

Hazardous Secondary Material (HSM) Recycling Checklist

**United State Environmental Protection Agency
Office of Resource Conservation and Recovery
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Hazardous Secondary Material Checklist Introduction

This document is a series of checklists that is designed to assist EPA and state implementing agencies with monitoring compliance at facilities that are generating and recycling hazardous secondary materials under the Resource Conservation and Recovery Act hazardous waste regulations. This document describes and summarizes statutory provisions, regulatory requirements, and policies. It is not a substitute for these provisions, regulations, or policies, nor is it a regulation itself.

What is Hazardous Secondary Material?

- Hazardous Secondary Material (HSM) is defined in [40 CFR 260.10](#) as “a secondary material (e.g., spent material, by-product, or sludge) that, when discarded, would be identified as hazardous waste.”
- “HSM” is often used as shorthand for a recyclable material that is excluded from hazardous waste regulation.
- However, it is important to note that **the term hazardous secondary material can also refer to a material that is hazardous waste, even when recycled**, as sometimes recycling is considered discard under the definition of solid waste in [40 CFR 261.2](#).
- In summary, HSM is the “material” that is evaluated in the 40 CFR 261.2 definition of solid waste to determine how it is regulated.

What Activities Does This Checklist Apply To?

- This checklist can be used to evaluate any RCRA-related hazardous secondary material recycling activity.
- This includes:
 - HSM that is not regulated as solid waste due to a recycling exclusion but must meet the conditions of that exclusion (e.g., material recycled under the transfer-based exclusion at [40 CFR 261.4\(a\)\(24\) and \(25\)](#)).
 - HSM that is a solid waste but is subject to different standards due to a recycling exemption or alternative recycling standards (e.g., material used in a manner constituting disposal per [40 CFR part 266 subpart C](#)).

- HSM that is regulated as a hazardous waste, for which the recycling process itself is exempt from a hazardous waste permit (e.g., material subject to [40 CFR 261.6\(c\) and \(d\)](#) recyclable material standards).
- For all three categories, the recycling must be legitimate, as explained in this checklist.

Hazardous Secondary Material (HSM) Recycling Checklist

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Hazardous Secondary Material (HSM) Recycling Checklist

Note: For any question where the answer is unknown, make a note in the checklist below, list the information needed to answer that question in the attached form, and then continue to the next question.

1. Description of the HSM, including what waste code(s) would apply if it is discarded.

2. Description of the recycling process, including how the HSM is managed during storage prior to recycling.

3. Accumulation start date:	4. If accumulation start date is > 1 year ago	
	a. The quantity of HSM stored onsite on January 1 of the <u>previous</u> calendar year.	b. The quantity of HSM stored onsite on January 1 of the <u>current</u> calendar year.

5. Description of the recycled product(s) and where they are sold and/or used by the generator. (Note: If the HSM is used directly without processing, the HSM would be considered the product in this analysis.) Authority to request information to document that a material is not a solid waste is found in 40 CFR 261.2(f). See also Appendix K.

6. Based on the above information, does the recycling meet the definition of legitimate recycling in 40 CFR 260.43? (See Appendix A) YES/NO

If NO, then the HSM is a solid and hazardous waste per 40 CFR 261.2(g). Because the recycling is not legitimate, processing of the hazardous waste is not considered an exempt recycling process under 40 CFR 261.6(c) and (d) and requires a RCRA treatment permit.

If YES, continue to 7.

7. Based on the above information, is the HSM subject to speculative accumulation limits, and is it being speculatively accumulated as defined in 40 CFR 261.1(c)(8)? (See Appendix B) YES/NO

If YES, then the HSM is a solid and hazardous waste per 40 CFR 261.2(c)(4). If NO, continue to 8.

8. Regulatory citation given for the specific HSM recycling solid waste exclusion, variance or non-waste determination being used (See Appendix C):

If NOT APPLICABLE, skip to #10

9. Does the HSM recycling comply with all the conditions of the exclusion? (See Appendix C) YES/NO

If YES, then the HSM is not regulated as a hazardous waste per the specific exclusion.

If NO, then the HSM is regulated as a hazardous waste.

10. Does recycling involve use constituting disposal? (See Appendix D) YES/NO

If YES, then the HSM is a solid and hazardous waste per 40 CFR 261.2(c)(1) and regulated under 40 CFR part 266 Subpart C.

If NO, continue to 11.

11. Does recycling involve burning for energy recovery? (See Appendix E) YES/NO

If YES, then the HSM is a solid and hazardous waste per 40 CFR 261.2(c)(2) and may be regulated under 40 CFR part 266 Subpart H.

If NO, continue to 12.

12. Is the HSM an inherently waste-like material? (See Appendix F) YES/NO

If YES, then the HSM is a solid and hazardous waste per 40 CFR 261.2(d).

If NO, continue to 13.

13. Is the HSM used directly as an ingredient in an industrial process or as an effective substitute for a commercial product (i.e., use/reuse)? (See Appendix G) YES/NO

If YES, then the HSM is not a solid waste per 40 CFR 261.2(e).

If NO, continue to 14.

14. Is the HSM processed to reclaim a useful product, and is the HSM either a commercial chemical product, a characteristic byproduct, or a characteristic sludge? (See Appendix H) YES/NO

If YES, then the HSM is not a solid waste per 40 CFR 261.2(c)(3).

If NO, continue to 15.

15. Is the HSM processed to reclaim a useful product, and is the HSM either a spent material, a listed byproduct, or a listed sludge? (See Appendix H) YES/NO

If YES, then the HSM is a hazardous waste being reclaimed per 40 CFR 261.2(c)(3). Note, the reclamation process itself may be exempt from RCRA requirements per 40 CFR 261.6(c) and (d). (See Appendix J)

If NO, continue to 16.

16. Is the HSM scrap metal? (See Appendix I) YES/NO

If the HSM is an excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal), then it is not a solid waste when recycled per 40 CFR 261.4(a)(13).

If the HSM is any other type of scrap metal, then it is a solid waste, but exempt from regulation when recycled per 40 CFR 261.6(a)(3)(ii).

If NO, continue to 17.

17. The HSM is a regulated hazardous waste being legitimately recycled. The recycling process itself may be exempt from RCRA requirements per 40 CFR 261.6(c) and (d). (See Appendix J)

Note: At this point, all possible categories of HSM recycling should have been covered. If you have any questions, contact Tracy Atagi at atagi.tracy@epa.gov or MaryBeth Sheridan at sheridan.marybeth@epa.gov

Additional Notes and Information Needed to Answer Questions With “Unknown” Responses

Question Topic (Corresponds to the question number in main checklist above)	Notes
1. HSM description, including waste codes	
2. Recycling Process Description	
3. Accumulation start date	
4. Quantity stored on Jan 1 (current & previous year)	
5. Description of recycled products	
6. Legitimacy determination	
7. Speculative accumulation determination	
8. Regulatory citation for exemption	
9. Compliance with conditions	

10. Use constituting disposal?	
11. Burning for energy recovery?	
12. Inherently waste-like?	
13. Use/re-use?	
14. CCP, or characteristic by-product or sludge being reclaimed?	
15. Spent material, or listed by-product or sludge being reclaimed?	
16. Scrap metal?	

Appendix A: Legitimate Recycling

Appendix A – Legitimate Recycling

40 CFR 260.43

The regulatory language from the 2018 revisions to the definition of legitimate recycling follows. The legitimate recycling regulations apply to all hazardous secondary materials regulated under the recycling exclusions and exemptions of RCRA, including recycling exclusions from the definition of solid waste in [40 CFR 261.2](#) and exemptions from permitting for recyclable materials in [40 CFR 264.1\(g\)\(2\)](#). In addition, hazardous secondary materials that are sham recycled because the recycling is not legitimate are solid waste and are not exempt per [40 CFR 261.2\(g\)](#).

There are four factors to the legitimate recycling definition, as outlined in the regulations below.

§260.43 Legitimate recycling of hazardous secondary materials

(a) Recycling of hazardous secondary materials for the purpose of the exclusions or exemptions from the hazardous waste regulations must be legitimate. Hazardous secondary material that is not legitimately recycled is discarded material and is a solid waste. In determining if their recycling is legitimate, persons must address all the requirements of this paragraph and must consider the requirements of [paragraph \(b\)](#) of this section.

[Factor 1]

(1) Legitimate recycling must involve a hazardous secondary material that provides a useful contribution to the recycling process or to a product or intermediate of the recycling process. The hazardous secondary material provides a useful contribution if it:

- (i) Contributes valuable ingredients to a product or intermediate; or
- (ii) Replaces a catalyst or carrier in the recycling process; or
- (iii) Is the source of a valuable constituent recovered in the recycling process; or
- (iv) Is recovered or regenerated by the recycling process; or
- (v) Is used as an effective substitute for a commercial product.

[Factor 2]

(2) The recycling process must produce a valuable product or intermediate. The product or intermediate is valuable if it is:

(i) Sold to a third party; or

(ii) Used by the recycler or the generator as an effective substitute for a commercial product or as an ingredient or intermediate in an industrial process.

[Factor 3]

(3) The generator and the recycler must manage the hazardous secondary material as a valuable commodity when it is under their control. Where there is an analogous raw material, the hazardous secondary material must be managed, at a minimum, in a manner consistent with the management of the raw material or in an equally protective manner. Where there is no analogous raw material, the hazardous secondary material must be contained. Hazardous secondary materials that are released to the environment and are not recovered immediately are discarded.

(b) The following factor must be considered in making a determination as to the overall legitimacy of a specific recycling activity.

[Factor 4]

(1) The product of the recycling process does not:

(i) Contain significant concentrations of any hazardous constituents found in [Appendix VIII of part 261](#) that are not found in analogous products; or

(ii) Contain concentrations of any hazardous constituents found in [Appendix VIII of part 261](#) at levels that are significantly elevated from those found in analogous products; or

(iii) Exhibit a hazardous characteristic (as defined in [part 261 subpart C](#)) that analogous products do not exhibit.

(2) In making a determination that a hazardous secondary material is legitimately recycled, persons must evaluate all factors and consider legitimacy as a whole. If, after careful evaluation of these considerations, the factor in this paragraph is not met, then this fact may be an indication that the material is not legitimately recycled. However, the factor in this paragraph does not have to be met for the recycling to be considered legitimate. In evaluating the extent to which this factor is met and in determining whether a process that does not meet this factor is still legitimate, persons can consider exposure from toxics in the product, the bioavailability of the toxics in the product, and other relevant considerations.

40 CFR 261.2(g)

§261.2(g) Sham recycling. A hazardous secondary material found to be sham recycled is considered discarded and a solid waste. Sham recycling is recycling that is not legitimate recycling as defined in [§260.43](#).

Additional Resources

A memo released by former Office Director Sylvia Lowrance, commonly known as the “Lowrance Memo,” ([RO 11426](#), 4/26/1989) discusses six main questions that help draw the distinction between legitimate recycling and sham recycling or treatment and provides further examination of those questions with sub-questions. EPA used this memo, as well as various preambles, to develop the regulatory language for legitimate recycling (shown above).

Example of a legitimate recycling determination: foundry sands being reused on site in the primary production process on a continuous basis in the sand loop are not solid wastes ([RO 14534](#), 3/28/2001).

Example of a legitimate recycling determination: cathode ray tube (CRT) funnel glass legitimately used as an effective substitute in the production of ceramic tiles is excluded from the solid and hazardous waste regulations under 40 CFR 261.2(e) ("use/reuse exclusion") ([RO 14845](#); 9/10/2014).

Guidance on legitimate energy recovery/legitimate fuel determination ([RO 13680](#), 6/7/1994).

Guidance on legitimate recycling of commercial chemical product spill residues ([RO 13743](#), 5/1995).

Federal Register Preambles to Relevant EPA Rules: General Discussion

[73 FR 64667](#): Definition of Solid Waste final rule that first codified the definition of legitimate recycling. Complete discussion of legitimate recycling [[73 FR 64700–64710](#)] 10/30/2008

[80 FR 1694](#): Definition of Solid Waste final rule that includes a discussion of revisions to the definition of legitimate recycling [[80 FR 1719–1732](#)] 1/13/2015

[83 FR 24664](#): Definition of Solid Waste final rule that includes a discussion of the D.C. Circuit Court vacatur of July 7, 2017 as amended on March 6, 2018, including revisions to Factor 4 [[83 FR 24665–24666](#)] 5/30/2018

Federal Register Preambles to Relevant EPA Rules: Specific Topics

[73 FR 64701–64702](#): Discussion of Factor 1 (useful contribution): Explains how this factor must be met, i.e., what it means for the hazardous secondary material to provide a useful

contribution to the recycling process or to a product or intermediate of the recycling process. 10/30/2008

[73 FR 64702–64703](#): Discussion of Factor 2 (valuable product): Explains how this factor must be met, i.e., what it means for the recycling process to produce a valuable product or intermediate. Discusses both monetary value and intrinsic value. 10/30/2008

[73 FR 64703–64704](#) and [80 FR 1724–1725](#): Discussion of Factor 3 (managed as a valuable commodity): Explains how this factor must be met, i.e., what it means for the hazardous secondary material to be managed as a valuable commodity. 10/30/2008 and 01/13/2015

[73 FR 64704–64706](#) and [83 FR 24665–24666](#): Discussion of Factor 4 (analogous to a legitimate product): Explains how this factor must be taken into consideration in making an overall legitimacy determination. Discusses how to compare the product from a recycling process to a product made of virgin or raw materials, including determining if the recycled product contains significant concentrations of hazardous constituents and/or exhibits a hazardous characteristic that the analogous product does not. 10/30/2008 and 5/30/2018

[73 FR 64706–64707](#): Discussion of how to take economics into account in terms of legitimate recycling. Discusses the decision by EPA not to make a specific determinative legitimacy factor on the economics of recycling. Discusses how economics can be considered in reviewing the other factors and in making an overall legitimacy determination. 10/30/2008

[73 FR 64708–64710](#): Crosswalk of legitimate recycling regulatory language and concepts in the April 26, 1989, Lowrance Memo. Provides an analysis that describes how the legitimate recycling regulatory language compares to the previous primary guidance on legitimate recycling. 10/30/2008

[73 FR 64701](#): Demonstration and enforcement of legitimate recycling. Explains how a person claiming a recycling exclusion should be able to demonstrate that the recycling is legitimate per §261.2(f). 10/30/2008

[80 FR 1720–1722](#): Legitimate recycling factors apply to all recycling exemptions and exclusions. Explains how all recycling of hazardous secondary materials under RCRA must be legitimate, regardless of whether the hazardous secondary materials are excluded or exempted from Subtitle C regulation when recycled or they are recyclable hazardous wastes that remain subject to the hazardous waste regulations. EPA determined that the codified legitimacy factors are a simplification and clarification of well-understood, long-standing policy. 1/13/2015

Appendix B: Speculative Accumulation

Appendix B – Speculative Accumulation

[40 CFR 261.1\(c\)\(8\)](#)

- A material is “accumulated speculatively” if it is accumulated before being recycled.
- A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that—during the calendar year (commencing on January 1)—the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period.
- Materials must be placed in a storage unit with a label indicating the first date that the material began to be accumulated. If placing a label on the storage unit is not practicable, the accumulation period must be documented through an inventory log or other appropriate method.
- In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type (*e.g.*, slags from a single smelting process) that is recycled in the same way (*i.e.*, from which the same material is recovered or that is used in the same way).
- Materials accumulating in units that would be exempt from regulation under [40 CFR 261.4\(c\)](#) are not to be included in making the calculation.
- Materials that are already defined as solid wastes also are not to be included in making the calculation.
- Materials are no longer in this category once they are removed from accumulation for recycling, however.

Additional Guidance

A material is not accumulated speculatively if, by December 31, the owner/operator can show he has recycled 75% of the amount in storage on January 1. The 75% requirement applies to materials of the same class being recycled in the same way. ([RO 13528](#), 2/1/1992)

A person accumulating potentially exempt recyclable materials becomes a hazardous waste generator when the materials become solid and hazardous wastes at the end of the speculative accumulation period. The generator can then hold the waste for 90 additional days (or 180/270

for small quantity generators) in compliance with Section 262 without a permit. ([RO 14199](#), 4/6/1998)

Additional Resources

[48 FR 14472](#) - Amendments to Definition of Solid Waste (Proposed rule) [pp. 14489-14491] 4/4/1983

[50 FR 614](#) - Amendments to Definition of Solid Waste (Final rule) [pp. 634-637] 1/4/1985

Frequently Asked Questions

1. How do the speculative accumulation limits apply to different types of hazardous secondary materials?

The following hazardous secondary materials are solid waste and are regulated as hazardous waste when speculatively accumulated (40 CFR 261.2(c) Table 1):

- Spent materials
- By-products
- Sludges

The following hazardous secondary materials are not subject to speculative accumulation limits, but must still have a reasonable expectation of being legitimately reused or recycled to be considered exempt from hazardous waste regulation:

- Commercial chemical products (40 CFR 261.2(c) (Table 1))
- Excluded scrap metal (40 CFR 261.4(a)(13))
- Exempted scrap metal (40 CFR 261.6(a)(3)(iii))

Note: Unlike commercial chemical products and excluded scrap metal, non-excluded scrap metal is a solid waste when speculatively accumulated, per Table 1 in 40 CFR 261.2(c). However, per the scrap metal exclusion found at 40 CFR 261.6(a)(3)(iii), it would still be exempt from hazardous waste regulations if it is legitimately recycled.

