

Overview of the 2015 Definition of Solid Waste Final Rule

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Briefing Overview

- Overview of the 2015 Definition of Solid Waste (DSW) Final Rule (January 13, 2015; 80 FR 1694)
- Discussion of Major Provisions
 - Retaining generator-controlled exclusions with strengthened requirements.
 - Replacing transfer-based exclusion with verified recycler exclusion.
 - Codifying definition of legitimate recycling with built-in recognition for in-process recycling and commodity-grade materials.
 - Finalizing remanufacturing exclusion for certain higher-value spent solvents.
 - Strengthening existing variance and non-waste determination provisions.
- State Authorization
- Next Steps

Overview of the 2015 DSW Final Rule

The 2015 DSW final rule encourages recycling by:

1. **Retaining the 2008 generator-controlled exclusion** for hazardous secondary material recycled under the control of the generator (on-site, same company and toll manufacturing recycling).
2. **Replacing the 2008 transfer-based exclusion with a new verified recycler exclusion** where off-site transfers for recycling must go to RCRA permitted recyclers or recyclers that have obtained a variance from the state or EPA.
3. **Codifying new flexible approaches in the legitimacy definition** for in-process recycling and commodity-grade recycled materials.
4. **Finalizing a new remanufacturing exclusion** for higher-value hazardous solvents which are remanufactured into commercial-grade products.

The 2015 DSW final rule increases environmental safeguards by:

1. **Codifying a new regulatory definition of the 2008 “contained” standard** in order to prevent mismanagement of hazardous secondary materials during storage.
2. **Replacing the 2008 exclusion for hazardous secondary materials transferred off-site** with the verified recycler exclusion, increasing oversight by the state or EPA and thus preventing unpermitted facilities from receiving hazardous secondary material, unless they have obtained a variance from the state or EPA.
3. **Codifying the sham recycling prohibition**, requiring all four legitimacy factors be met, and requiring legitimacy documentation when the recycled product has elevated levels of hazardous constituents.
4. **Strengthening provisions related to variances and non-waste determinations**, which are granted to facilities on a case-specific basis.

Changes From 2011 DSW Proposal In Response To Public Comments

- Added the verified recycler exclusion instead of the proposed alternate hazardous waste standards.
- The final rule does not add notification to the pre-2008 recycling exclusions and instead recommends further study.
- The final rule does not revise the pre-2008 recycling exclusions to include an explicit legitimacy requirement. Instead, the 2015 final rule codifies the long-standing policy of prohibiting sham recycling.
- The definition of legitimate recycling is significantly revised to add built-in recognition of legitimacy of in-process recycling (e.g., closed loop recycling and mining and mineral processing) and widely-recognized commodities (e.g., scrap metal).
- Documentation requirements for legitimacy have been reduced. Documentation is only required for the generator-controlled exclusion and in cases where the recycled products have elevated levels of hazardous constituents when compared to products made from raw materials (in lieu of proposed petition process).
- Added emergency preparedness and response requirements for generators under the generator-controlled and verified-recycler exclusion.

Economic Impacts of 2015 DSW Final Rule

- The 2015 DSW rule is estimated to **reduce compliance costs** compared to Subtitle C hazardous waste regulation and compared to the 2008 DSW final rule.
- Entities potentially affected by the 2015 DSW final rule include over 5,000 industrial facilities in 634 industries (at the 6-digit North American Industry Classification System (NAICS) code level) that generate or recycle hazardous secondary materials.

Final DSW Environmental Justice Analysis

- EPA's environmental justice analysis of the DSW rule identified significant regulatory gaps in the 2008 rule, which could negatively impact communities adjacent facilities recycling under the rule, including disproportionately impacting minority and low-income populations.
- In particular, EPA identified mismanagement by third-party hazardous materials recyclers as posing a risk of fires, explosions, accidents and releases of hazardous constituents to the environment. This is because the economics of commercial recycling contain market disincentives that encourage over-accumulation and mismanagement of hazardous secondary material.
- The 2015 DSW rule addresses these market disincentives in a way that helps encourage safe and legitimate recycling while addressing the need to protect communities. The DSW revisions provides communities a strong protection against the potential for mismanagement of hazardous materials intended for recycling and opportunities for public participation in environmental decision-making at DSW recycling facilities, while allowing legitimate recycling activities to continue.
- The draft DSW Environmental Justice Analysis underwent both peer review and public comment. The final analysis addresses these comments and can be found on the DSW rulemaking website and in the docket for the final rule.

