Focus on: Treating Dangerous Waste Under Permit by Rule

You may treat dangerous waste under permit by rule if you follow the provisions. Photo credit: U.S. Army Environmental Command

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This focus sheet explains Washington state's permit by rule provisions[1] as they apply to totally enclosed treatment facilities, elementary neutralization, or wastewater treatment units.

What is permit by rule?

By volume, most of Washington's dangerous waste is wastewater: aqueous waste generated during manufacturing, service, and production processes. Generators often treat it on site to make it non-dangerous and then discharge it to a publicly owned wastewater treatment works (POTW) or the ocean, river, or other water body.

The state's Dangerous Waste Regulations regulate how you treat dangerous waste. However, if you can discharge the wastewater to a water body, Washington's water quality rules may regulate the same treatment process.[2] The **permit by rule** provisions help you avoid dual regulation and ensure the dangerous waste and water quality rules work together to reduce risks to human health and the environment.

Who qualifies for permit by rule?

You may qualify for permit by rule if all of the following are true:

- You treat a specific type of dangerous waste in an **elementary neutralization unit**, **totally enclosed treatment facility**, or **wastewater treatment unit**.[3]

[1] Permit by Rule provisions in the Dangerous Waste Regulations: http://apps.leg.wa.gov/wac/default.aspx?cite=173-303-802
[2] Water Pollution Control Act: http://apps.leg.wa.gov/rcw/default.aspx?cite=90.48
[3] Definitions for totally enclosed treatment units, elementary neutralization, and wastewater treatment units are defined in WAC 173-303-040: http://apps.leg.wa.gov/wac/default.aspx?cite=173-303-040. The definitions for each type of unit are unique and important. For example, according to the definitions, elementary neutralization can take place in a mobile container while treatment through a wastewater treatment unit can only take place in a stationary tank.

- You have one of the following water quality permits:
  - National Pollutant Discharge Elimination System (NPDES) permit.[4]
  - State waste discharge permit.[5]
  - Pretreatment permit or authorization.
- You comply with your water quality permit[6] and the permit addresses each of the waste streams you treat on site.
- You comply with the applicable permit by rule regulations.[7]

How do you treat your waste under permit by rule?

The Dangerous Waste Regulations and water quality permit work together to address dangerous wastewater. The water quality permit addresses wastewater after it has been generated, from the moment it enters the treatment works until it is discharged.

The dangerous waste regulations mostly focus on wastewater **before** it enters the treatment system: at the point where wastes are first generated, upstream from the treatment process. However, as a reminder, permit by rule units are regulated under the dangerous waste regulations and open for inspection by an Ecology hazardous waste inspector.

Properly manage your waste

Designate your waste[8] **before** mixing or diluting it with other wastes.[9] For example, you must designate a concentrated wastewater solution separately from rinse water, mop bucket water, or any other wastes you might treat in the same container as the concentrated solution.

After you designate your waste, you must meet minimum performance standards[10] to reduce risks to human health and the environment. These standards commonly focus on the floors, trenches, sumps, pipes, and other equipment that might be used to send dangerous wastewater to the on-site treatment unit. They also address areas that could lead to unnecessary human exposures or releases to the environment, such as poor worker practices, equipment maintenance, and regular inspections.

To address potential risks, follow these waste management requirements:

- Train employees about standard operating procedures and dangerous waste management practices.
- Determine which chemicals are incompatible and separate them to prevent chemical reaction during routine use or emergency events.
- If possible, separate unique wastes so they can be recycled, reused, treated, or disposed more easily. Separate incompatible wastes to avoid chemical mixtures that create harmful vapors, generate extreme heat or pressure, or cause fires or explosions.
- Dispose of process wastes properly. Keep them out of septic systems and storm sewers.