2. How are hazardous secondary materials shown to not be speculatively accumulated?

Hazardous secondary materials are not speculatively accumulated if the person accumulating the hazardous secondary materials can show: (1) that the material is potentially recyclable and has a feasible means of being recycled; and (2) that during the calendar year the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period (40 CFR section 261.1(c)(8)).

3. In the speculative accumulation regulation, what does it mean for a person to “show that the material is potentially recyclable and has a feasible means of being recycled”?

In general, hazardous secondary material is “potentially recyclable and has a feasible means of being recycled” if there is a known market for legitimately recycling the material – that is, a person who is managing the material has identified a recycler who will accept and legitimately recycle the material, or the person can legitimately recycle the material themselves.

On the other hand, all hazardous secondary materials stored with an expectation of eventually being legitimately recycled but for which there is no known current recycling market (i.e., no feasible means of recycling) are considered wastes.

A person accumulating hazardous secondary materials would have the burden of proving that the material is potentially recyclable and there is a feasible means of recycling. This ordinarily will require identification of actual recyclers and recycling technology, location of the recycler, and relative costs associated with recycling. (See 50 FR 634; January 4, 1985).

In addition, EPA believes that materials for which generators could demonstrate that on-going developmental work will lead to recycling at a future date should be considered to be accumulated speculatively. EPA believes that materials that are not known to be recyclable (or not feasibly recyclable in the hands of a particular generator) are wastes immediately. (See 50 FR 635; January 4, 1985).

Additionally, EPA notes that in order to demonstrate that materials are not being speculatively accumulated, both parts of the provision must be met – that is, (1) the person accumulating the materials can show that the material is potentially recyclable and has a feasible means of being recycled and (2) that during the calendar year the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period.

4. How is the minimum requirement of 75 percent material recycled in one year calculated?

The minimum requirement of 75 percent material recycled applies to each material of the same type. It can be calculated either by weight or by volume and is based on the total inventory of that material accumulated for recycling as of January 1 of any given year. For example, a company with a total of 100 tons of material stockpiled for recycling on January 1 must recycle, or transfer for recycling, at least 75 tons of material before the end of the calendar year.

5. What about the remaining 25 percent?

Hazardous secondary materials that are not recycled during the calendar year count towards the total inventory for the purpose of speculative accumulation calculations for the following calendar year.

6. How does the January 1 date work? If a shipment is received on February 1, when does it need to be recycled by?

According to the speculative accumulation provision, a facility must recycle, or transfer to a different site for recycling, at least 75 percent of the weight or volume of the amount of material accumulated at the beginning of the period (commencing on January 1). Thus, a facility that has 0 tons on site on January 1 would not have to recycle any hazardous secondary material by the end of the calendar year (since 75 percent of 0 is 0). However, hazardous secondary materials that the company receives during the year count towards the total inventory for the purpose of speculative accumulation calculations for the following calendar year.

Appendix C: Recycling Exclusions and Exemptions

Appendix C – Recycling Exclusions and Exemptions

Citation(s)	Name(s)	Compliance Notes
<p>40 CFR 260.30; 260.31; 260.33, and 260.34</p>	<p>Solid waste variances and non-waste determinations</p>	<p>Variances and non-waste determinations can only be granted by EPA or the authorized state following the procedures in 40 CFR 260.33 and according to the standards and criteria in 40 CFR 260.31 or 40 CFR 260.34. See regulations for more details.</p> <p>Partial reclamation variances granted after July 13, 2015, must meet the more stringent federal criteria in 40 CFR 260.31(c) promulgated as part of the 2015 Definition of Solid Waste final rule (80 FR 1771, Jan. 13, 2015).</p> <p>Variances granted after July 13, 2015, must be renewed every ten years per 40 CFR 260.33(d).</p> <p>Facilities granted a variance or non-waste determination after July 13, 2015, must notify every two years following the procedures in 40 CFR 260.42 per 40 CFR 260.33(e).</p> <p>Facilities with variances granted prior to July 13, 2015, are grandfathered under the previous rules.</p> <p>States are not required to recognize variances and non-waste determinations granted by other states. (e.g., RO 14737)</p>
<p>40 CFR 261.2(c); Table 1 column 3</p>	<p>Reclamation</p>	<p>All hazardous secondary materials undergoing reclamation are solid wastes except: (1) characteristic sludges and by-products, and commercial chemical products (See Appendix H); (2) mining and mineral processing wastes meeting the exclusion at 40 CFR 261.4(a)(17) (see entry below); and (3) materials that meet the 2015 and 2018 DSW exclusions in 40 CFR 261.4(a)(23) (See Appendix L), in 40 CFR 261.4(a)(24) & (25) (See Appendix M), and 40 CFR 261.4(a)(27) (See Appendix N).</p>
<p>40 CFR 261.2(e)</p>	<p>Use/Reuse</p>	<p>See Appendix G.</p>
<p>40 CFR 261.4(a)(6)</p>	<p>Pulping liquors</p>	<p>Pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process are not solid waste, unless accumulated speculatively (See Appendix B).</p>
<p>40 CFR 261.4(a)(7)</p>	<p>Spent sulfuric acid</p>	<p>Spent sulfuric acid used to produce virgin sulfuric acid is not a solid waste provided it is not accumulated speculatively (See Appendix B).</p> <p>Spent sulfuric acid used to produce virgin sulfuric acid per 261.4(a)(7) is not a solid waste, regardless of how the facility subsequently utilizes the virgin sulfuric acid. Virgin sulfuric acid incorporated into a fertilizer is not waste-derived and is not regulated when applied to the land. (RO 14713) (RO 14348)</p>

		<p>A secondary material with high sulfur content burned in a sulfuric acid regeneration furnace is not eligible for the 261.4(a)(7) exclusion because the secondary material in question is not spent sulfuric acid. (RO 11856) (RO 14086)</p> <p>Spent pickle liquor (K062) that is reclaimed is not eligible for the 261.4(a)(7) exclusion because this activity does not involve the production of virgin sulfuric acid. (RO 11468)</p> <p>Section 261.4(a)(7) exclusion applies only to spent sulfuric acid used as a feedstock in an industrial furnace for the production of virgin sulfuric acid. Spent sulfuric acid recycled by another method, such as filtration, is not excluded under Section 261.4(a)(7). Used sulfuric acid produced by sulfonation, alkylation, and dehydration reactions may be regulated as a by-product or co-product. (RO 14570) (RO 12551) (RO 11351) (RO 11352)</p>
<p>40 CFR 261.4(a)(8)</p>	<p>Closed-loop recycling</p>	<p>Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process are not solid wastes provided:</p> <ul style="list-style-type: none"> (i) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance; (ii) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators); (iii) The secondary materials are never accumulated in such tanks for over twelve months without being reclaimed; and (iv) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal. <p>Only the portion of the secondary material that is returned to the production process to be used as a raw material is not exempted from the definition of a solid waste per Section 261.4(a)(8). Any remaining portion that is discarded is a solid waste. (RO 13239)</p>

		<p>Still bottoms and other residues formed during the reclamation process are a solid waste and count towards a facility's generator status when removed from the process. (RO 11285) (RO 12732) (RO 13017) (RO 13220)</p> <p>The closed-loop exemption does not apply to oil being returned to a refinery where it will be used as a fuel. (RO 11732)</p> <p>Secondary materials stored in open-top tanks may qualify for closed-loop recycling exclusion as long as the system meets requirements in Section 261.4(a)(8). Owners or operators of open-top tanks should ensure secondary materials are managed as valuable materials prior to reclamation in order for the tank to be considered a part of a closed-loop recycling system and excluded under §261.4(a)(8). (RO 13591)</p> <p>All secondary materials must be returned to the production process to qualify for the closed-loop recycling exclusion. A process which returns 80% of xylene and sends 20% of recovered xylene off as product does not qualify as closed-loop recycling. (RO 14089)</p>
40 CFR 261.4(a)(9)	Spent wood preserving solutions and wastewater	<p>Spent wood preserving solutions and wastewater that have been reclaimed and are reused to treat wood are not solid wastes, provided all conditions are met. See regulation for full description of conditions.</p> <p>Spent wood preserving solutions that are reclaimed are no longer solid wastes and so are not derived from listed wastes F032, F034, or F035 (SEE ALSO: 63 FR 28556; May 26, 1998). (RO 13516)</p>
40 CFR 261.4(a)(10)	Coke by-products	<p>Coke by-products (K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke by-products processes that exhibit the toxicity characteristic) are not solid waste when recycled to coke ovens or to the tar recovery process as a feedstock to produce coal tar, or mixed with coal tar prior to the tar's sale or refining.</p> <p>261.4(a)(10) exclusion for recycling coke by-products does not apply to coal gasifier units. (RO 14507)</p> <p>The use of open pits, or flat or low-walled concrete pads to store coke by-product residues is land disposal. Therefore, management of wastes in these units is not exempt under 261.4(a)(10). (RO 11705)</p>
40 CFR 261.4(a)(11)	Nonwastewater splash condenser dross residue from the treatment of electric arc furnace dust	<p>Nonwastewater splash condenser dross residue from the treatment of electric arc furnace dust (K061) in high temperature metals recovery unit is not a solid waste provided it is shipped in drums (if shipped) and not land disposed before recovery.</p>

<p>40 CFR 261.4(a)(12)</p>	<p>Oil-bearing hazardous secondary material</p>	<p>Oil-bearing hazardous secondary materials that are generated at a petroleum refinery and recovered oil are not solid wastes when inserted into the petroleum refining process. See regulation for full description of conditions.</p> <p>This exclusion applies to oil-bearing secondary materials generated by wastewater treatment system owned and operated by third party as long as third party accepts and manages only wastewaters generated at petroleum refinery facilities and returns the oil-bearing secondary materials to a petroleum refinery (SIC 2911) for insertion in the refining process. (RO 14444)</p> <p>From RO 14677:</p> <ul style="list-style-type: none"> • There is no minimum amount of oil required for the exclusion, but there must be recoverable amounts of hydrocarbons for legitimate recycling to occur. • This exclusion applies to oil-bearing hazardous secondary materials, irrespective of whether they are listed or characteristic. • Spent petroleum catalysts (K171-K172) may qualify for the exclusion. • The exclusion only extends to materials actually inserted into the refinery process. • The exclusion applies at the point of generation, even if preprocessing occurs, provided the conditions of the exclusion are met. • The point of insertion into the refining process must be consistent with the material being recycled, and the material must be suitable for insertion. • Materials may be inserted into the same refinery where they were generated or sent to another refinery. The materials cannot be sent to an intermediate non-refinery facility for processing. • There is no limit on the number of transfers of the materials if recycling is legitimate and no speculative accumulation occurs.
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		<ul style="list-style-type: none"> • Processing equipment handling the materials is generally exempt from the Resource Conservation and Recovery Act (RCRA), since the material is excluded, and the equipment is considered a process unit in 261.4(c). • The processing equipment may be subject to RCRA if it contains reclamation residuals and no longer meets the process unit exclusion. • The refinery does not need to own the equipment used to process and reclaim residuals to meet the exclusion.
<p>40 CFR 261.4(a)(13)</p> <p>40 CFR 261.6(a)(3)(ii)</p>	<p>Excluded scrap metal</p> <p>Exempt scrap metal</p>	<p>Excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled is not a solid waste.</p> <p>Exempt scrap metal (scrap metal that is not excluded under §261.4(a)(13)) is a solid waste, but is not subject to regulation under 40 CFR parts 262 through parts 268, 270 or 124, and is not subject to the notification requirements of section 3010 of RCRA when recycled.</p> <p>Scrap metal destined for reclamation is exempt from Subtitle C regulation at the point of generation. (RO 14277)</p> <p>Agglomerated drosses (from any source, not just scrap metal processing) can be classified as processed scrap metal and, if recycled, are excluded from the definition of solid waste. Agglomerated drosses are solid chunks of metal in a physical state that does not allow them to be easily crushed, split, or crumbled. Dross, which has not been agglomerated is by-product, not scrap metal. Agglomerated drosses used in a manner constituting disposal are excluded scrap metal being recycled and thus not solid waste. Drosses that have not been agglomerated are solid wastes when used in a manner constituting disposal. (RO 14195) (RO 14888)</p> <p>Unprocessed, spent printed circuit boards qualify for the scrap metal exclusion as generated. Residuals from the processing of spent circuit boards (e.g., shredded pieces, sweeps, ash, fluff, or baghouse dust) may not qualify as scrap metal, but instead may be spent materials, by-products, or sludges (See also 261.4(a)(14) exclusion for shredded circuit boards). (RO 11689)</p> <p>Lead shot may be considered scrap metal, not spent material, and exempt from regulation when recycled. The exemption extends only to the lead shot portion of the waste. (RO 14070)</p>

Lead foil from dental x-ray packages qualifies for the scrap metal exemption when it is recycled. ([RO 11742](#))

Properly drained, processed (crushed) used oil filters that are being recycled meet the processed scrap metal exclusion. ([RO 11643](#)) ([RO 14202](#)) ([RO 14183](#)) ([RO 14184](#))

Used batteries are spent materials, not scrap metal. Battery cases and lead plates with acid and lead removed are scrap metal. Mixtures of scrap metal (battery cases) and other regulated recyclable materials (lead oxides) must be managed as hazardous waste when sent for reclamation. ([RO 11100](#)) ([RO 11184](#)) ([RO 11383](#)) ([RO 13376](#))

Solder that becomes contaminated through use is a spent material when reclaimed, it is not scrap metal. ([RO 12929](#)) ([RO 13534](#)) Solder skimmings are by-products, not scrap metal. ([RO 11446](#)) ([RO 11572](#)) ([RO 11617](#))

Spent solder baths, or "pot dumps," meet the definition of scrap metal and are exempt when recycled. ([RO 11771](#)) Solder drippings that are generated during radiator repair operations qualify for the scrap metal exclusion when they are recycled. ([RO 11740](#))

Steel aerosol cans are scrap metal when they are recycled if they do not contain significant liquids. ([RO 11780](#)) ([RO 11806](#))

Natural gas regulators that contain mercury are spent materials. Any quantity of liquid mercury, other than trace amounts attached to a material, precludes a waste's designation as scrap metal. The waste may qualify as scrap metal once the mercury has been removed. ([RO 11860](#))

Used airbag modules installed in cars and remaining in the car when it is recycled as scrap metal are considered part of vehicle and exempt scrap metal when legitimately recycled. Deployment of airbag in vehicle does not need a RCRA treatment permit because scrap metal is not subject to regulation under parts 262 through parts 268, 270 or 124 of this chapter, and are not subject to the notification requirements of section 3010 of RCRA. Used airbag modules removed from vehicle that can safely undergo electronic deployment are exempt scrap metal when electronically deployed and legitimately recycled for metal value. ([RO 14920](#))

40 CFR 261.4(a)(14)	Shredded circuit boards	<p>Shredded circuit boards being recycled are not solid wastes provided that they are (1) stored in containers sufficient to prevent a release to the environment prior to recovery; and (2) free of mercury switches, mercury relays and nickel-cadmium batteries and lithium batteries.</p> <p>Shredded circuit boards must be free of mercury switches, mercury relays, nickel-cadmium batteries and lithium batteries to qualify for the exclusion from the definition of solid waste in Section 261.4(a)(14). Whole circuit boards containing minimal quantities of mercury and batteries that are protectively packaged to minimize dispersion of metal constituents would qualify for the scrap metal exemption in Section 261.6(a)(3). (RO 14155)</p> <p>The exclusion is limited to circuit boards free of these items to prevent environmental releases of mercury, cadmium, and lithium. "Free of" does not mean that the whole circuit boards never contained these items, but that these items are not part of the circuit boards when they are shredded (SEE ALSO: 62 FR 26013; May 12, 1997). If the items are removed from whole circuit boards prior to shredding, the boards remain covered by the exclusion. Shredded circuit boards that are not free of these items are solid wastes and may be hazardous wastes when recycled. (RO 14692)</p>
40 CFR 261.4(a)(15)	Kraft mill steam stripper condensates	Condensates derived from the overhead gases from kraft mill steam strippers that are used to comply with 40 CFR 63.446(e) are not solid wastes. The exemption applies only to combustion at the mill generating the condensates.
40 CFR 261.4(a)(17)	Mineral processing spent materials	Spent materials other than hazardous wastes listed in Subpart D of this part (i.e., F-, K-, P- and U-listed wastes) that are generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing or by beneficiation are not solid wastes, provided that all conditions are met. See regulation for full description of conditions.
40 CFR 261.4(a)(18)	Recovered oil from associated chemical manufacturing facility inserted into petroleum refinery process	Petrochemical recovered oil from an associated organic chemical manufacturing facility (SIC code 2869), where the oil is to be inserted into the petroleum refining process (SIC code 2911) along with normal petroleum refinery process streams is not a solid waste, provided all conditions are met. See regulation for full description of conditions.
40 CFR 261.4(a)(19)	Spent caustic solutions from petroleum refining	Spent caustic solutions from petroleum refining liquid treating processes used as a feedstock to produce cresylic or naphthenic acid are not solid waste unless the material is placed on the land, or accumulated speculatively (See Appendix B for more information on speculative accumulation and Appendix D for more information on use constituting disposal).