Generator-controlled Exclusion

§ 261.4(a)(23)

- The 2015 DSW final rule is expected to increase recycling by retaining the 2008 generator-controlled exclusion for hazardous secondary materials reclaimed by the generator:
 - On-site
 - Within the same company
 - Within certain tolling agreements
- By maintaining control over, and potential liability for, the reclamation process, and meeting the conditions of the exclusion, the generator ensures that the hazardous secondary materials are legitimately recycled.
- The final rule includes several changes to strengthen and ensure protectiveness of the generator-controlled exclusion. Most notable is a codification of a performance-based “contained” standard for hazardous secondary materials.

New Codified Definition of “Contained” (40 CFR 260.10)

- One major issue with the 2008 DSW final rule raised by states and environmental groups was the lack of a codified “contained” standard, which could result in mismanagement during storage.
- The final 2015 DSW rule defines contained to mean a unit (including a land-based unit such as a pile) that meets the following criteria:
 - The unit is in **good condition**, with no leaks or other continuing or intermittent unpermitted releases of the hazardous secondary materials to the environment, and is designed, as appropriate for the hazardous secondary materials, to prevent releases of hazardous secondary materials to the environment. Unpermitted releases are releases that are not covered by a permit (such as a permit to discharge to water or air) and may include, but are not limited to, releases through surface transport by precipitation runoff, releases to soil and groundwater, wind-blown dust, fugitive air emissions, and catastrophic unit failures;

New Codified Contained Definition (40 CFR 260.10) continued

- The unit is **properly labeled** or otherwise has a system (such as a log) to immediately identify the hazardous secondary materials in the unit; and
 - The unit holds hazardous secondary materials that are **compatible with other hazardous secondary materials placed in the unit** and is **compatible with the materials used to construct the unit** and addresses any potential risks of fires or explosions.
- Hazardous secondary materials in units that meet the hazardous waste tank and container standards are presumptively contained.

Other revisions to the Generator-Controlled Exclusion

- Adds **recordkeeping for same-company and toll manufacturing** reclamation
- Makes **notification a condition** of the exclusion,
- Adds a requirement to **document legitimate recycling**
- Adds **emergency preparedness and response** conditions, and
- **Amends the speculative accumulation** provision to add a **recordkeeping** requirement. This requirement applies to all persons subject to speculative accumulation.

Replacing Transfer-Based Exclusion with the Verified Recycler Exclusion § 261.4(a)(24)

Why replace the transfer-based exclusion?

- Hazardous waste presents the **same physical and chemical risks** when sent to recycling as when sent to disposal.
- For third-party recyclers, **perverse economic incentives** (avoided disposal fees and the need to maximize the amount of hazardous material accepted for recycling) can result in over-accumulation, mismanagement, sham recycling, and abandonment of hazardous waste.
- In a study of **environmental problems** resulting from hazardous secondary materials recycling, EPA identified 250 recycling damages cases that have occurred since 1982.
 - 90% of the damage cases involved facilities receiving waste for off-site recycling. Only 20% of the facilities were identified as having a RCRA permit.

Why replace the transfer-based exclusion? (continued)

- As a result of the Environmental Justice (EJ) analysis conducted as part of this rule, EPA concluded that there were **disproportional adverse impacts** to minority and low-income populations, particularly from the transfer-based exclusion.
- These communities bear a **disproportionate risk burden** from sham recycling and mismanagement of hazardous secondary materials. EPA's EJ analysis of the 2008 DSW rule identified **significant regulatory gaps**, which could result in significant risk to human health and the environment from hazardous waste recycling activities, including disproportionate risk to minority and low-income populations.
- In particular, EPA identified **mismanagement by third-party hazardous materials recyclers** as posing a risk of fires, explosions, accidents and releases of hazardous constituents to the environment.

The 2015 DSW final rule **replaces the transfer-based exclusion** with the verified recycler exclusion (40 CFR 261.4(a)(24)).

- This approach ensures that **hazardous secondary material transferred** to a third party for recycling will **go to “verified” recyclers**, that either have a RCRA permit or have obtained a variance from the state or EPA, thus decreasing the potential for adverse impacts to human health and the environment and allowing opportunities for public participation.
 - This upfront requirement to be “verified” allows EPA and the states to verify that a facility has established rigorous safety measures to manage the material.
 - Under the variance process, EPA and the states will also be able to review and approve the facilities’ financial assurance plans before operations begin to ensure that they are financially stable and that there will be funds available should the unexpected happen.
 - Exports no longer allowed under the verified recycler exclusion.

