesspool wells (20 or more people per day), which receive only sanitary waste, a point of injection sample and analysis typically is not required.
  - b. For motor vehicle waste disposal wells, the point of injection sample should be analyzed for contaminants associated with motor vehicle maintenance and repair such as: volatile organic compounds using EPA Method 8260, semi-volatile organic compounds using EPA Method 8270, petroleum aromatic hydrocarbons using EPA Method 8270-SIM, metals including arsenic, cadmium, chromium, and lead using EPA Method 6020 and mercury using EPA Method 7471. In Alaska, additionally analyze the sample for diesel range organics using Alaska Method AK101, residual range organics using Alaska Method 102, and gasoline range organics using Alaska Method AK103. On Tribal lands in Idaho, Oregon, and Washington, additionally analyze the sample for diesel and gas using NWTPH-Dx and NWTPW-Gx.
  - c. For industrial process wastewater injection wells, the point of injection sample should be analyzed for contaminants present in the injectate and at a minimum include testing for volatile organic compounds by EPA Method 8260, semi-volatile organic compounds by EPA Method 8270 and metals EPA Method 6020. Other contaminants potentially present in the injectate should be included in the proposed sampling plan for analysis.
- J. An assurance that all backfill material is clean. This includes documenting the source of material and ensuring all backfill originates from non-contaminated areas.

A final report outlining the closure procedures, including all sampling results, waste disposal manifests, and a certification that the well closure has occurred in accordance with the approved well closure plan, must be submitted to the EPA upon the completion of closure activities for review and approval.