<p>40 CFR 261.4(a)(20) and (a)(21)</p>	<p>Zinc fertilizer exclusions</p>	<p>Hazardous secondary materials used to make zinc fertilizers, and zinc fertilizers made from hazardous wastes or excluded hazardous secondary materials, are not solid waste, provided that all conditions are met. See regulation for full description of conditions.</p> <p>Adding hazardous wastes to fertilizers as a way of disposing of them is illegal. Fertilizer products may be made with ingredients extracted from certain hazardous waste materials such as zinc "micro-nutrient" fertilizers. Fertilizers made from zinc-bearing waste are of the same purity and quality as fertilizers made from virgin sources of zinc. (RO 14652) (RO 14658) (RO 14671) (RO 14676)</p>
<p>40 CFR 261.4(a)(22); 261.39; 261.40, and 261.41</p>	<p>Cathode Ray Tube (CRT) and CRT glass</p>	<p>Used, intact CRTs are not solid wastes within the United States unless they are disposed, or unless they are speculatively accumulated by CRT collectors or glass processors (See Appendix B). CRT exporters who export used, intact CRTs for reuse must send a notification to EPA per 40 CFR 261.41. See regulation for full description of notification requirements.</p> <p>Used, intact CRTs are not solid wastes when exported for recycling provided that they meet the conditions of 40 CFR 261.40. See regulation for full description of conditions.</p> <p>Used, broken CRTs as defined in 40 CFR 260.10 of this chapter are not solid wastes provided that they meet the conditions of 40 CFR 261.39. See regulation for full description of conditions.</p> <p>Processed CRT glass from used CRTs that is destined for recycling at a CRT glass manufacturer or a lead smelter after processing is not a solid waste unless it is speculatively accumulated (See Appendix B).</p> <p>Processed CRT glass is glass that has been broken, separated, and sorted or otherwise managed after it has been removed from CRT monitors. The glass does not have to be cleaned. The coatings do not have to be removed. If it is sent to a CRT glass manufacturer or a lead smelter it is not subject to any export requirements, and it need not be packaged or labeled. If glass has been removed from used CRT monitors and has not been sorted, or otherwise managed, it would be considered used broken CRTs. (RO 14805) (RO 14757)</p> <p>The exclusion at §261.39(c) only applies to processed CRT glass sent for recycling to a CRT glass manufacturer or a lead smelter; the provision does not apply to a mechanical process used to recycle CRT glass into lead and silica sand. If the lead or silica from CRT glass were applied to or placed on the land or used in foundations or other land placement activities, EPA would consider it to be a recycled material</p>

		<p>used in a manner constituting disposal and subject to the regulations in Part 266, Subpart C, including the applicable land disposal restrictions (LDR). (RO 14839)</p> <p>CRT glass that has been treated in accordance with land disposal restrictions (LDRs) and that no longer exhibits hazardous characteristics may be disposed in a municipal or Subtitle D non-hazardous waste landfill, including use of treated CRT glass as alternative daily cover. (RO 14844)</p> <p>Processed CRT glass may be legitimately used/reused under 40 CFR 261.2(e) when used as a fluxing agent in a copper smelter (RO 14835) or as a substitute for lead oxide in the manufacturing of ceramic tiles. (RO 14845)</p> <p>See also Frequent Questions about the Regulation of Used Cathode Ray Tubes (CRTs) and CRT Glass.</p>
<p>40 CFR 261.4(a)(23), (24), (25), and (27)</p>	<p>Hazardous Secondary Material (HSM) reclamation exclusions</p>	<p>HSM that is (1) reclaimed under the control of the generator (40 CFR 261.4(a)(23)) (See Appendix L); (2) transferred to a third party for reclamation (40 CFR 261.4(a)(24)) (See Appendix M); (3) exported for reclamation (40 CFR 261.4(a)(25)) (See Appendix M); or (4) reclaimed under a remanufacturing agreement (40 CFR 261.4 (a)(27)) (See Appendix N) is not a solid waste, provided all conditions are met. See regulations for full description of conditions.</p> <p>From RO 14812, RO 14813, and RO 14818.</p> <ul style="list-style-type: none"> • Excluded HSM cannot be commingled with regulated hazardous waste and still maintain the exclusion from the definition of solid waste. • Excluded HSM may be mixed with hazardous waste, but the resulting mixture is a hazardous waste. • HSM may not be managed in stationary tanks at transfer facilities. Materials at transfer facilities may be consolidated from smaller to larger containers, but may not be managed in stationary tanks because such tanks are not portable and thus are not part of the 'normal course of transportation'. • A state that has not adopted the Definition of Solid Waste Rule may impose state requirements on HSM while the material is being transported through that state. • Facilities who collect HSM from other generators do not meet the definition of a hazardous secondary material generator. These facilities, however, could act as an intermediate facility for

		<p>hazardous secondary materials managed under the transfer-based exclusion if they meet the terms and conditions for an intermediate facility.</p> <p>Materials being processed in a halogen acid furnace (HAF) are not eligible for the “generator-controlled exclusion” in 40 CFR 261.4(a)(23) and instead are considered to be inherently waste-like materials per 40 CFR 261.2(d)(2). (RO 14900)</p> <p>Solvent-contaminated wipes that are centrifuged and subsequently reused or recycled may be eligible for the generator-controlled exclusion at 40 CFR 261.4(a)(23) if the generator meets the conditions of the exclusion, including a legitimate recycling determination. (RO 14912)</p>
<p>40 CFR 261.4(a)(26)</p> <p>40 CFR 261.4(b)(18)</p>	Solvent-contaminated wipes	<p>Reusable solvent-contaminated wipes sent to cleaning and reuse are not solid waste, and disposable wipes sent for disposal (except for disposable wipes that are hazardous due to trichloroethylene) are not hazardous waste, provided all conditions are met. See regulations for full description of conditions.</p> <p>See also Summary Chart of the 2013 Wipes Final Rule and Frequent Questions about Implementing the Regulations for Solvent-Contaminated Wipes.</p> <p>The RCRA solvent-contaminated wipes exclusions do not preclude RCRA generators from using other RCRA recycling provisions. Solvent-contaminated wipes that are centrifuged and subsequently reused or recycled may be eligible for the generator-controlled exclusion at 40 CFR 261.4(a)(23) if the generator meets the conditions of the exclusion, including a legitimate recycling determination. (RO 14912)</p>
40 CFR 261.4(b)(12)	Used chlorofluorocarbon (CFC) refrigerants	<p>Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle are not hazardous waste provided the refrigerant is reclaimed for further use.</p> <p>Filters from the CFC refrigerant reclamation process do not qualify for Section 261.4(b)(12) exclusion. (RO 13560)</p>
40 CFR 261.4(b)(14)	Used oil re-refining distillation bottoms	Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products are not hazardous wastes.
40 CFR 261.4(b)(18)	Solvent-contaminated wipes	See entry under 40 CFR 261.4(a)(26) above.
40 CFR 261.6(a)(3)(i)	Industrial ethyl alcohol	Industrial ethyl alcohol that is reclaimed is not subject to regulation under parts 262 through parts 268, 270 or 124, and is not subject to the notification requirements of section 3010 of RCRA except that exports

		and imports of such recyclable materials must comply with the requirements of 40 CFR part 262, Subpart H. See regulation for full description of export and import requirements for this waste.
40 CFR 261.6(a)(3)(ii)	Exempt scrap metal	See entry for 40 CFR 261.4(a)(13) above.
40 CFR 261.6(a)(3)(iii)	Oil-bearing hazardous waste processed into fuel at a refinery	Fuels produced from the refining of oil-bearing hazardous waste along with normal process streams at a petroleum refining facility are not subject to regulation under parts 262 through parts 268, 270 or 124, and are not subject to the notification requirements of section 3010 of RCRA if such wastes result from normal petroleum refining, production, and transportation practices.
40 CFR 261.6(a)(3)(iv)	Hazardous waste fuel and recovered oil meeting used oil specs	Hazardous waste fuel and oil recovered from hazardous waste that meet that meet used oil specifications are not subject to regulation under parts 262 through parts 268, 270 or 124, and are not subject to the notification requirements of section 3010 of RCRA provided all requirements of the exemption are met. See regulation for full description of requirements. Fuel produced (and oil reclaimed and used as fuel) from petroleum refining, production, and transportation by processes other than normal refining operations, is eligible for the 261.6(a)(3) exemptions. (RO 11574)
40 CFR 261.6(a)(4)	Used oil	Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic is not subject to the requirements of 40 CFR parts 260 through 268, but is regulated under 40 CFR part 279. Used oil that is recycled includes any used oil which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes, but is not limited to, oil which is re-refined, reclaimed, burned for energy recovery, or reprocessed. See 40 CFR 279 for full description of used oil requirements. See also Managing Used Oil: Answers to Frequent Questions for Businesses.
40 CFR 261.6(c) and (d)	Requirements for hazardous waste recycling facilities	See Appendix J.
40 CFR part 266 Subpart C (40 CFR 266.20–266.23)	Use Constituting Disposal	See Appendix D.
40 CFR part 266 Subpart F	Precious metals recycling	Persons who generate, transport, or store hazardous wastes that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, or any combination of these, are subject to alternative hazardous waste requirements of 40 CFR part 266 Subpart

		<p>F instead of 40 CFR parts 262 through 265, 267, 270, and 124, unless the wastes are speculatively accumulated (See Appendix B). See regulations for full description of requirements.</p> <p>The presence of economically significant amounts of precious metals, efficient recovery operations, no land disposal of wastes, and payment by the reclaimer to the waste generator are indicators of legitimate precious metal recovery. True precious metal recovery is characterized by net financial return to the generator (i.e., sufficient to cover all costs). Persons engaged in recovery operations bear the burden of proving legitimacy. (RO 14267)</p> <p>Precious metals reclaimed from hazardous waste and suitable for direct reuse or only need refining before reuse are products, not wastes (e.g., silver flake that is 98% pure refined to 99.99% pure). (RO 11117) (RO 11879)</p> <p>Generators accumulating recyclable materials for precious metal recovery are not required to store the materials in RCRA-regulated accumulation units (i.e., tanks, containers, and containment buildings). Precious metals being reclaimed must be counted towards generator monthly determination. (RO 14092)</p> <p>Primary exporters of recyclable materials that are used for precious metals recovery are subject to the hazardous waste export regulations. (RO 12755) (RO 11580)</p> <p>Recyclable materials such as precious metals that are subject to Part 266 are also subject to the 268.7 land disposal restrictions (LDR) notification, certification and demonstrations unless specifically exempted from Part 268 in Part 261 or Part 268. (RO 11482)</p> <p>Spent photographic fixer solution is a spent material, and subject to regulation as a precious metal when it is reclaimed. Silver-bearing sludge precipitated from spent fixer is not a solid waste when it is reclaimed, and therefore it is not subject to Part 266, Subpart F. The precipitation process is exempt recycling. (RO 11814) (RO 11744) (RO 11879)</p> <p>Furnaces legitimately recovering precious metals fall within the Part 266, Subpart F exemption, and are not subject to the Subpart O incinerator regulations and most BIF rules, except for one-time notification and certification, sampling, and analysis (see 40 CFR §266.100(f)). (RO 11804) (RO 13703)</p>
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<p>40 CFR part 266 Subpart G</p>	<p>Spent lead-acid batteries (SLABs)</p>	<p>Persons who generate, collect, transport, store, or regenerate spent lead-acid batteries for reclamation purposes may be exempt from certain hazardous waste management requirements. See table in 40 CFR 266.80(a) for full description of exemptions.</p> <p>Persons who store spent lead-acid batteries before reclaiming them in a manner other than regeneration are subject to applicable hazardous waste permitting requirements. See language in 40 CFR 266.80(b) for full description of requirements.</p> <p>Alternatively, spent lead-acid batteries may be managed under the “Universal Waste” rule in 40 CFR part 273.</p> <p>Generators that send spent lead-acid batteries offsite for reclamation do not have to: 1) count these batteries when making a hazardous waste generator category determination, 2) manifest them/use hazardous waste transporters (DOT requirements still apply), or 3) store them onsite per 262.16-17 (RO 13746) (RO 14147).</p> <p>Spent lead acid batteries are prohibited from export under RCRA unless the exporter has submitted a notice to EPA requesting approval to export, obtained written consent from the receiving country via EPA, complied with the appropriate export requirements in either 40 Code of Federal Regulations (CFR) Part 262 Subpart E or 40 CFR Part 262 Subpart H, and ensured that the shipments comply with the terms of the receiving country's written consent. (RO 14825)</p>
<p>40 CFR 266.100</p>	<p>Metals Recovery Exemptions from Boiler and Industrial Furnace ((BIF) requirements</p>	<p>40 CFR 266.100(d): Smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, but not including cement kilns, aggregate kilns, or halogen acid furnaces burning hazardous waste) that process hazardous waste solely for metal recovery are conditionally exempt from regulation, except for §§266.101 (management standards prior to burning) and 266.112 (regulation of residues), provided all conditions are met. See regulation for full description of conditions.</p> <p>40 CFR 266.100(g): Smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces) that process hazardous waste for recovery of economically significant amounts of the precious metals gold, silver, platinum, palladium, iridium, osmium, rhodium, or ruthenium, or any combination of these are conditionally exempt, except for §266.112 (regulation of residues), provided all conditions are met. See regulation for full description of conditions.</p>

		<p>40 CFR 266.100(h): Lead recovery furnaces that process hazardous waste for recovery of lead and that are subject to regulation under the Secondary Lead Smelting National Emission Standards for Hazardous Air Pollutants (NESHAP), are conditionally exempt from regulation under this Subpart, except for §266.101 (management standards prior to burning). See regulation for full description of conditions.</p> <p>Note: Industrial furnaces that do not meet the conditions of exemptions are regulated under 40 CFR part 266 Subpart H.</p>
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Appendix D: Use Constituting Disposal

Appendix D – Use Constituting Disposal (UCD)

[40 CFR 261.2\(c\)\(1\)](#) is the subparagraph in the definition of solid waste that applies to “use constituting disposal,” as explained below:

- Materials (including spent materials, sludges, by-products, commercial chemical products and scrap metal) are solid wastes if they are recycled—or accumulated, stored, or treated before recycling—by being used in a manner constituting disposal.
- Materials are used in a manner constituting disposal if they are:
 - (A) Applied to or placed on the land in a manner that constitutes disposal; or
 - (B) Used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which cases the product itself remains a solid waste).
- However, commercial chemical products listed in [40 CFR 261.33](#) are not solid wastes if they are applied to the land and that is their ordinary manner of use.

[40 CFR part 266 Subpart C](#) is the subpart that explains the hazardous waste requirements that apply to recyclable materials used in a manner constituting disposal, as summarized below:

- **Generators and transporters** of materials that are used in a manner that constitutes disposal are subject to the applicable hazardous waste generator and transporter requirements of 40 CFR parts 262 and 263, and the notification requirement under section 3010 of RCRA. ([40 CFR 266.21](#))
- **Owners or operators of facilities that store materials** that are to be used in a manner that constitutes disposal, but who are not the ultimate users of the materials, are regulated under all applicable hazardous waste permitting provisions of subparts A through L of parts 264, 265, and 267, and parts 270 and 124 of this chapter and the notification requirement under section 3010 of RCRA. ([40 CFR 266.22](#))
- **Owners or operators of facilities that use recyclable materials** in a manner that constitutes disposal are regulated under all applicable provisions of subparts A through N of parts 124, 264, 265, 268, and 270 of this chapter and the notification requirement under section 3010 of RCRA. ([40 CFR 266.23 \(a\)](#))
- These requirements do not apply to products which contain recyclable materials, and are used in or on the land, and meet the requirements of [40 CFR 266.20\(b\)](#), which says:

- **Products produced for the general public's use** that are used in a manner that constitutes disposal and that contain recyclable materials are not subject to regulation if:
 - The recyclable materials have undergone a chemical reaction in the course of producing the products so as to become inseparable by physical means; and
 - Such products meet the applicable land disposal treatment standards in 40 CFR part 268 subpart D (or applicable prohibition levels in 40 CFR 268.32 of this chapter or RCRA section 3004(d), where no treatment standards have been established) for each recyclable material (*i.e.*, hazardous waste) that they contain; and
 - The recycler complies with [40 CFR 268.7\(b\)\(6\)](#) (One-time certification and notification requirements under the land disposal restrictions requirements).
- **Anti-skid/deicing uses of slags**, which are generated from high temperature metals recovery (HTMR) processing of hazardous waste K061, K062, and F006, in a manner constituting disposal are not covered by the exemption in [40 CFR 266.20\(b\)](#) and **remain subject to regulation** per [40 CFR 266.20\(c\)](#).
- **Fertilizers** that contain recyclable materials are not subject to regulation (per [40 CFR 266.20\(d\)](#)) provided that:
 - They are zinc fertilizers excluded from the definition of solid waste according to [40 CFR 261.4\(a\)\(21\)](#); or
 - They meet the applicable treatment standards in [40 CFR part 268 Subpart D](#) for each hazardous waste that they contain.
- The use of waste or used oil or other material, which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for **dust suppression or road treatment is prohibited**. ([40 CFR 266.23\(b\)](#))

Additional Guidance on UCD

Hazardous secondary material used as an ingredient in a fertilizer or used to make an ingredient in a fertilizer is use constituting disposal, and is a solid waste and hazardous waste, except as described in [40 CFR 266.20\(d\)](#). ([RO 11112](#)) ([RO 11113](#)) ([RO 11124](#)) ([RO 11174](#)) ([RO 11179](#))

Acid used to produce a fertilizer is not a solid waste if it is purer in acid content and no more contaminated than virgin acid that is typically used. Excluded sulfuric acid incorporated into a fertilizer is not waste-derived and is not regulated when applied to the land. ([RO 11185](#)) ([RO 14348](#))