Conditions for Generators Using the Verified Recycler Exclusion

- Subject to the **speculative accumulation provision**, including new recordkeeping.
- Must **notify** using EPA Form 8700-12.
- Hazardous Secondary Materials (HSM) must be **contained**.
- Must follow certain **emergency preparedness and response** requirements.
- Must send their HSM to a **verified reclamation facility** (RCRA permitted or obtained a DSW variance) in the U.S.
- Must maintain **records** documenting off-site shipments and confirmation of receipts for 3 years.

Criteria to Become a Verified Recycler

For **reclaimers without a RCRA permit**, in order to obtain a variance and become verified, the third-party reclaimer must:

- (1) Demonstrate their recycling is **legitimate**,
- (2) Have **financial assurance** in place to properly manage the hazardous secondary material,
- (3) **Not** have had any **formal enforcement actions** for RCRA violations in the previous 3 years and not be classified as a significant non-complier with RCRA Subtitle C, or must provide credible evidence that the facility will manage the hazardous secondary materials properly,

Criteria to Become a Verified Recycler (continued)

- (4) Must have the **proper equipment, trained personnel**, and meet **emergency preparedness** and response requirements to safely reclaim the material,
- (5) Must **manage the residuals** from reclamation properly, and
- (6) Must **address risk to nearby communities** from potential releases of the hazardous secondary material and in consideration of existing environmental stressors.

Legitimate Recycling Provision § 260.43

Key Environmental Issue: Sham recycling

Sham recycling (recycling that is not legitimate) is disposal of hazardous waste in the guise of recycling. Determining whether hazardous waste recycling is legitimate or sham depends on case-specific circumstances.

Legitimate: Lead-contaminated foundry sands reused in foundry molds

In 2001, EPA issued a memo clarifying that the reuse of foundry sands for mold making in a facility's sand loop following normal industry practices is legitimate reuse.

Sham: Lead-contaminated foundry sands reused as playground sand

During 1997-1998, 375 tons of lead-contaminated foundry sand (with concentrations above the Toxicity Characteristic) were bagged and sold as play sand to 40 different retailers throughout Georgia, Virginia, North Carolina and South Carolina.



- Legitimate recycling has been an implicit requirement of the hazardous waste program since 1985, as discussed in preamble and policy memos.
- In the 2008 DSW final rule, EPA codified the definition of legitimate recycling, which included four legitimacy factors.
- In the 2008 legitimacy definition, the first two factors must be met, while the last two must be considered. If factors 3 and 4 are not met, the facility must be prepared to demonstrate why the recycling is legitimate.
- The 2008 regulatory definition only applied to the 2008 DSW exclusions, but EPA said in the preamble that the codified definition is equivalent to current policy for all recycling.

- Two major problems with the 2008 legitimacy definition:
 - (1) Despite the preamble language stating that the new definition was equivalent to current policy for all recycling, having two standards is confusing and difficult to enforce.
 - (2) Stating that two factors “must be met” and two factors “must be considered” has been interpreted by the regulated community to mean that that the second two factors are optional and can be ignored, which is incorrect.
- Having a clear, enforceable definition of legitimate recycling in the regulations can help prevent or mitigate damage cases from sham recycling. (*see next slide*)

Sham Recycling Example – “Ugly Paint”

Hazardous spent solvent contaminated with ink from screen printing process designated by generator as “ugly paint” or “used thinner” (depending on solids content).



The facility had no records of anyone taking the free ugly paint or used thinner. Feed material for these “products” are stored outside in containers covered with corrugated plastic.



According to the owner, he was using the ugly paint on a concrete slab for an advertisement that would be visible by airplanes. The “advertisement” was never completed. (see picture, right)



“Advertisement” painted with “ugly paint”

The 2015 DSW final rule addresses the problems with the 2008 DSW legitimacy regulation by:

1. **Explicitly prohibiting sham recycling** (i.e., recycling that is not legitimate) in the regulations (40 CFR 261.2(g)).
 - This will make the legitimate recycling regulations more transparent and enforceable and will reduce the risk of environmental damage from sham recycling operations.
 - Companies that are complying with current recycling exclusions (e.g., scrap metal recycling) are not required to take any action.
2. **Requiring that all four legitimacy factors must be met**, and also **adding flexibilities** into the third and fourth factors to ensure current good recycling practices continue unimpeded.

Legitimate Recycling Regulatory Language

The 2015 Legitimacy Standard includes 4 codified factors (40 CFR 260.43):

1. Hazardous secondary material must provide a **useful contribution** to the recycling process or to a product or intermediate.
2. Recycling must produce a **valuable product** or intermediate.
3. Hazardous secondary material must be **managed as valuable commodities**.
4. The product of recycling must be **comparable to a legitimate product** or intermediate.