[4] http://apps.leg.wa.gov/wac/default.aspx?cite=173-220
[5] http://apps.leg.wa.gov/wac/default.aspx?cite=173-216
[6] If you fail to comply with your water quality permit, you may lose your opportunity to operate under the permit by rule standards. In that case, you would have to meet other treatment standards in the Dangerous Waste Regulations.
[7] https://apps.leg.wa.gov/wac/default.aspx?cite=173-303-802
[8] https://ecology.wa.gov/Designation
[9] http://apps.leg.wa.gov/wac/default.aspx?cite=173-303-070
[10] http://apps.leg.wa.gov/wac/default.aspx?cite=173-303-283

- Empty all catch pans or basins, concrete trenches, sumps, and sinks regularly.
- Design systems to contain dangerous wastewater.
    - Prevent cracks, gaps, pitting, or spalling in concrete structures.
    - Seal floors, trenches, sumps, and curbs if needed.
    - Prevent corrosion.
    - Ensure all equipment (including those used for transportation) are compatible with the waste.
- Complete weekly visual inspections of all systems and equipment used to convey, transfer, accumulate, or treat dangerous waste. Consider annual integrity assessments for any tank system treating dangerous wastes.
    - Keep records of all inspections for at least five years.
    - Note any problems and corrective actions taken.
- Meet security requirements[11] so workers and the public are alerted to risks and have limited access to equipment.
- Properly designate any solid wastes generated in and escaping (leaking) from the treatment process, including filter solids, tank sediment, and contaminated personal protective equipment.

Submit necessary plans and reports

You must notify Ecology[12] that you treat dangerous waste on site under the permit by rule. You must also submit a Dangerous Waste Report[13] annually to verify that you're still operating under a permit by rule.

The volume of dangerous wastewater treated on site doesn't need to be reported, but any dangerous wastes generated from the treatment process (e.g., filter solids) must be reported.[14]

You must maintain these additional documents at your facility and make them available for Ecology review:

- A general waste analysis plan[15] that includes each treated dangerous waste stream, prior to mixing or dilution.
- A written preventative maintenance program that includes equipment used to transfer or accumulate dangerous waste, such as concrete trenches and sumps, and any pipes, pumps, valves, gauges and tanks.

Plan for emergencies

Write a contingency plan,[16] establish emergency procedures[17] and train employees on these procedures. Be sure to identify:

- Response procedures. Know how to handle a sudden equipment failure, fire, spill, or other unforeseen problem.

[11] http://apps.leg.wa.gov/wac/default.aspx?cite=173-303-310
[12] https://ecology.wa.gov/DWNotification
[13] https://ecology.wa.gov/DWreport
[14] Small quantity generators of dangerous waste aren't required to report the volume of waste generated each year.
[15] http://apps.leg.wa.gov/wac/default.aspx?cite=173-303-300
[16] https://apps.ecology.wa.gov/publications/SummaryPages/2004029.html
[17] Refer to WAC 173-303-350 through 173-303-360: http://apps.leg.wa.gov/wac/default.aspx?cite=173-303-350 through http://apps.leg.wa.gov/wac/default.aspx?cite=173-303-360

Figure 1: If you discover a release, such as a leak, immediately stop or control it, clean it up, and report the problem.

Figure 2: Facility improperly treating wastewater in 55-gallon containers.
This treatment isn't legal.

Figure 3: You may treat dangerous wastewater in a totally enclosed treatment unit.

- Response equipment and the schedule you'll use to check that equipment.
- Responsible personnel. Make sure they're familiar with potential hazards and know how to use response equipment.

Finally, if you discover a release to the environment or impact to human health, stop or control it, clean it up, or otherwise address the risk.[18] Immediately report the problem[19] and keep a record[20] of all emergency activities.

Permit by rule example cases

Example 1

A furniture shop strips old paint and varnish off of doors, cabinets, and other wood products. They pump corrosive and metal-bearing dangerous wastewater into 55-gallon containers for batch treatment. They discharge the non-dangerous wastewater under a local pretreatment permit.