Hazardous secondary material reclaimed for both metal and fertilizer ingredients is subject to used in a manner constituting disposal rules. The solid waste determination for a recycled material is made at the point of generation and must account for the entire recycling process. ([RO 11276](#)) ([RO 11644](#)) ([RO 11645](#)) ([RO 13507](#))

Hazardous secondary material used as an ingredient in cement or aggregate that is placed on the land or is used in a product that is placed on the land is a solid and hazardous waste subject to Part 266, subpart C, and must meet land disposal restrictions treatment standards. For the purposes of 266.20(b), EPA may test clinker, rather than product (i.e., cement). If the owner/operator of a cement kiln documents that none of the cement is applied to the land, then the material may not be a solid waste. Cement produced from treated soil that no longer contains hazardous waste is not a waste-derived product. ([RO 11395](#)) ([RO 11426](#)) ([RO 11491](#)) ([RO 11573](#)) ([RO 11618](#)) ([RO 11684](#)) ([RO 14001](#))

Soil contaminated with a hazardous secondary material used in asphalt batching is a solid waste because it is used in a manner constituting disposal, unless the material is a normal ingredient in asphalt batching, or until it meets the terms of 266.20(b). ([RO 11616](#))

Chemically solidified de-characterized wastes are subject to the used in a manner constituting disposal standards. RCRA jurisdiction extends to all secondary materials applied to the land or used in water as a fill or support material. ([RO 12513](#))

Drip gas from natural gas pipelines that is used as a solvent to remove paraffin buildup may be a hazardous waste used in a manner constituting disposal if it is a by-product rather than a legitimate product. ([RO 11767](#))

Material used as a water conditioner is not used in a manner that constitutes disposal. ([RO 11081](#)) ([RO 11185](#))

Incorporating hazardous waste into animal feeds is generally not considered used in a manner constituting disposal. ([RO 11932](#)) ([RO 14148](#))

The act of spraying virgin fuel on the ground for firefighting training is not used in a manner constituting disposal, because fuel is a primary material, not a waste. ([RO 12488](#))

Iron and steel slag is exempt from RCRA regulation under the Bevill mining and mineral processing exclusion even when used in a manner constituting disposal (SEE ALSO: Section 266.20(c); 59 FR 67256; December 29, 1994). ([RO 13382](#))

Wood treated with wood preservative reclaimed under the spent wood preservative exclusion in 40 CFR 261.4(a)(9) is not a hazardous waste when the wood is placed on land. ([RO 13516](#))

Compliance with the land disposal restrictions treatment standards applies to the product that will be used in a manner constituting disposal, not the waste before it becomes a manufactured product. ([RO 14566](#))

Additional Resources

[48 FR 14472](#) - Amendments to Definition of Solid Waste (Proposed rule) [pp. 14484-14485, 14499] 4/4/1983

[50 FR 614](#) - Amendments to Definition of Solid Waste (Final rule) [pp. 627-628, 646-647] 1/4/1985

[53 FR 31138](#) - Land Disposal Restrictions for First Third Scheduled Wastes (Final rule) [pp.31197-31198] 8/17/1988

[59 FR 43496](#) - Amendment to Subpart C – Recyclable Materials Used in a Manner Constituting Disposal (Final rule) [All pages] 8/24/1994

Appendix E: Burning for Energy Recovery

Appendix E – Burning for Energy Recovery

[40 CFR 261.2\(c\)\(2\)](#) is the regulatory citation for the part of the RCRA definition of solid waste that affects materials burned for energy recovery, as summarized below:

- Materials are solid wastes when they are:
 - (A) Burned to recover energy. (40 CFR 261.2(c)(2)(i)(A))
 - (B) Used to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself remains a solid waste). (40 CFR 261.2(c)(2)(i)(B))
- However, commercial chemical products listed in 40 CFR 261.33 are not solid wastes if they are themselves fuels. (40 CFR 261.2(c)(2)(ii))

Combustion units that burn hazardous waste to recover energy are generally regulated under the boiler and industrial furnace rules, found at [40 CFR part 266 subpart H](#).

Additional Resources

Commercial Chemical Products (CCPs):

- Characteristic off-specification fuels (e.g., gasoline, kerosene, jet fuel, and diesel), including fuels recovered from clean-ups, are commercial chemical products and are not solid waste when burned for energy recovery because they themselves are fuels. ([RO 11138](#)) ([RO 11449](#)) ([RO 11713](#)) ([RO 11848](#)) ([RO 11938](#)) ([RO 12825](#)) ([RO 14503](#))
- Section 261.2(c)(2)(ii) applies to both listed and characteristic CCPs. ([RO 11848](#))
- CCP refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use. This consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material such as a manufacturing process waste. ([RO 14814](#))
- The manner in which fuels become off-specification generally is not relevant, unless the fuels are mixed with or contaminated by a non-fuel hazardous waste. ([RO 11938](#))
- Unused propellant mixture (butane and propane) from aerosol cans is not a solid waste when it is burned for energy recovery because butane and propane are commercial chemical products normally used as fuels. ([RO 11717](#))
- Crude sulfate turpentine (CST) is not a solid waste when it is burned for energy recovery because it is a CCP that is itself a fuel. CST contains hydrogen sulfide that can pose

health risks, thus, it should be managed in accordance with applicable OSHA standards. ([RO 14609](#))

Solvents

- Reclaimed solvent burned as a fuel is a solid waste. Off-specification solvent products burned for energy recovery in lieu of the intended purpose could be excluded under 261.2(c)(2)(ii) if they are themselves fuels. Used toluene is a spent material and not a CCP, therefore the solid waste exemption for fuels burned for energy recovery does not apply. ([RO 13208](#)) ([RO 14814](#))

By-Product vs Co-Products

- Light hydrocarbon wastestreams generated in the production of a primary product may be either by-products or co-products, depending on site-specific factors. By-products burned for energy recovery are solid wastes, while co-products are not. ([RO 11793](#))

Sham Energy Recovery

- Although ignitable off-specification fuels, such as natural gas condensate, are usually not solid wastes when burned for energy recovery, sale or use of low energy value condensate as motor fuel or a fuel additive may constitute sham burning for energy recovery. Additional legitimacy factors besides the energy value can apply to a sham recycling determination. ([RO 11831](#)) ([RO 13049](#))

Boilers and Industrial Furnaces

- The boiler and industrial furnace rules found at [40 CFR part 266 subpart H](#) apply to hazardous waste burned or processed in a boiler or industrial furnace irrespective of the purpose of burning or processing (with certain exceptions described in the regulations). The term "burn" means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. ([40 CFR 266.100\(a\)](#))
- Waste-derived products (e.g., cement or aggregate) from industrial furnaces burning hazardous waste may be subject to use constituting disposal regulations in [40 CFR part 266 Subpart C](#) unless the hazardous waste is burned for energy recovery, rather than for destruction, for materials recovery, or as an ingredient. Hazardous waste with a heating value of less than 5000 Btu/lb is generally considered burned for destruction, not for energy recovery. Heating value is based on an as-generated basis, not as-fired basis, and blending cannot be used to meet the fuel value test. However, the as-generated heating value of a hazardous waste may be increased to meet the "legitimate fuel" test by bona fide treatment (e.g., decanting). ([RO 11883](#)) ([RO 13672](#)) ([RO 13680](#))

- Hazardous waste burned in a boiler or industrial furnace for metals recovery is exempt from the boiler and industrial furnace rules under the smelting, melting, and refining furnace exemption in 40 CFR 266.100(c) only if the device burns the waste exclusively for metals recovery and not partially for destruction or energy recovery. Generally, waste with a heating value at or above 5000 Btu/lb is considered burned as fuel. ([RO 11856](#)) ([RO 11885](#))

Hazardous Waste Fuel Blending

- Blending hazardous waste fuels to meet a specification is treatment and requires a permit and is not an exempt recycling process. Most fuel blending units are permitted as tanks or miscellaneous units. Fuel blenders are subject to the air emissions standards. Unit processes used to raise Btu value of a hazardous waste (e.g., phase separation, centrifugation) also require a permit. Fuel blenders are subject to 268.7(b) LDR notification and certification. ([RO 11881](#)) ([RO 13577](#)) ([RO 11411](#)) ([RO 13512](#)) ([RO 13764](#))

Additional Resources

[50 FR 614](#) - Amendments to Definition of Solid Waste (Final) [pp. 625-627, 629-632] 1/4/1985

[50 FR 33541](#) - Amendments to Definition of Solid Waste (Technical Corrections) [pp. 33541-33543] 8/20/1985

[50 FR 49164](#) - Hazardous Waste Management System; Burning of Waste Fuel and Used Oil in Boilers and Industrial Furnaces (Final) [pp 49166, 49167, 49171-4] 11/29/1985

[56 FR 7134](#) - Burning of Hazardous Waste in Boilers and Industrial Furnaces (Final) [pp. 7138-7142] 2/21/1991

[80 FR 18777](#) - Response to Vacatures of the Comparable Fuels Rule and the Gasification Rule (Final) [All pages] 04/08/2015

Appendix F: Inherently Waste-like Materials

Appendix F – Inherently Waste-like Materials

[40 CFR 261.2\(d\)](#) is the subparagraph in the definition of solid waste that applies to “inherently waste-like materials,” which are solid wastes that are so hazardous that they pose a substantial threat to human health and the environment even when recycled. These materials are described below:

- **Dioxin hazardous wastes** with listed waste codes F020, F022, F023, F026, and F028, and F021 (unless used as an ingredient to make a product at the site of generation).
- **Secondary halogen-containing materials that are fed to halogen acid furnaces (HAFs)** that exhibit a characteristic of a hazardous waste or are listed as a hazardous waste defined in subparts C or D,
 - **This does not include brominated material that meets the following criteria:**
 - The material must contain a bromine concentration of at least 45%; and
 - The material must contain less than a total of 1% of toxic organic compounds listed in [Appendix VIII](#); and
 - The material is processed continually on-site in the halogen acid furnace via direct conveyance (hard piping).

To add a waste to the list above, EPA would use the following criteria:

- The materials are ordinarily disposed of, burned, or incinerated; or
- The materials contain toxic constituents listed in Appendix VIII of part 261 and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and
- The material may pose a substantial hazard to human health and the environment when recycled.

Additional Guidance on Inherently Waste-like Materials

HAFs

Materials being processed in a halogen acid furnace (HAF) are not eligible for the “generator-controlled exclusion” in [40 CFR 261.4\(a\)\(23\)](#) and instead are considered to be inherently waste-like materials per [40 CFR 261.2\(d\)\(2\)](#). ([RO 14900](#)) ([RO 11751](#))

Acid generation that occurs in a closed, controlled chemical manufacturing process is not considered the "production of acid" for purposes of the HAF definition. Secondary materials going to such units are not solid wastes pursuant to the use/reuse exclusion if the process is legitimate recycling. State regulations can be more stringent than the federal regulations. ([RO 14576](#))

Dioxins

Wastes and contaminated equipment from the use of dioxins as lab standards (and most other lab wastes) do not meet the listing description for dioxin-bearing F020, F021, F022, F023, F026, F028 as they do not result from any of the manufacturing processes specified in the listings. ([RO 11055](#))

Includes a clarification of the federal policy on the disposal of dioxin and dioxin-contaminated material, a summary of EPA efforts to regulate dioxin, and a description of F-listed dioxin wastes (F020, F021, F022, F023, F027, F028). ([RO 12970](#))

Wastes from the production of chlorophenoxy acids, or their ester, ether, amine, or other salt derivatives are F020 (including 2,4,5-T). F023 processes are the same as F020. F020–F023, F026 do not cover wastewaters but cover sludges from their treatment. Packaging is not part of the formulating process. ([RO 11065](#))

Discussion of the applicability of F020 and F023 listings to wastes from the production of 2,4,5-trichlorophenol (TCP) and hexachlorophene. Wastewaters from 2,4,5-TCP process are not F020 or F023, but sludges from their treatment meet the listings. Clarification of highly purified 2,4,5-trichlorophenol. F020 and F023 wastes are regulated as acutely hazardous. ([RO 11186](#))

Additional Resources

[50 FR 614](#) - Amendments to Definition of Solid Waste (Final) [pp. 637, 640–641] 1/4/1985.

[40 CFR 261.2\(d\)](#) - Definition of solid waste: Inherently waste-like materials.

[Guidance Manual](#) on the RCRA Regulation of Recycled Hazardous Materials [pp. 30]. Document may be downloaded by clicking on “Get This Item.”

Appendix G: Use-Reuse

Appendix G – Use/Reuse

[40 CFR 261.2\(e\)](#) is the section of the regulations that explains when a hazardous secondary material that is used, reused, or returned to the original process is a solid waste, as summarized below.

With certain exceptions listed below, a material is not a solid waste if it is:

- Used or reused as an ingredient in an industrial process to make a product, provided the material is not being reclaimed; (40 CFR 261.2(e)(1)(i));
- Used or reused as an effective substitute for a commercial product; (40 CFR 261.2(e)(1)(ii)); or
- Returned to the original process from which it is generated, without first being reclaimed or land disposed. The material must be returned as a substitute for feedstock materials.
 - In cases where the original process to which the material is returned is a secondary process, the materials must be managed such that there is no placement on the land.
 - In cases where the material is generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion found at § 261.4(a)(17) apply rather than this paragraph. (40 CFR 261.2(e)(1)(iii))

Exceptions - The following materials are solid wastes, even if the recycling involves use, reuse, or return to the original process:

- Materials used in a manner constituting disposal, or used to produce products that are applied to the land; (40 CFR 261.2(e)(2)(i));
- Materials burned for energy recovery, used to produce a fuel, or contained in fuels (40 CFR 261.2(e)(2)(ii));
- Materials accumulated speculatively (40 CFR 261.2(e)(2)(iii)); or
- Inherently waste-like materials (40 CFR 261.2(e)(2)(iv)).

Additional Resources

General Use/Reuse Guidance

Wastes which undergo some reclamation, including filtration, are not eligible for the use/reuse exclusion. Filtration occurring near the end of the process when it is already in essence a completed product may not constitute reclamation. For example, if the filter removes only minute quantities of particulate matter to guarantee the physical quality of the product, not to reclaim the secondary material in any meaningful sense, then that may not be considered reclamation. ([RO 14099](#)) ([RO 14736](#))

Metals suitable for direct use or that only have to be refined rather than reclaimed to be usable are products, not wastes (e.g., free flowing mercury which is distilled and sold as an ingredient in an industrial process). ([RO 11823](#))

Materials which undergo only "incidental processing" are not reclaimed and thus can be excluded under the use/reuse provisions. Incidental processing includes only those processing steps that are not necessary to material recovery, and which do not themselves regenerate the material or recover material. Incidental processing activities may take place at any step during the use/reuse process. A process may involve more than one incidental processing step as long as the cumulative effect is incidental. Another indicator of incidental processing is whether an analogous process using raw materials includes the same or similar activities at the same point in the process. ([RO 14748](#))

Materials must be legitimately recycled to satisfy the section 261.2(e) provisions. ([RO 14643](#))

Material requiring reclamation prior to use or reuse as an effective substitute for a commercial product is not being directly used or reused and would not qualify for the section 261.2(e)(1)(ii) exclusion from the definition of solid waste. ([RO 13539](#))

Specific Examples of Use/Reuse

Spent pickle liquor directly used or reused as a wastewater conditioner (ferric chloride substitute) is not a solid waste or K062, provided the material is not speculatively accumulated. ([RO 11081](#))

Corrosive materials (deionization acid) that are beneficially reused as effective substitutes for a virgin material, meet relevant specifications for contamination levels, and used under controlled conditions are not solid waste. ([RO 11154](#))

Phosphoric acid used as a wastewater conditioner is not a solid waste. Phosphoric acid used to produce a fertilizer is not a solid waste if it is purer in acid content and no more contaminated than virgin phosphoric acid that is typically used. ([RO 11185](#))

Copper chloride and copper ammonium chloride by-products directly used (i.e., without prior reclamation) in the production of copper sulfate and copper hydroxide are not solid waste. ([RO 11334](#))

Sulfuric acid from chlorine dehydration that is too dilute for reuse without further processing may meet the definition of spent material. If the secondary use of sulfuric acid has the same purpose as the primary use (e.g., once-used sulfuric acid can be directly reused in the same or another alkylation reaction), then the once-used sulfuric acid may be exempt from the definition of solid waste under 261.2(e). ([RO 11361](#))

The reuse of etchants to produce a basic copper sulfate is not solid waste management (See also 50 FR 614; 1/4/85). Spent copper etchants used as ingredients in the production of tri-basic copper chloride are not solid wastes under the use/reuse exemption unless the etchants are being reclaimed. ([RO 12779](#)) ([RO 14102](#))

Waste sodium hydroxide (NaOH) that is used as a substitute for a commercial product in a tank clean-out is not a solid waste if it would function as a product in normal commercial use, unless it is speculatively accumulated. A generator may increase the effectiveness of a 'product' by adding additional NaOH. ([RO 12918](#))

Foundry sand reused on-site within the sand loop for mold-making, including the separation (shakeout) step, is part of a continuous industrial production process, and would not be a solid waste. Sand handled carelessly prior to its reuse may raise questions regarding the legitimacy of the continuous production process. ([RO 14534](#))

Hazardous secondary materials that are processed in gasification systems to produce synthesis gas exclusively used or reused in industrial processes to manufacture legitimate products are not subject to RCRA, since such materials are excluded from the definition of solid waste, provided they are not reclaimed, used in a manner constituting disposal, burned for energy recovery, or speculatively accumulated (See also 67 FR 13864; 3/25/02). ([RO 14643](#))