New legitimacy standard includes built-in recognition of certain recycling practices

- **Alternative management methods** (e.g., supersacks instead of barrels) can be used to ensure a hazardous secondary material is handled as a valuable commodity, when appropriate for the materials **(factor 3)**.
- **Commodity standards** can be used to determine that the product of a recycling process is comparable, where appropriate (**e.g., scrap metal recycling**) **(factor 4)**.
- **In-process recycling** (e.g., closed-loop recycling), where the hazardous secondary material is returned to the industrial process from which it originated, does not require any **further demonstration of comparability (factor 4)**.
- **When the product of the hazardous secondary material has higher levels of hazardous constituents** than the product made from raw materials, but recycling is legitimate, the new standard **allows documentation (including certification) to be kept onsite to demonstrate legitimacy**, with notification to the regulatory agency **(factor 4)**.

Remanufacturing Exclusion § 261.4(a)(27)

The **remanufacturing exclusion** encourages the recycling of 18 higher-value hazardous spent solvents used for reacting, extracting, blending, or purifying chemicals in the pharmaceutical, organic chemical, plastics and resins, and the paint and coatings sectors (40 CFR 261.4(a)(27)).

- EPA’s Green Engineering Program identified remanufacturing of these solvents as an **opportunity to obtain large environmental benefits**.
- The production and the disposal of solvents covered by this exclusion currently requires large amounts of energy and the solvents are used in very high volumes.
 - For example, pharmaceutical manufacturers use at least 100 kg of solvents to make 1 kg of active pharmaceutical ingredient.
 - Because of their origin, these solvents are only lightly contaminated and need minimal processing to be returned to a commercial-grade product.
- Greenhouse gas reductions and energy and resource savings result from maximizing the number of uses of a high-purity grade chemical product as an aid to chemical manufacturing and processing.

Conditions for the Remanufacturing Exclusion

1. Both the generator and remanufacturer must **notify** using EPA form 8700-12.
2. The generator and remanufacturer must jointly develop and maintain a **remanufacturing plan**.
3. Both generators and remanufacturers must maintain **record of shipments and confirmation of receipts** for 3 years.
4. The spent solvents must be managed in **RCRA equivalent tanks and containers**, including meeting applicable air emission standards.
5. Spent solvents managed under this exclusion are subject to the **prohibition on speculative accumulation**.

Revisions to the DSW Variances and Non-Waste Determinations § 260.30-34

Revisions to the Existing Variances and Non-Waste Determinations

- Revisions include:
 1. requiring facilities to **send a notice** to the Administrator (or State Director, if the state is authorized) and potentially re-apply for a variance **in the event of a change** in circumstances that affects how a hazardous secondary material meets the criteria upon which a solid waste variance has been based;
 2. establishing a **fixed term** not to exceed ten years for variance and non-waste determinations, at the end of which facilities must re-apply for a variance or non-waste determination;

Revisions to the Existing Variances and Non-Waste Determinations (continued)

3. requiring facilities to **re-notify every two years** with updated information;
4. revising the criteria for the **partial reclamation** variance to clarify when the variance applies and to require, among other things, that **all the criteria** for this variance **must be met**; and
5. for the non-waste determinations in 40 CFR 260.34, requiring that petitioners **demonstrate why the existing solid waste exclusions would not apply** to their hazardous secondary materials.

State Authorization

State Authorization

- Because the 2015 DSW rule is more stringent than the 2008 DSW rule, states that adopted the 2008 DSW rule (Idaho, Illinois, New Jersey, and Pennsylvania) will be required to modify their programs to be at least as stringent as the federal program.
- Other states will be required to adopt at minimum those provisions in the 2015 DSW rule that are more stringent than the current hazardous waste program: (1) prohibition of sham recycling and the definition of legitimate recycling (including contained definition), (2) accumulation date tracking requirement for speculative accumulation provisions, and (3) changes to the standards and criteria for the solid waste variance and non-waste determinations.
- In general, the exclusions in the final rule do not go into effect unless and until the authorized state adopts them.

Next Steps

Next Steps

- The final rule was signed December 10, 2014, and published in the Federal Register on January 13, 2015 (80 FR 1694).
- The final rule will be effective July 13, 2015.
- EPA will be working with states to help facilitate state adoption of the new rule and to encourage legitimate recycling of hazardous secondary materials.

For More Information

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