Even though the facility has a pretreatment permit, it **doesn't** qualify for a permit by rule because the waste isn't managed in one of the following treatment units:

- **Totally enclosed treatment facility**: The facility's portable 55-gallon containers aren't completely enclosed. They use flexible hoses and buckets to add waste to the system and flexible hoses to discharge the treated waste. Spills and accidental discharges could easily occur with this sort of open set up.
- **Elementary neutralization unit**: An elementary neutralization unit only treats corrosive wastes. This facility's system is treating metal-bearing waste as well.
- **Wastewater treatment unit**: Treatment in a wastewater treatment unit must be done in a stationary tank. This facility's system involves portable containers.

KEY: A permit by rule **only** applies if you treat dangerous wastewater in a hard-piped totally enclosed treatment unit, an elementary neutralization unit, or a wastewater treatment unit. If you use earthen lagoons, surface impoundments, or other miscellaneous units to treat wastewater, the permit by rule doesn't apply.

Example 2

A facility washes the interior of tanker trucks. Each tanker may contain a different type of product. When the tanker is washed it generates a unique waste stream. The facility designated each of these waste streams and each waste stream is addressed in the wastewater discharge permit they have with the local sewer utility.

[18] http://apps.leg.wa.gov/wac/default.aspx?cite=173-303-145
[19] https://ecology.wa.gov/Report-a-spill
[20] http://apps.leg.wa.gov/wac/default.aspx?cite=173-303-380

Wastewater is treated on site through a series of tanks and is occasionally batch discharged to the sewer utility. They test each batch of treated waste before discharge and comply with their permit. They've also implemented routine cleaning and inspection practices, and employees are trained to manage wastes properly from the moment they're generated through the treatment process. They're also trained to respond appropriately to spills and other accidental releases.

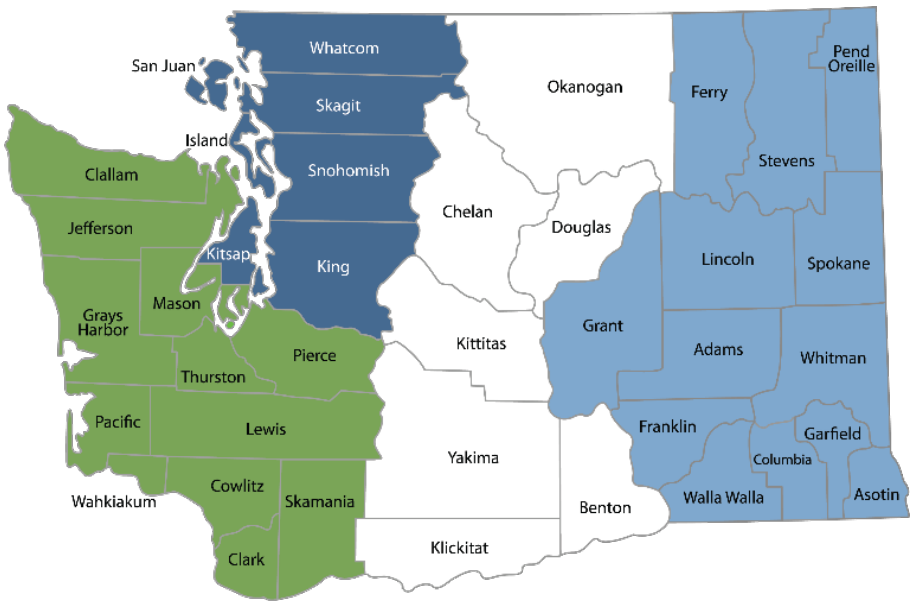
This facility **does** qualify for permit by rule. They treat the waste in a wastewater treatment unit, have a discharge permit from the local sewer utility, and comply with their permit. They've also implemented measures to prevent and respond to problems.

KEY: The permit by rule requires you to designate all wastes before they are mixed or diluted by other wastes and develop and follow contingency plans.[21]

For more information

Contact a dangerous waste specialist near you if you have questions about permit by rule or other dangerous waste management practices.

Department of Ecology Regional Offices



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[21] You must designate all wastes before they are mixed as part of the designation regulations (WAC 173-303-070(3)(a)).