A business sending electronics to a reseller for reuse is not a RCRA generator. Electronics reused in the same manner without reclamation are still considered commercial products. Repairing electronics before resale is neither reclamation nor waste management. ([RO 14668](#))

CRT funnel glass may be excluded from RCRA hazardous waste regulations under the 'use/reuse' exclusion (40 CFR 261.2(e)) for hazardous secondary materials used as an ingredient to make a product or used as an effective substitute for a commercial product, as long as that use is legitimate. CRT funnel glass legitimately used as an effective substitute in the production of ceramic tiles can be excluded from the solid and hazardous waste regulations under 40 CFR 261.2(e). Processed CRT glass used as an effective substitute for virgin fluxing agent at copper smelters would be excluded from solid and hazardous waste regulation under 261.2(e)(1)(ii). (See also 71 FR 42928, 42937; July 28, 2006) (Memorandum, Shapiro to Richter; March 8, 1995 ([RO 11900](#))) ([RO 14835](#)) ([RO 14845](#)) ([RO 14855](#))

Specific Examples of Reclamation Not Eligible for Use/Reuse Exclusion

Recycling red water (K047) is not an exempt use or reuse because sodium sulfite is recovered from K047 before reuse. Using K047 as a fuel makes it ineligible for the use or reuse exclusion. ([RO 11253](#))

The production of copper sulfate solution from etchants is reclamation and is solid waste management. Mixing residue from tri-basic copper chloride (TBCC) manufacturing with additional chemicals to produce fresh etchant is not exempt use/reuse if the activity involves reclamation. If both activities are steps in one industrial process, then reclamation in the second step (fresh etchant production) would disqualify the whole process from the use/reuse exemption. ([RO 12779](#)) ([RO 14102](#))

Wastewater treatment sludge (F006) sent to primary smelters for copper extraction is not eligible for the Section 261.2(e) use/reuse exemption because the sludge is being reclaimed. ([RO 14026](#))

Treatment of spent, crushed hexavalent chrome bricks essentially regenerates the chromium back into trivalent chromium, and this treated material then becomes the feedstock to produce new trivalent chromium refractory bricks. Per 40 CFR 261.2(c)(3), regeneration of a secondary material is a form of reclamation, and the reclamation of particular types of secondary materials, such as spent materials, is subject to RCRA regulation. Furthermore, the RCRA regulations at 261.2(e) involving the direct use/reuse of a secondary material as an ingredient or as an effective substitute in a manufacturing process do not apply when the material is being reclaimed and therefore are not applicable in this situation. ([RO 14852](#))

Specific Examples of Use Constituting Disposal Not Eligible for Use/Reuse Exclusion

Spent sulfuric acid reused as fertilizer ingredient is considered a solid waste and a hazardous waste used in a manner constituting disposal subject to Part 266, Subpart C. ([RO 11361](#))

Baghouse dust used as a product or reclaimed as an ingredient in a product (e.g., aggregate) placed on the land is a solid waste and is not exempt per 40 CFR 261.2(e)(2)(i). ([RO 11618](#))

Appendix H: Reclamation

Appendix H – Reclamation

According to [40 CFR 261.1\(c\)\(4\)](#), a material is “reclaimed” if it is processed to recover a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.

In addition, for purposes of the solid waste exclusions found at [40 CFR 261.4\(a\)\(23\)](#) and [\(24\)](#), smelting, melting, and refining furnaces are considered to be solely engaged in metals reclamation if the metal recovery from the hazardous secondary materials meets the same requirements as those specified for metals recovery from hazardous waste found in [§ 266.100\(d\)\(1\)](#) through [\(3\) of this chapter](#), and if the residuals meet the requirements specified in [§ 266.112 of this chapter](#).

[40 CFR 261.2\(c\)\(3\) Table 1](#) identifies which materials a solid waste, and which are not, when reclaimed.

- **The following materials are solid waste when reclaimed**, unless they meet the solid waste exclusion requirements of [40 CFR 261.4\(a\)\(17\)](#), or [40 CFR 261.4\(a\)\(23\)](#), [40 CFR 261.4\(a\)\(24\)](#), or [40 CFR 261.4\(a\)\(27\)](#):
 - Spent materials
 - Sludges listed as hazardous waste in [40 CFR Part 261.31](#) or [261.32](#)
 - By-products listed as hazardous waste in [40 CFR 261.31](#) or [261.32](#)
 - Scrap metal that is not excluded under [40 CFR 261.4\(a\)\(13\)](#) (however, non-excluded scrap metal is exempt from regulation per [40 CFR 261.6\(a\)\(3\)](#) when recycled)

- **The following materials are not solid waste when reclaimed:**
 - Sludges exhibiting a characteristic of hazardous waste
 - By-products exhibiting a characteristic of hazardous waste
 - Commercial chemical products listed in [40 CFR 261.33](#)

The terms “spent materials,” “sludges,” “by-products,” and “scrap metal” are defined in [40 CFR 261.1](#).

Additional Resources

General Guidance on Reclamation

Materials which undergo only "incidental processing" are not reclaimed and thus can be excluded under the direct use/reuse provisions. Incidental processing includes only those processing steps that are not necessary to material recovery, and which do not themselves regenerate the material or recover material. Incidental processing activities may take place at

any step during the use/reuse process. A process may involve more than one incidental processing step as long as the cumulative effect is incidental. Another indicator of incidental processing is whether an analogous process using raw materials includes the same or similar activities at the same point in the process. ([RO 14748](#))

Wastes which undergo some reclamation, including filtration, are not eligible for the use/reuse exclusion. Filtration occurring near the end of the process when it is already in essence a completed product may not constitute reclamation. The filter removes only minute quantities of particulate matter to guarantee the physical quality of the product, not to reclaim the secondary material in any meaningful sense. ([RO 14099](#)) ([RO 14736](#))

Hazardous waste sent to smelters remains hazardous waste until reclamation is complete. Materials that have been reclaimed are not wastes. Metal-bearing material that is 92-99% pure and only needs refining prior to use is considered fully reclaimed. Wastewater treatment sludge (F006) sent to primary smelters for copper extraction is not eligible for the Section 261.2(e) use/reuse exemption because the sludge is being reclaimed. ([RO 11929](#)) ([RO 14026](#))

If zinc oxide produced from the recycling of K061 is completely reclaimed, it is a product and is no longer subject to RCRA provided it is not burned for energy recovery or used in a manner constituting disposal. In cases where the zinc oxide will be further refined to make zinc metal, it is a partially reclaimed listed sludge and is still a hazardous waste subject to regulation. ([RO 11932](#))

Materials that are not solid wastes when they are reclaimed are exempt from the point of generation forward. The term "when" as used in 40 CFR 261.2 applies to the point that a material's ultimate disposition has been determined. The recycling activity is viewed prospectively; that is, the status of certain secondary materials is determined by knowing how the material is going to be recycled. The term "when" as it is used in 40 CFR 261.2(c) for recycling activities (e.g., "when reclaimed", "when burned", "when placed on the land") is not meant to refer only to the moment in time when that activity occurs, in order to determine the regulatory status of a material, with the exception of speculative accumulation. For secondary materials that are excluded or exempt based on a claim of recycling, the material is no longer excluded or exempt if it is accumulated speculatively prior to recycling; also, respondents in enforcement actions who make such a claim (e.g., generator, recycler) must be able to document a claim of legitimate recycling (see 40 CFR 261.2(f)). ([RO 11747](#))

For purposes of 40 CFR 261.2, EPA interprets non-listed commercial chemical products (CCPs) to include all types of unused commercial products that exhibit hazardous waste characteristics, even if these products are not commonly considered chemicals (e.g., circuit boards, batteries, thermometers, fluorescent lamps, etc.). Unlisted CCPs that are sent for reclamation are not solid waste. ([RO 11726](#)) ([RO 14012](#))

The heating value of sulfur-containing material inserted in a sulfuric acid regeneration furnace determines if the activity is burning for energy recovery or reclamation. Materials with a

heating value greater than 5000 Btu/lb are generally considered to be burned as a fuel rather than for metals recovery or as an ingredient. 5000 Btu/lb is not a regulatory threshold for the purposes of the definition of solid waste, but there is a strong presumption that secondary materials above 5000 Btu are burned for energy recovery and therefore are solid wastes (e.g., as in the case of characteristic by-products recycled by being burned). ([RO 14086](#))

Characteristic by-products being reclaimed may be placed or stored in a land based unit (e.g., waste pile) without affecting their exclusion from the definition of solid waste. Characteristic by-products being reclaimed are not subject to the RCRA hazardous waste regulations, including the prohibition on land placement. ([RO 14268](#))

The definition of solid waste is limited to listed sludges to avoid including sludges that are routinely processed to recover useable products as part of ongoing production operations. The October 2, 1985, Federal Register (50 FR 40297) states that: "Nevertheless, sludges can be listed and thus be solid wastes if they are more waste-like than product-like." ([RO 12656](#))

Federal RCRA hazardous waste regulations, per 40 CFR 261.2(c)(3) and Table 1 of 261.2, do not regulate the reclamation of off-spec commercial chemical products and characteristic byproducts provided these materials are reclaimed legitimately. Therefore, EPA's hazardous waste import/export requirements would not apply to a shipment of intact unused off-spec dental x-ray packs and trimmings from unused dental x-ray packs generated in Mexico, with transit across the United States, that is destined for reclamation in Canada. ([RO 14841](#))

Examples of Processes that are Reclamation

Smelting wastewater treatment sludge to recover metal is reclamation. A listed sludge to be smelted is a hazardous waste. A characteristic sludge to be smelted is not a solid waste. Partially reclaimed listed sludge is a solid waste, unless granted a variance. ([RO 11338](#))

The dewatering process of an accumulated by-product is defined as reclamation (see 40 CFR 261.1(c)(4)). ([RO 11415](#))

The Agency considers both thermal oxidization and hydrodechlorination processes to be forms of reclamation. These processes are designed to recover materials/ products (muriatic acid, chlorobenzenes, and/or benzenes) from a listed by-product (K085); and under Section 261.2(c)(4), this constitutes reclamation. Pursuant to Section 261.2(c)(3), listed by-products that are reclaimed are solid wastes. ([RO 11297](#))

Treatment of spent, crushed hexavalent chrome bricks essentially regenerates the chromium back into trivalent chromium, and this treated material then becomes the feedstock to produce new trivalent chromium refractory bricks. Per 40 CFR 261.2(c)(4), regeneration of a secondary material is a form of reclamation, and the reclamation of particular types of secondary materials, such as spent materials, is subject to RCRA regulation. ([RO 14852](#))

The production of copper sulfate solution from used etchants is reclamation and is waste management. ([RO 12779](#))

Examples of Processes that are not Reclamation

Wastewater treatment is not generally considered to be reclamation and wastewaters are not considered products after treatment (see 50 FR 634, January 4, 1985). Wastewaters are not ordinarily considered to be commercial products and are often discharged, and the Agency did not intend to allow facilities to exempt their wastewater treatment surface impoundments from regulation by being classified as "recycling" facilities. In certain cases, treated wastewater that is legitimately reused is considered reclaimed and is not a solid waste. ([RO 11546](#)) ([RO 11374](#))

Briquetting is not reclamation. Flue dust K061 that is mixed with sodium silicate binder and pressed into briquettes is not solid waste if it is directly reused in steel production and is not reclaimed. ([RO 11271](#))

Shredding and grinding leather trimmings in order to attain a required particle size is not reclamation. ([RO 14025](#))

Examples of Materials that are Solid Waste When Reclaimed

Spent pickle liquor (K062) is a spent material and a solid waste when reclaimed. Beneficial reuse of waste after reclamation does not affect the solid waste status before and during reclamation. ([RO 11093](#))

Dried metal hydroxide solids in pellet powder from dewatering electroplating wastewater are F006. The listing applies even if the sludge is reclaimed further. Dried metal hydroxide solids in pellet form sent to a smelter to recover metals are reclaimed, not directly used or reused, because distinct components are recovered as separate end products. ([RO 11910](#))

Dust collected in an air filtration system is a spent material, not a sludge, since filtration is intended to recover dust, not control pollution, and is a solid waste when reclaimed. Heating and distillation are considered reclamation processes. ([RO 11937](#))

Used silver-bearing photo fixer that is to be reclaimed is a spent material and a solid waste. Sludges from silver recovery units to be reclaimed are characteristic sludges and not a solid waste (SEE ALSO: RPC# 8/4/95-01). ([RO 11814](#)) ([RO 11914](#)) ([RO 11912](#))

Chopline (i.e., residues generated from the processing of scrap wire that consist primarily of plastics, some paper, and up to five percent copper) residues are spent materials and therefore solid wastes when reclaimed or recycled. A material is considered spent when it can no longer be used for the original purpose without reprocessing or reclamation. Hazardous waste management requirements apply up to the point of resale as product. ([RO 14098](#))

Used airbag inflators that are not legitimately reused are spent material and solid waste when reclaimed (40 CFR 261.2(c)(3)). ([RO 14920](#))

Examples of Materials that are not Solid Waste When Reclaimed

Commercial Chemical Products (CCPs) or mixtures of CCPs (e.g., methyl isocyanate and methylene chloride) reclaimed or used for their intended purpose (e.g., in a manufacturing process) are not solid waste. ([RO 11147](#))

A mixture of fuel and water going to reclamation is considered a commercial chemical product being reclaimed. Reclamation must meet the definition of legitimate recycling found at 40 CFR 260.43, including the first factor which says the materials must provide a "useful contribution." In the case of fuel/water mixtures, such mixtures would be considered as providing a useful contribution if the fuel product is recovered by the recycling process. ([RO 14883](#))

Reclaimed methanol (99.5% purity) sent off-site for further reclamation before use in a manufacturing process is more product-like than waste-like, is not a solid waste, and need not be manifested. It is analogous to reclaimed metals that only have to be refined (See also 50 FR 634; 1/4/85). ([RO 11109](#))

Flue dust generated by an air pollution control device in a brass mill is a characteristic sludge. Metal hydroxide sludge generated in a wastewater treatment unit at a brass mill is a characteristic sludge. Characteristic sludges from air and water pollution control devices are not solid wastes from the point of generation if the sludges are destined for reclamation in a manner not involving placement on land. A generator must be prepared to document the claim that a sludge is excluded from the solid waste definition. ([RO 11412](#))

Brass dross skimmings are by-products, not scrap metal, and are not solid waste if reclaimed. ([RO 11083](#))

If sludge from a silver recovery unit that is used to treat wastewater qualifies as a characteristic sludge, it is not a solid waste when destined for reclamation. Materials generated from wastewater treatment are sludges, even if the treatment is not undertaken to meet any discharge requirements. ([RO 11879](#))

Unused batteries sent for reclamation are CCPs being reclaimed and are not solid wastes. ([RO 11891](#))

Bubbler canisters containing unused phosphorous oxychloride is a commercial chemical product (CCP) when reclaimed and not solid waste. ([RO 13722](#))

Appendix I: Processed or Unprocessed Scrap Metal

Appendix I – Processed or Unprocessed Scrap Metal

[40 CFR 261.1\(c\)\(6\)](#) defines scrap metal as “bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled.”

[40 CFR 261.4\(a\)\(13\)](#) applies to “excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled.” If a hazardous secondary material (HSM) is an excluded scrap metal, then it is not a solid waste per 40 CFR 261.4(a)(13).

Processed scrap metal is scrap metal that has been baled, shredded, sheared, chopped, crushed, flattened, cut, melted or separated by metal type (i.e., sorted), and fines, drosses, and related materials which have been agglomerated. Processed scrap metal means the scrap metal has undergone manual or mechanical processing regardless of who has done the processing. ([62 FR 26011](#))

Unprocessed home and prompt scrap metal is scrap metal such as turnings, cuttings, punchings, and borings which can be generated by steel mills, foundries, and metal refineries or the metal-working/fabrication industries. These are excluded when recycled because they are more product-like than waste-like. ([62 FR 26011](#))

[40 CFR 261.6\(a\)\(3\)\(ii\)](#) is a recyclable materials exemption that applies to scrap metal that is not excluded under 40 CFR 261.4(a)(13). If the HSM is a non-excluded scrap metal, then it is a solid waste, but exempt from regulation when recycled per 40 CFR 261.6(a)(3)(ii).

Additional Guidance

General Scrap Metal

Precious metal containing scrap metal is exempt from regulations. ([RO 11117](#))

Metal pieces that are generated from machining operations are also considered scrap metal. ([RO 13356](#))

Zinc bar, nickel and cadmium plate, and steel scrap from batteries are scrap metal. Scrap metal is exempt when it is recycled whether it is characteristic or not. Metal that contains only an oily film is still scrap metal. ([RO 11184](#))

Once separated out from nickel-cadmium batteries, metal plates may be exempt scrap metal if recycled. If metal plates are removed and mixed with non-scrap metal, then the plates lose their scrap metal designation. ([RO 13376](#))

Because the scrap metal definition is based on physical form, the determination of whether nickel-plated steel wool generated during nickel recovery is scrap metal should be made by the State or Regional office. [\(RO 11930\)](#)

The Agency has consistently held that metal scrap is neither an ore nor a mineral. Therefore, if the predominant input to the process is steel scrap, the waste from the ferroalloy facility would not qualify for the mining waste exclusion. [\(RO 12664\)](#)

Scrap metal that fails the toxicity characteristic for lead is excluded from RCRA Subtitle C regulation when it is recycled. [\(RO 11769\)](#)

Scrap tantalum anodes, wire, pellets, and pins meet the definition of scrap metal found at 40 CFR 261.1(c)(6) and would not be subject to RCRA hazardous waste regulation when recycled under the solid waste exclusion found at 40 CFR 261.4(a)(13) (if processed) or under the hazardous waste exemption found at 40 CFR 261.6(a)(3)(ii) (for all other materials). Tantalum powders would only meet the definition of scrap metal if they have been "agglomerated" in such a way that the agglomerated powders physically resemble other types of scrap metal (i.e., bits and pieces of metal parts). Non-agglomerated tantalum powders would not meet the definition of scrap metal. [\(RO 14888\)](#)

Emptying a steel oxygen breathing apparatus (OBA) canister could be an exempt scrap steel recycling process if the canisters are to be recycled. [\(RO 11835\)](#)

Automotive airbag modules can be exempt scrap metal when legitimately recycled for metal value. The scrap metal exemption only applies to material that would otherwise be regulated as hazardous waste; non-hazardous scrap metal is not subject to RCRA Subtitle C hazardous waste requirements in the first place. [\(RO 14920\)](#)

Emptying a steel aerosol can by puncturing and draining it may be exempt as a step in recycling the can as scrap metal. A steel aerosol can qualify as scrap metal if it does not contain significant liquids (i.e., is fully drained) and is therefore exempt from regulation when sent for recycling. There is no need to determine if a steel aerosol can is "RCRA empty" per 40 CFR 261.7 once it qualifies as scrap metal (i.e., once it no longer contains significant liquids) that is destined for recycling. [\(RO 11806\)](#) [\(RO 11782\)](#) [\(RO 11780\)](#) [\(84 FR 67210\)](#)

Solder skimmings are by-products, not scrap metal and solder that becomes contaminated through use is a spent material when reclaimed, not scrap metal. Solder skimmings are more closely identified with the drosses than the turnings. [\(RO 11572\)](#) [\(RO 12929\)](#)

Spent solder baths, or "pot dumps," meet the definition of scrap metal and are exempt when recycled. The 261.2(f) documentation requirement applies to scrap metal that is conditionally exempt based on recycling. [\(RO 11771\)](#) [\(RO 11775\)](#) [\(RO 13628\)](#)

Lead foil from dental x-ray packages qualifies for the scrap metal exemption when it is recycled. [\(RO 11742\)](#)

Lead shot may be considered scrap metal, not spent material, and exempt from regulation when recycled. The exemption extends only to the lead shot portion of the waste. [\(RO 14070\)](#)

Spent photoconductor drums taken from photocopying machines meet the definitions of spent material and scrap metal. Spent drums that are recycled qualify for the scrap metal recycling exclusion. [\(RO 11710\)](#)

Discarded automotive parts and electronic devices that meet the definition of scrap metal are exempt from RCRA Subtitle C regulation when sent for reclamation. [\(RO 11432\)](#)

Industrial steel battery cases and lead plates with acid and lead removed are scrap metal. Mixtures of scrap metal (battery cases) and other regulated recyclable materials (lead oxides) must be managed as hazardous waste when sent for reclamation. [\(RO 11100\)](#)

Natural gas regulators that contain mercury are best classified as spent materials. Any quantity of liquid mercury, other than trace amounts attached to a material, precludes a waste's designation as scrap metal. The waste may qualify as scrap metal once the mercury has been removed. [\(RO 11860\)](#)

Excluded Scrap Metal (40 CFR 261.4(a)(13)):

Drained used oil filters may qualify as processed scrap metal if they are processed prior to recycling. They are potentially eligible for the scrap metal exemption if they do not contain a significant amount of liquid, but the exclusion only applies to processed scrap metal being recycled. Draining a used oil filter is not processing, physical alteration of the filter is required. Materials removed from processed scrap metal are newly generated wastes and are subject to waste determination. No toxicity characteristic determination is necessary for drained oil filters destined for recycling. [\(RO 14183\)](#) [\(RO 14184\)](#) [\(RO 14202\)](#) [\(RO 13498\)](#)

Agglomerated drosses (from any source, not just scrap metal processing) can be classified as processed scrap metal and, if recycled, are excluded from the definition of solid waste. EPA maintains that the definition of scrap metal does not include residues generated from smelting and refining operations such as drosses, slags, and sludges. Dross which has not been agglomerated is a by-product, not scrap metal. Agglomerated drosses used in a manner constituting disposal are excluded scrap metal being recycled and thus not solid waste. Drosses that have not been agglomerated are solid wastes when used in a manner constituting disposal. [\(RO 14195\)](#)

Solder drippings that are generated during radiator repair operations qualify for the scrap metal exclusion when they are recycled. [\(RO 11740\)](#)

Non-Excluded Scrap Metal (Exempt under 40 CFR 261.6(a)(3)):

Non-excluded scrap metal is both a solid waste and a hazardous waste (if characteristically hazardous) but is exempt if recycled. Scrap metal that is intended to be reclaimed is exempt from hazardous waste regulation at the point of generation. The recycling activity is viewed prospectively; provided that the generator intends to recycle his/her scrap metal at some point in the future, stored scrap metal is exempt from the hazardous waste regulations. Also, any entity that claims the recycling exemption must be able to document that legitimate recycling occurs. ([RO 11057](#)) ([RO 11063](#)) ([RO 11877](#)) ([RO 14277](#))

Under the § 261.6(a)(3)(ii) exemption, any hazardous scrap metal sent for recycling/reclamation is exempt from the hazardous waste management requirements, including storage prior to reclamation, manifesting, and the land disposal restrictions (LDR) program. ([RO 11134](#)) ([RO 11383](#)) ([RO 11482](#)) ([RO 11600](#)) ([RO 14277](#))

Unprocessed, spent printed circuit boards qualify for the scrap metal exemption as generated. Residuals from the processing of spent circuit boards (e.g., shredded pieces, sweeps, ash, fluff, or baghouse dust) may not qualify as scrap metal, but instead may be spent materials, by-products, or sludges (See also: 261.4(a)(14) exclusion for shredded circuit boards). ([RO 11689](#))

Whole circuit boards containing minimal quantities of mercury and batteries that are protectively packaged to minimize dispersion of metal constituents would qualify for the scrap metal exemption in Section 261.6(a)(3). Shredded circuit boards must be free of mercury switches, mercury relays, nickel-cadmium batteries and lithium batteries to qualify for the exclusion from the definition of solid waste in Section 261.4(a)(14). ([RO 14155](#))

Additional Resources

[62 FR 26011](#) – Final rule which excluded processed circuit boards and scrap metal from RCRA regulation which is intended to promote the goal of safe recycling. [62 FR 26011-26014] 5/12/1997

[50 FR 635](#) – The original Definition of Solid Waste final rule that included the general category of scrap metal and noted the speculative accumulation provision does not apply to secondary materials that already are wastes when they are recycled, for example, scrap metal. 1/4/1985

Appendix J: Hazardous Waste Recycling Process

Appendix J – Hazardous Waste Recyclable Material Process Requirements

The requirements for generators, transporters and treatment, storage and disposal facilities that manage hazardous wastes that are recycled (“recyclable materials”) are found in 40 CFR 261.6(b), (c), and (d).

- Exceptions to these requirements are explained in detail in [40 CFR 261.6\(a\)](#). These exceptions include:
 - Recyclable materials subject to the requirements of [40 CFR part 266 Subparts C through N](#) (including use constituting disposal, burning for energy, precious metal recycling, spent lead acid battery recycling). ([40 CFR 261.6\(a\)\(2\)](#))
 - Recyclable materials exempted from most hazardous waste regulations when recycled (industrial ethyl alcohol, exempted scrap metal, certain fuels produced from oil-bearing hazardous waste). ([40 CFR 261.6\(a\)\(3\)](#))
 - Used oil regulated under [40 CFR part 279](#). ([40 CFR 261.6\(a\)\(4\)](#))
- In addition, hazardous waste that is exported or imported for purpose of recovery is subject to the requirements of 40 CFR part 262, subpart H. ([40 CFR 261.6\(a\)\(5\)](#))

Generators and transporters of recyclable materials are subject to the applicable requirements of 40 CFR parts 262 and 263 and the notification requirements under section 3010 of RCRA. ([40 CFR 261.6\(b\)](#))

Owners and operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of subparts A through L, AA, BB, and CC of parts 264 and 265, and under 40 CFR parts 124, 266, 267, 268, and 270 and the notification requirements under section 3010 of RCRA. ([40 CFR 261.6\(c\)\(1\)](#))

Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the following requirements: ([40 CFR 261.6\(c\)\(2\)](#))

- Notification requirements under section 3010 of RCRA
- 40 CFR 265.71 and 265.72 (dealing with the use of the manifest and manifest discrepancies)
- 40 CFR 265.75 (biennial reporting requirements)
- 40 CFR 261.6(d) (see below)

The **recycling process itself** is exempt from regulation except as provided in 40 CFR 261.6(d). ([40 CFR 261.6\(c\)\(1\)](#))

Owners or operators of facilities subject to RCRA permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the RCRA air emission requirements of subparts AA and BB of 40 CFR part 264, 265 or 267. ([40 CFR 261.6\(d\)](#))

Additional Resources

General Guidance

A recycling facility where waste is directly off-loaded from vehicles into recycling equipment does not need a storage permit. The EPA allows time for off-loading waste into the recycling process without obtaining a storage permit. The specific timeframe is determined by the appropriate Region or state implementing agency. ([RO 11365](#)) ([RO 11388](#))

The recycling unit itself is exempt from permitting/management standards with one exception. ([RO 11383](#)) ([RO 11814](#))

At permitted and interim status facilities, the recycling unit may be subject to 40 CFR part 264/265, Subparts AA and BB (SEE ALSO: 62 FR 64635, 64638; 12/8/97). ([RO 11881](#))

40 CFR part 264/265, Subpart CC does not apply to recycling units (See also 61 FR 59931, 59935; 11/25/96). ([RO 14461](#))

Burning hazardous waste in an incinerator is not exempt recycling, but rather is considered incineration regulated under Parts 264 or 265, even if some energy or material recovery occurs. ([RO 11873](#)) ([RO 11385](#)) ([RO 14893](#))

Fuel blending is not exempt from permitting, unless it is done at a generator site in a generator accumulation unit (tank and/or container). Fuel blending is treatment and requires a permit and cannot be done at a transfer facility. Most fuel blending units are permitted as tanks or miscellaneous units. ([RO 11881](#)) ([RO 11411](#))

Examples of Exempt Recycling Processes

Since the process of emptying the aerosol cans is part of a recycling process (i.e., scrap steel recycling), this activity would be exempt from RCRA regulation under 40 CFR 261.6(c) (except as specified in 40 CFR 261.6(d)). ([RO 11780](#)) However, aerosol cans recycled at universal waste handlers must meet the puncturing and draining requirements found in [40 CFR 273.13\(e\)\(4\)](#) or [40 CFR 273.33\(e\)\(4\)](#).

Reclamation of spent solvents to make new product solvent through distillation and other recycling technologies would be exempt recycling. The residues (i.e., stillbottoms) would be newly generated waste and subject to the hazardous waste generator accumulation requirements. ([RO 11200](#)) ([RO 12865](#)) ([RO 13280](#))

The desulfurization process to remove sulfur and chloride from slurried baghouse dust is an exempt recycling process. Desulfurization units are either exempt recycling units or wastewater treatment units (WWTUs). ([RO 13566](#))

Nonthermal reclamation of foundry sands (screening sand to remove metal residuals) is an exempt recycling process. ([RO 11900](#))

Examples of Processes that are not Exempt Recycling

Thermal reclamation using a controlled flame to destroy organics in foundry sand is not an exempt recycling process and is incineration subject to 40 CFR part 264/265, Subpart O. ([RO 11900](#))

Carbon regeneration units are regulated as thermal treatment units under the interim status standards of 40 CFR part 265, subpart P, and the permit standards of 40 CFR part 264, subpart X, and are not exempt recycling units. ([RO 13491](#)) ([56 FR 7200, February 21, 1991](#))

Demilitarization and munitions popping furnaces are regulated as incinerators, not exempt recycling units. ([RO 11873](#))

Appendix K: Documentation of Claims

Appendix K – Documentation of Claims that HSM are not Solid Wastes

[40 CFR 261.2\(f\)](#)

The regulatory language explaining that documentation of claims that a hazardous secondary material is not a solid waste or is conditionally exempt from regulation is required in the event of an enforcement action is below. This documentation requirement can be triggered by any enforcement action including an informational request letter and applies to all hazardous secondary materials regulated under the recycling exclusions and exemptions of RCRA.

§261.2(f) Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation.

Respondents in actions to enforce regulations implementing subtitle C of RCRA who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste or is exempt from regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so.

Additional Resources:

Examples of recycling hazardous secondary materials where it is mentioned that the generator has the burden of proof to show they meet the recycling exclusion they are claiming: ([RO 11185](#)) ([RO 11546](#)) ([RO 11271](#))

Relevant Federal Registers:

[50 FR 642-643](#): Original Definition of Solid Waste final rule where § 261.2(f) was first promulgated. 1/4/1985

[73 FR 67](#): Example of a recycling exclusion that explains that under 40 CFR 261.2(f), documentation is necessary to demonstrate that the conditions of an exclusion have been met. 1/2/2008

[73 FR 64700-64701](#): Definition of Solid Waste final rule where EPA affirmed in preamble that § 261.2(f) applies to all claims that hazardous secondary materials are not solid waste because they are being legitimately recycled and noted that respondents in enforcement cases should be prepared to demonstrate that they meet the terms of the exclusion or exemption, which includes demonstrating that the recycling is legitimate. 10/30/2008

Appendix L: Generator Controlled Exclusion

Appendix L – Under the Control of the Generator Exclusion

Generator Controlled Exclusion (40 CFR 261.4(a)(23)) – Short Form Checklist		
1	<p>Is the hazardous secondary material (HSM) being reclaimed “under the control of the generator?”</p> <p>That is, is the HSM being reclaimed at the generated facility, at a different facility that is under the control of the generator, or under a specific tolling agreement?</p> <p>Note: “reclaimed” does not include recycling that involves use constituting disposal (see Appendix D) or burning for energy recovery (see Appendix E).</p>	<p>If yes, then continue to Question 2.</p> <p>If no, this exclusion does not apply.</p>
2	<p>Is the HSM contained?</p>	<p>If yes, then continue to Question 3.</p> <p>If no, this exclusion does not apply and the uncontained HSM is a solid and hazardous waste subject to all applicable RCRA regulations.</p>
3	<p>Is the HSM being reclaimed in a timely manner (i.e., not speculatively accumulated)?</p>	<p>If yes, continue to Question 4.</p> <p>If no, the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.</p>
4	<p>Did the HSM generator provide notice using the Site ID form (EPA form 8700-12)?</p>	<p>If yes, continue to Question 5.</p> <p>If no, the generator needs to submit notification to use this exclusion.</p>
5	<p>Is the HSM subject to material-specific management standards?</p>	<p>If yes, then the HSM must be managed under the material-specific exclusion and not under the generator-controlled exclusion.</p> <p>If no, continue to Question 6.</p>
6	<p>Does the HSM generator have documentation that the HSM is being legitimately reclaimed?</p>	<p>If yes, then continue to Question 7.</p> <p>If no, then the generator needs to document its legitimacy determination to use this exclusion. If the HSM is not being legitimately recycled, the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.</p>

7	<p>Has the HSM generator complied with the emergency preparedness and response requirements in 40 CFR 261, subpart M?</p>	<p>If yes, the HSM generator meets the conditions of this exclusion.</p> <p>If no, then the generator is not meeting all the conditions of this exclusion and the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.</p>
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40 CFR 261.4(a)(23) HSM Generated and Legitimately Reclaimed Under the Control of the Generator

Hazardous secondary material generated and legitimately reclaimed within the United States or its territories and under the control of the generator, provided that the material complies with 40 CFR 261.4(a)(23)(i) and (ii):

(i)(A) **The hazardous secondary material is generated and reclaimed at the generating facility** (for purposes of this definition, generating facility means all contiguous property owned, leased, or otherwise controlled by the hazardous secondary material generator); or

(B) **The hazardous secondary material is generated and reclaimed at different facilities, if the reclaiming facility is controlled by the generator or if both the generating facility and the reclaiming facility are controlled by a person as defined in 40 CFR 260.10 of this chapter, and if the generator provides one of the following certifications:** “on behalf of [insert generator facility name], I certify that this facility will send the indicated hazardous secondary material to [insert reclaimer facility name], which is controlled by [insert generator facility name] and that [insert name of either facility] has acknowledged full responsibility for the safe management of the hazardous secondary material,” or “on behalf of [insert generator facility name], I certify that this facility will send the indicated hazardous secondary material to [insert reclaimer facility name], that both facilities are under common control, and that [insert name of either facility] has acknowledged full responsibility for the safe management of the hazardous secondary material.” For purposes of this paragraph, “control” means the power to direct the policies of the facility, whether by the ownership of stock, voting rights, or otherwise, except that contractors who operate facilities on behalf of a different person as defined in 40 CFR 260.10 shall not be deemed to “control” such facilities. The generating and receiving facilities must both maintain at their facilities for no less than three years records of hazardous secondary materials sent or received under this exclusion. In both cases, the records must contain the name of the transporter, the date of the shipment, and the type and quantity of the hazardous secondary material shipped or received under the exclusion. These requirements may be satisfied by routine business records (e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations); or

(C) **The hazardous secondary material is generated pursuant to a written contract between a tolling contractor and a toll manufacturer and is reclaimed by the tolling contractor, if the tolling contractor certifies the following:** “On behalf of [insert tolling contractor name], I certify

that [insert tolling contractor name] has a written contract with [insert toll manufacturer name] to manufacture [insert name of product or intermediate] which is made from specified unused materials, and that [insert tolling contractor name] will reclaim the hazardous secondary materials generated during this manufacture. On behalf of [insert tolling contractor name], I also certify that [insert tolling contractor name] retains ownership of, and responsibility for, the hazardous secondary materials that are generated during the course of the manufacture, including any releases of hazardous secondary materials that occur during the manufacturing process". The tolling contractor must maintain at its facility for no less than three years records of hazardous secondary materials received pursuant to its written contract with the tolling manufacturer, and the tolling manufacturer must maintain at its facility for no less than three years records of hazardous secondary materials shipped pursuant to its written contract with the tolling contractor. In both cases, the records must contain the name of the transporter, the date of the shipment, and the type and quantity of the hazardous secondary material shipped or received pursuant to the written contract. These requirements may be satisfied by routine business records (e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations). For purposes of this paragraph, tolling contractor means a person who arranges for the production of a product or intermediate made from specified unused materials through a written contract with a toll manufacturer. Toll manufacturer means a person who produces a product or intermediate made from specified unused materials pursuant to a written contract with a tolling contractor.

(ii) (A) **The hazardous secondary material is contained** as defined in [40 CFR 260.10](#) of this chapter. A hazardous secondary material released to the environment is discarded and a solid waste unless it is immediately recovered for the purpose of reclamation. Hazardous secondary material managed in a unit with leaks or other continuing or intermittent unpermitted releases is discarded and a solid waste.

(B) **The hazardous secondary material is not speculatively accumulated**, as defined in [40 CFR 261.1\(c\)\(8\)](#).

(C) **Notice is provided** as required by [40 CFR 260.42](#) of this chapter.

(D) **The material is not otherwise subject to material-specific management** conditions under paragraph (a) of this section when reclaimed, and it is not a spent lead-acid battery (see [40 CFR 266.80](#) and [40 CFR 273.2](#) of this chapter).

(E) **Persons performing the recycling of hazardous secondary materials under this exclusion must maintain documentation of their legitimacy determination on-site.** Documentation must be a written description of how the recycling meets all three factors in [40 CFR 260.43\(a\)](#) and how the factor in [40 CFR 260.43\(b\)](#) was considered. Documentation must be maintained for three years after the recycling operation has ceased.

(F) **The emergency preparedness and response requirements found in [subpart M](#) of this part are met.**

Additional Resources

Materials being processed in a halogen acid furnace (HAF) are not eligible for the “generator-controlled exclusion” in 40 CFR 261.4(a)(23) and instead are considered to be inherently waste-like materials per 40 CFR 261.2(d)(2). ([RO 14900](#))

Solvent-contaminated wipes that are centrifuged and subsequently reused or recycled may be eligible for the generator-controlled exclusion at 40 CFR 261.4(a)(23) if the generator meets the conditions of the exclusion, including a legitimate recycling determination. ([RO 14912](#))

Relevant Federal Registers:

[73 FR 64667](#): Definition of Solid Waste final rule that first promulgated the exclusion for hazardous secondary material reclaimed under the control of the generator. General discussion of generator-controlled exclusion. [73 FR 64680-64683] 10/30/2008

[80 FR 1694](#): Revisions to the generator-controlled exclusion. [80 FR 1703-1706] 1/13/2015

[83 FR 24664](#): Definition of Solid Waste final rule that implemented the D.C. Circuit court’s vacatur included minor revisions to the generator-controlled exclusion. [83 FR 24665-24666] 5/30/2018

Appendix M: Transfer-Based Exclusion Including Exports

Appendix M – Transfer-Based HSM Exclusion including Exports

Transfer-Based HSM Exclusion (40 CFR 261.4(a)(24)) – Short Form Checklist	
1	<p>Is the hazardous secondary material (HSM) being transferred to another facility for reclamation by the HSM generator?</p> <p>Note: “Reclamation” does not include recycling that involves use constituting disposal (see Appendix D) or burning for energy recovery (see Appendix E).</p>
	<p>If yes, then continue to Question 2.</p> <p>If no, this exclusion does not apply.</p>
2	<p>Is the HSM being exported to another country for reclamation?</p>
	<p>If yes, go to HSM Exported and Reclaimed Short Form Checklist.</p> <p>If no, go to Question 3.</p>
3	<p>Is the HSM being reclaimed in a timely manner (i.e., not speculatively accumulated)?</p>
	<p>If yes, continue to Question 4.</p> <p>If no, the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.</p>
4	<p>Is the HSM only handled by the HSM generator, the transporter, an intermediate facility and/or the reclaimer, and, while in transport, not stored for more than 10 days at a transfer facility?</p>
	<p>If yes, continue to Question 5. If no, the HSM is not eligible for this exclusion.</p>
5	<p>Is the HSM subject to material-specific management standards? Some examples of HSM subject to material specific standards are oil-bearing hazardous secondary materials (40 CFR 261.4(a)(12)); hazardous secondary materials used to make zinc fertilizers (40 CFR 261.4(a)(20)) or cathode ray tubes (40 CFR 261.4(a)(22))</p>
	<p>If yes, then the HSM must be managed under the material-specific exclusion and not under the transfer-based exclusion.</p> <p>If no, continue to Question 6.</p>
6	<p>Is the HSM being legitimately reclaimed?</p>
	<p>If yes, then continue to Question 7.</p> <p>If the HSM is not being legitimately recycled, the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.</p>
7	<p>Has the HSM generator met the following conditions:</p> <p>a) Does the HSM generator ensure the HSM is contained while managed at its facility?</p> <p>b) Has the HSM generator made reasonable efforts to ensure the HSM will be safely managed by any intermediate facility and the reclamation facility and legitimately recycled by</p>
	<p>If the answers to all of the sub-questions under question 7 are yes, then the HSM generator is meeting their obligations under this exclusion.</p> <p>If the answer to any of these sub-questions is no, then the HSM generator is not meeting all the conditions of this exclusion and the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.</p>

	<p>any reclamation facility, if such facilities do not have a RCRA permit?</p> <p>c) If sending their HSM to a facility that does not have a RCRA permit, does the HSM generator keep documentation and certification of any reasonable efforts made for at least 3 years?</p> <p>d) Does the HSM generator keep records of all off-site shipments of HSM for at least 3 years?</p> <p>e) Does the HSM generator keep confirmation of receipts from all reclaimers and any intermediate facilities for at least 3 years?</p> <p>f) Has the HSM generator complied with the emergency preparedness and response requirements in 40 CFR 261, subpart M?</p>	
8	<p>Has the HSM reclaimer and all intermediate facilities met the following conditions:</p> <p>a) Does the reclaimer and any intermediate facility keep records of all HSM received from off-site for at least 3 years?</p> <p>b) If applicable, does the intermediate facility send the HSM to the reclaimer designated by the HSM generator?</p> <p>c) Does the reclaimer and any intermediate facilities send confirmations of receipt to the HSM generator?</p> <p>d) Does the reclaimer and any intermediate facilities manage the HSM at least as protectively as the analogous raw material and is the HSM contained?</p> <p>e) Are the residuals from the reclamation process managed in a way that protects human health and the environment?</p> <p>f) Does the reclaimer and any intermediate facilities have financial assurance?</p>	<p>If the answers to all of the sub-questions under question 8 are yes, then the HSM reclaimer and intermediate facility are meeting their obligations under this exclusion.</p> <p>If the answer to any of these sub-questions is no, then the HSM reclaimer and/or intermediate facility are not meeting all the conditions of this exclusion and the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.</p>
9	<p>Did the HSM generator, the HSM reclaimer, and any intermediate facilities provide notice using the Site ID form (EPA form 8700-12)?</p>	<p>If yes, they are eligible to use the transfer-based exclusion.</p> <p>If no, these facilities need to submit notification to use this exclusion.</p>

40 CFR 261.4(a)(24) – HSM Generated and Transferred for Legitimate Reclamation

Hazardous secondary material that is generated and then transferred to another person for the purpose of reclamation is not a solid waste, provided that:

- (i) **The material is not speculatively accumulated**, as defined in [40 CFR 261.1\(c\)\(8\)](#);
- (ii) **The material is not handled by any person or facility other than the hazardous secondary material generator, the transporter, an intermediate facility or a reclaimer, and, while in transport, is not stored for more than 10 days at a transfer facility**, as defined in [40 CFR 260.10](#), and is packaged according to applicable Department of Transportation regulations at 49 CFR parts [173](#), [178](#), and [179](#) while in transport;
- (iii) **The material is not otherwise subject to material-specific management conditions** under paragraph (a) of this section when reclaimed, and it is not a spent lead-acid battery (see [40 CFR 266.80](#) and [40 CFR 273.2](#));
- (iv) **The reclamation of the material is legitimate**, as specified under [40 CFR 260.43](#);
- (v) **The hazardous secondary material generator satisfies all of the following conditions:**
 - (A) **The material must be contained** as defined in [40 CFR 260.10](#). A hazardous secondary material released to the environment is discarded and a solid waste unless it is immediately recovered for the purpose of recycling. Hazardous secondary material managed in a unit with leaks or other continuing releases is discarded and a solid waste.
 - (B) **Prior to arranging for transport of hazardous secondary materials to a reclamation facility (or facilities) where the management of the hazardous secondary materials is not addressed under a RCRA part B permit or interim status standards, the hazardous secondary material generator must make reasonable efforts to ensure that each reclaimer intends to properly and legitimately reclaim the hazardous secondary material and not discard it, and that each reclaimer will manage the hazardous secondary material in a manner that is protective of human health and the environment.** If the hazardous secondary material will be passing through an intermediate facility where the management of the hazardous secondary materials is not addressed under a RCRA part B permit or interim status standards, the hazardous secondary material generator must make contractual arrangements with the intermediate facility to ensure that the hazardous secondary material is sent to the reclamation facility identified by the hazardous secondary material generator, and the hazardous secondary material generator must perform reasonable efforts to ensure that the intermediate facility will manage the hazardous secondary material in a manner that is protective of human health and the environment. **Reasonable efforts must be repeated at a minimum of every three years** for the hazardous secondary material generator to claim the exclusion and to send the hazardous secondary materials to each reclaimer and any intermediate facility. In making these reasonable efforts, the generator may use any credible evidence available, including information gathered by the hazardous secondary material generator, provided by the

reclaimer or intermediate facility, and/or provided by a third party. **The hazardous secondary material generator must affirmatively answer all of the following questions for each reclamation facility and any intermediate facility:**

(1) **Does the available information indicate that the reclamation process is legitimate pursuant to [40 CFR 260.43](#)?** In answering this question, the hazardous secondary material generator can rely on their existing knowledge of the physical and chemical properties of the hazardous secondary material, as well as information from other sources (e.g., the reclamation facility, audit reports, etc.) about the reclamation process.

(2) **Does the publicly available information indicate that the reclamation facility and any intermediate facility that is used by the hazardous secondary material generator notified the appropriate authorities of hazardous secondary materials reclamation activities pursuant to [40 CFR 260.42](#) and have they notified the appropriate authorities that the financial assurance condition is satisfied per [40 CFR 261.4\(a\)\(24\)\(vi\)\(F\)](#)** In answering these questions, the hazardous secondary material generator can rely on the available information documenting the reclamation facility's and any intermediate facility's compliance with the notification requirements per [40 CFR 260.42](#), including the requirement in § 260.42(a)(5) to notify EPA whether the reclaimer or intermediate facility has financial assurance.

(3) **Does publicly available information indicate that the reclamation facility or any intermediate facility that is used by the hazardous secondary material generator has not had any formal enforcement actions taken against the facility in the previous three years for violations of the RCRA hazardous waste regulations and has not been classified as a significant non-complier with RCRA Subtitle C?** In answering this question, the hazardous secondary material generator can rely on the publicly available information from EPA or the state. If the reclamation facility or any intermediate facility that is used by the hazardous secondary material generator has had a formal enforcement action taken against the facility in the previous three years for violations of the RCRA hazardous waste regulations and has been classified as a significant non-complier with RCRA Subtitle C, does the hazardous secondary material generator have credible evidence that the facilities will manage the hazardous secondary materials properly? In answering this question, the hazardous secondary material generator can obtain additional information from EPA, the state, or the facility itself that the facility has addressed the violations, taken remedial steps to address the violations and prevent future violations, or that the violations are not relevant to the proper management of the hazardous secondary materials.

(4) **Does the available information indicate that the reclamation facility and any intermediate facility that is used by the hazardous secondary material generator have the equipment and trained personnel to safely recycle the hazardous secondary material?** In answering this question, the generator may rely on a description by the reclamation facility or by an independent third party of the equipment and trained personnel to be used to recycle the generator's hazardous secondary material.

(5) If residuals are generated from the reclamation of the excluded hazardous secondary materials, does the reclamation facility have the permits required (if any) to manage the residuals? If not, does the reclamation facility have a contract with an appropriately permitted facility to dispose of the residuals? If not, does the hazardous secondary material generator have credible evidence that the residuals will be managed in a manner that is protective of human health and the environment? In answering these questions, the hazardous secondary material generator can rely on publicly available information from EPA or the state, or information provided by the facility itself.

(C) **The hazardous secondary material generator must maintain for a minimum of three years documentation and certification that reasonable efforts were made for each reclamation facility and, if applicable, intermediate facility where the management of the hazardous secondary materials is not addressed under a RCRA part B permit or interim status standards prior to transferring hazardous secondary material.** Documentation and certification must be made available upon request by a regulatory authority within 72 hours, or within a longer period of time as specified by the regulatory authority. **The certification statement must:**

(1) Include the printed name and official title of an authorized representative of the hazardous secondary material generator company, the authorized representative's signature, and the date signed;

(2) Incorporate the following language: "I hereby certify in good faith and to the best of my knowledge that, prior to arranging for transport of excluded hazardous secondary materials to [insert name(s) of reclamation facility and any intermediate facility], reasonable efforts were made in accordance with [40 CFR 261.4\(a\)\(24\)\(v\)\(B\)](#) to ensure that the hazardous secondary materials would be recycled legitimately, and otherwise managed in a manner that is protective of human health and the environment, and that such efforts were based on current and accurate information."

(D) **The hazardous secondary material generator must maintain at the generating facility for no less than three (3) years records of all off-site shipments of hazardous secondary materials.** For each shipment, these records must, at a minimum, contain the following information:

(1) Name of the transporter and date of the shipment;

(2) Name and address of each reclaimer and, if applicable, the name and address of each intermediate facility to which the hazardous secondary material was sent;

(3) The type and quantity of hazardous secondary material in the shipment.

(E) **The hazardous secondary material generator must maintain at the generating facility for no less than three (3) years confirmations of receipt from each reclaimer and, if applicable, each intermediate facility for all off-site shipments** of hazardous secondary materials.

Confirmations of receipt must include the name and address of the reclaimer (or intermediate

facility), the type and quantity of the hazardous secondary materials received and the date which the hazardous secondary materials were received. This requirement may be satisfied by routine business records (e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations of receipt);

(F) The hazardous secondary material generator must comply with the emergency preparedness and response conditions in subpart M of this part.

(vi) **Reclaimers of hazardous secondary material excluded from regulation under this exclusion and intermediate facilities as defined in [40 CFR 260.10](#) satisfy all of the following conditions:**

(A) The reclaimer and intermediate facility must maintain at its facility for no less than three (3) years records of all shipments of hazardous secondary material that were received at the facility and, if applicable, for all shipments of hazardous secondary materials that were received and subsequently sent off-site from the facility for further reclamation. For each shipment, these records must at a minimum contain the following information:

(1) Name of the transporter and date of the shipment;

(2) Name and address of the hazardous secondary material generator and, if applicable, the name and address of the reclaimer or intermediate facility which the hazardous secondary materials were received from;

(3) The type and quantity of hazardous secondary material in the shipment; and

(4) For hazardous secondary materials that, after being received by the reclaimer or intermediate facility, were subsequently transferred off-site for further reclamation, the name and address of the (subsequent) reclaimer and, if applicable, the name and address of each intermediate facility to which the hazardous secondary material was sent.

(B) The intermediate facility must send the hazardous secondary material to the reclaimer(s) designated by the hazardous secondary materials generator.

(C) The reclaimer and intermediate facility must send to the hazardous secondary material generator confirmations of receipt for all off-site shipments of hazardous secondary materials. Confirmations of receipt must include the name and address of the reclaimer (or intermediate facility), the type and quantity of the hazardous secondary materials received and the date which the hazardous secondary materials were received. This requirement may be satisfied by routine business records (e.g., financial records, bills of lading, copies of DOT shipping papers, or electronic confirmations of receipt).

(D) The reclaimer and intermediate facility must manage the hazardous secondary material in a manner that is at least as protective as that employed for analogous raw material and must be contained. An “analogous raw material” is a raw material for which a hazardous secondary

material is a substitute and serves the same function and has similar physical and chemical properties as the hazardous secondary material.

(E) **Any residuals that are generated from reclamation processes will be managed in a manner that is protective of human health and the environment.** If any residuals exhibit a hazardous characteristic according to [subpart C of 40 CFR part 261](#), or if they themselves are specifically listed in [subpart D of 40 CFR part 261](#), such residuals are hazardous wastes and must be managed in accordance with the applicable requirements of 40 CFR parts 260 through 272.

(F) **The reclaimer and intermediate facility have financial assurance** as required under [subpart H of 40 CFR part 261](#),

(vii) **In addition, all persons claiming the exclusion under this paragraph (a)(24) of this section must provide notification** as required under [40 CFR 260.42](#).

HSM Exported and Reclaimed (40 CFR 261.4(a)(24) and (a)(25)) – Short Form Checklist		
1	Is the HSM being exported and reclaimed outside of the U.S. ?	<p>If yes, then continue to Question 2.</p> <p>If no, then only the conditions of 261.4(a)(24) above would apply.</p>
2	<p>Does the HSM generator comply with the following conditions:</p> <p>a) Is the HSM being reclaimed in a timely manner (i.e., not speculatively accumulated)?</p> <p>b) Is the HSM only handled by the HSM generator, the transporter, an intermediate facility and/or the reclaimer, and, while in transport, not stored for more than 10 days at a transfer facility?</p> <p>c) Is the HSM subject to material-specific management standards?</p> <p style="padding-left: 20px;">i. If yes, then the HSM must be managed under the material-specific exclusion and not under this exclusion. If no, continue to sub-question d.</p> <p>d) Is the HSM being legitimately reclaimed?</p> <p>e) Does the HSM generator ensure the HSM is contained at its facility?</p>	<p>If the answers to all of the sub-questions under question 2 are yes, then the HSM generator is meeting their obligations under this exclusion.</p> <p>If the answer to any of these sub-questions is no, then the HSM generator is not meeting all the conditions of this exclusion and the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.</p>

<p>f) Has the HSM generator made reasonable efforts to ensure the HSM will be legitimately recycled by any intermediate facility and the reclamation facility (except reclaimers outside the U.S. would not have to provide notice and have financial assurance)?</p> <p>g) Does the HSM generator keep documentation and certification of the reasonable efforts made for at least 3 years?</p> <p>h) Does the HSM generator keep records of all off-site shipments of HSM for at least 3 years?</p> <p>i) Does the HSM generator keep confirmation of receipts from all reclaimers and any intermediate facilities for at least 3 years?</p> <p>j) Has the HSM generator complied with the emergency preparedness and response requirements in 40 CFR 261, subpart M?</p> <p>k) Has the HSM generator notified EPA of the intended HSM export at least 60 days before the initial shipment?</p> <p>l) Did the HSM generator submit the notification electronically through EPA's Waste Import Export Tracking System (WIETS)?</p> <p>m) Has EPA provided a complete notification to the country of import and any countries of transit?</p> <p>n) Has the country of import consented to the intended export in writing and does the HSM generator have the EPA Acknowledgment of Consent or if the country of import is an OECD country, is the shipment being sent under tacit consent?</p> <p>o) Does the EPA Acknowledgment of Consent accompany the shipment?</p>	
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	<p>p) If a shipment cannot be delivered, has the HSM generator re-notified EPA and obtained a new EPA Acknowledgment of Consent for the new reclaimer?</p> <p>q) Does the HSM generator keep copies of each notification of intent to export and each EPA Acknowledgment of Consent for a period of three years following receipt of the EPA Acknowledgment of Consent?</p> <p>r) Has the HSM generator filed an annual report on its HSM exports for the preceding year by March 1st?</p>	
3	<p>Did the HSM generator and any intermediate facilities provide notice using the Site ID form (EPA form 8700-12)?</p>	<p>If yes, they are eligible to use the transfer-based exclusion for exports.</p> <p>If no, these facilities need to submit notification to use this exclusion.</p>

40 CFR 261.4(a)(25) HSM Exported and Reclaimed Outside the U.S.

(25) Hazardous secondary material that is exported from the United States and reclaimed at a reclamation facility located in a foreign country is not a solid waste, provided that the hazardous secondary material generator complies with the applicable requirements of [40 CFR 261.4\(a\)\(24\)\(i\)-\(v\)](#) (excepting paragraph (a)(24)(v)(B)(2) for foreign reclaimers and foreign intermediate facilities), and that the hazardous secondary material generator also complies with the following requirements:

(i) **Notify EPA of an intended export before the hazardous secondary material is scheduled to leave the United States. A complete notification must be submitted at least sixty (60) days before the initial shipment is intended to be shipped off-site. This notification may cover export activities extending over a twelve (12) month or lesser period. The notification must be in writing, signed by the hazardous secondary material generator, and include the following information:**

(A) Name, mailing address, telephone number and EPA ID number (if applicable) of the hazardous secondary material generator;

(B) A description of the hazardous secondary material and the EPA hazardous waste number that would apply if the hazardous secondary material was managed as hazardous waste and the U.S. DOT proper shipping name, hazard class and ID number (UN/NA) for each hazardous secondary material as identified in [49 CFR parts 171 through 177](#);

- (C) The estimated frequency or rate at which the hazardous secondary material is to be exported and the period of time over which the hazardous secondary material is to be exported;
- (D) The estimated total quantity of hazardous secondary material;
- (E) All points of entry to and departure from each foreign country through which the hazardous secondary material will pass;
- (F) A description of the means by which each shipment of the hazardous secondary material will be transported (e.g., mode of transportation vehicle (air, highway, rail, water, etc.), type(s) of container (drums, boxes, tanks, etc.));
- (G) A description of the manner in which the hazardous secondary material will be reclaimed in the country of import;
- (H) The name and address of the reclaimer, any intermediate facility and any alternate reclaimer and intermediate facilities; and
- (I) The name of any countries of transit through which the hazardous secondary material will be sent and a description of the approximate length of time it will remain in such countries and the nature of its handling while there (for purposes of this section, the terms “EPA Acknowledgement of Consent”, “country of import” and “country of transit” are used as defined in [40 CFR 262.81](#) with the exception that the terms in this section refer to hazardous secondary materials, rather than hazardous waste):
- (ii) **Notifications must be submitted electronically using EPA's Waste Import Export Tracking System (WIETS), or its successor system.**
- (iii) Except for changes to the telephone number in [40 CFR 261.4\(a\)\(25\)\(i\)\(A\)](#) and decreases in the quantity of hazardous secondary material indicated pursuant to [40 CFR 261.4\(a\)\(25\)\(i\)\(D\)](#), **when the conditions specified on the original notification change** (including any exceedance of the estimate of the quantity of hazardous secondary material specified in the original notification), **the hazardous secondary material generator must provide EPA with a written renotification of the change.** The shipment cannot take place until consent of the country of import to the changes (except for changes to [40 CFR 261.4\(a\)\(25\)\(i\)\(I\)](#) and in the ports of entry to and departure from countries of transit pursuant to [40 CFR 261.4\(a\)\(25\)\(i\)\(E\)](#) has been obtained and the hazardous secondary material generator receives from EPA an EPA Acknowledgment of Consent reflecting the country of import's consent to the changes.
- (iv) Upon request by EPA, the hazardous secondary material generator shall furnish to EPA any additional information which a country of import requests in order to respond to a notification.
- (v) **EPA will provide a complete notification to the country of import and any countries of transit.** A notification is complete when EPA receives a notification which EPA determines satisfies the requirements of [40 CFR 261.4\(a\)\(25\)\(i\)](#). Where a claim of confidentiality is asserted

with respect to any notification information required by [40 CFR 261.4\(a\)\(25\)\(i\)](#), EPA may find the notification not complete until any such claim is resolved in accordance with [40 CFR 260.2](#).

(vi) The export of hazardous secondary material under this paragraph (a)(25) is prohibited unless the country of import consents to the intended export. When the country of import consents in writing to the receipt of the hazardous secondary material, EPA will send an EPA Acknowledgment of Consent to the hazardous secondary material generator. Where the country of import objects to receipt of the hazardous secondary material or withdraws a prior consent, EPA will notify the hazardous secondary material generator in writing. EPA will also notify the hazardous secondary material generator of any responses from countries of transit.

(vii) For exports to OECD Member countries, the receiving country may respond to the notification using tacit consent. If no objection has been lodged by any country of import or countries of transit to a notification provided pursuant to [40 CFR 261.4\(a\)\(25\)\(i\)](#) within thirty (30) days after the date of issuance of the acknowledgement of receipt of notification by the competent authority of the country of import, the transboundary movement may commence. In such cases, EPA will send an EPA Acknowledgment of Consent to inform the hazardous secondary material generator that the country of import and any relevant countries of transit have not objected to the shipment, and are thus presumed to have consented tacitly. Tacit consent expires one (1) calendar year after the close of the thirty (30) day period; renotification and renewal of all consents is required for exports after that date.

(viii) A copy of the EPA Acknowledgment of Consent must accompany the shipment. The shipment must conform to the terms of the EPA Acknowledgment of Consent.

(ix) If a shipment cannot be delivered for any reason to the reclaimer, intermediate facility or the alternate reclaimer or alternate intermediate facility, the hazardous secondary material generator must re-notify EPA of a change in the conditions of the original notification to allow shipment to a new reclaimer in accordance with paragraph (iii) of this section and obtain another EPA Acknowledgment of Consent.

(x) Hazardous secondary material generators must keep a copy of each notification of intent to export and each EPA Acknowledgment of Consent for a period of three years following receipt of the EPA Acknowledgment of Consent. They may satisfy this recordkeeping requirement by retaining electronically submitted notifications or electronically generated Acknowledgements in their account on EPA's Waste Import Export Tracking System (WIETS), or its successor system, provided that such copies are readily available for viewing and production if requested by any EPA or authorized state inspector. No hazardous secondary material generator may be held liable for the inability to produce a notification or Acknowledgement for inspection under this section if they can demonstrate that the inability to produce such copies are due exclusively to technical difficulty with EPA's Waste Import Export Tracking System (WIETS), or its successor system for which the hazardous secondary material generator bears no responsibility.

(xi) Hazardous secondary material generators must file with the Administrator no later than March 1 of each year, a report summarizing the types, quantities, frequency and ultimate destination of all hazardous secondary materials exported during the previous calendar year.

Annual reports must be submitted electronically using EPA's Waste Import Export Tracking System (WIETS), or its successor system. Such reports must include the following information:

(A) Name, mailing and site address, and EPA ID number (if applicable) of the hazardous secondary material generator;

(B) The calendar year covered by the report;

(C) The name and site address of each reclaimer and intermediate facility;

(D) By reclaimer and intermediate facility, for each hazardous secondary material exported, a description of the hazardous secondary material and the EPA hazardous waste number that would apply if the hazardous secondary material was managed as hazardous waste, the DOT hazard class, the name and U.S. EPA ID number (where applicable) for each transporter used, the total amount of hazardous secondary material shipped and the number of shipments pursuant to each notification;

(E) A certification signed by the hazardous secondary material generator which states: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

(xii) All persons claiming an exclusion under this paragraph (a)(25) must provide notification as required by [40 CFR 260.42](#).

Additional Resources:

[Implementation Guide for the DSW Exclusion Found in 40 CFR Section 261.4\(a\)\(24\)](#), August 2022. The litigation history related to DSW, coupled with a state's ability to be more stringent than the federal requirements, has resulted in a complex national landscape for this exclusion, with different states adopting different versions of the rules. This guide provides a plain-language explanation of how the different versions of this exclusion interact, particularly focusing on interstate transport and import/export issues.

From [RO 14812](#), [RO 14813](#), and [RO 14818](#):

- Excluded HSM cannot be commingled with regulated hazardous waste and still maintain the exclusion from the definition of solid waste.

- Excluded HSM may be mixed with hazardous waste, but the resulting mixture is a hazardous waste.
- HSM may not be managed in stationary tanks at transfer facilities. Materials at transfer facilities may be consolidated from smaller to larger containers, but may not be managed in stationary tanks because such tanks are not portable and thus are not part of the 'normal course of transportation'.
- A state that has not adopted the Definition of Solid Waste Rule may impose state requirements on HSM while the material is being transported through that state.
- Facilities who collect HSM from other generators do not meet the definition of a hazardous secondary material generator. These facilities, however, could act as an intermediate facility for hazardous secondary materials managed under the transfer-based exclusion if they meet the terms and conditions for an intermediate facility.

Relevant Federal Registers

[73 FR 64667](#): Definition of Solid Waste final rule that first promulgated the exclusion for hazardous secondary material generated and transferred for reclamation (called the Transfer-Based exclusion). Discussion of the Transfer-Based exclusion [73 FR 64683-64700]. Discussion of reasonable efforts that a HSM generator must make before transferring HSM off-site to be reclaimed. [73 FR 64685-64690] 10/30/2008

[80 FR 1694](#): Definition of Solid Waste final rule that replaced the Transfer-Based exclusion with the Verified Recycler exclusion. Parts of this rule related to the Verified Recycler exclusion were vacated by the United States Court of Appeals for the District of Columbia Circuit on July 7, 2017, as amended on March 6, 2018. Discussion of the Verified Recycler exclusion. [80 FR 1706-1715] 1/13/2015

[83 FR 24664](#): Definition of Solid Waste final rule that implemented the D.C. Circuit court's vacatur, replacing the 2015 verified recycler exclusion with the 2008 transfer-based exclusion, except for certain provisions. The court upheld the containment and emergency preparedness provisions of the 2015 rule, thus including them in the reinstated transfer-based exclusion. Discussion of the reinstated transfer-based exclusion. [83 FR 24665] 5/30/2018

Appendix N: Remanufacturing Exclusion

Appendix N – Remanufacturing HSM Exclusion

Remanufacturing HSM Exclusion (40 CFR 261.4(a)(27)) – Short Form Checklist

No.	Question	Answer
1	Is the hazardous secondary material (HSM) being transferred for remanufacturing by the HSM generator?	If yes, then continue to Question 2. If no, this exclusion does not apply.
2	Is the HSM one of the specifically listed spent solvents ?	If yes, continue to Question 3. If no, this exclusion does not apply.
3	Was the HSM used in a commercial grade for reacting, extracting, purifying, blending chemicals, or rinsing out associated process lines in one of the 4 specifically listed sectors?	If yes, continue to Question 4. If no, this exclusion does not apply.
4	Does the HSM generator send the HSM solvents to a remanufacturer in one of the same 4 sectors?	If yes, continue to Question 5. If no, this exclusion does not apply.
5	After remanufacturing, is the remanufactured solvent used in reacting, extracting, purifying, blending chemicals, or rinsing out associated process lines in one of the 4 specifically listed sectors or used to make a new product and not used for cleaning or degreasing?	If yes, continue to Question 6. If no, this exclusion does not apply.
6	<p>Have both the HSM generator and remanufacturer met the following conditions:</p> <p>a) Have both the HSM generator and remanufacturer notified?</p> <p>b) Did the HSM generator and remanufacturer develop a joint remanufacturing plan? Does the plan contain the required certification statement signed by the remanufacturer?</p> <p>c) Do both the HSM generator and remanufacturer have records of shipments and confirmations of receipts for 3 years?</p> <p>d) Prior to remanufacturing, do both the HSM generator and remanufacturer store the hazardous spent solvents in tanks or containers that meet the RCRA technical</p>	<p>If the answers to all of the sub-questions under question 6 are yes, then the HSM generator and remanufacturer are meeting their obligations under this exclusion. Continue to Question 7.</p> <p>If the answer to any of these sub-questions is no, then the HSM generator and/or remanufacturer are not meeting all the conditions of this exclusion and the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.</p>

	standards and are the tanks and containers labeled?	
7	During remanufacturing, and during storage of the HSM prior to remanufacturing, does the remanufacturer certify that the remanufacturing equipment, vents, and tanks are operating in compliance with CAA or RCRA air emission standards?	If yes, continue to Question 8. If no, the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.
8	Is the HSM being reclaimed in a timely manner (i.e., not speculatively accumulated)?	If yes, the HSM is not a solid waste under this exclusion. If no, the HSM is a solid and hazardous waste subject to all applicable RCRA regulations.

40 CFR 261.4(a)(27) HSM Generated and Transferred for Remanufacturing

Hazardous secondary material that is generated and then transferred to another person for the purpose of remanufacturing is not a solid waste, provided that:

(i) The hazardous secondary material consists of one or more of the following spent solvents:

Toluene, xylenes, ethylbenzene, 1,2,4-trimethylbenzene, chlorobenzene, n-hexane, cyclohexane, methyl tert-butyl ether, acetonitrile, chloroform, chloromethane, dichloromethane, methyl isobutyl ketone, NN-dimethylformamide, tetrahydrofuran, n-butyl alcohol, ethanol, and/or methanol;

(ii) The hazardous secondary material originated from using one or more of the solvents listed in paragraph (a)(27)(i) of this section in a commercial grade for reacting, extracting, purifying, or blending chemicals (or for rinsing out the process lines associated with these functions) in the pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), and/or the paints and coatings manufacturing sectors (NAICS 325510).

(iii) The hazardous secondary material generator sends the hazardous secondary material spent solvents listed in paragraph (a)(27)(i) of this section to a remanufacturer in the pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), and/or the paints and coatings manufacturing sectors (NAICS 325510).

(iv) After remanufacturing one or more of the solvents listed in paragraph (a)(27)(i) of this section, the use of the remanufactured solvent shall be limited to reacting, extracting, purifying, or blending chemicals (or for rinsing out the process lines associated with these functions) in the pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), and the

paints and coatings manufacturing sectors (NAICS 325510) or to using them as ingredients in a product. These allowed uses correspond to chemical functional uses enumerated under the Chemical Data Reporting Rule of the Toxic Substances Control Act (40 CFR parts 704, 710-711), including Industrial Function Codes U015 (solvents consumed in a reaction to produce other chemicals) and U030 (solvents become part of the mixture);

(v) After remanufacturing one or more of the solvents listed in paragraph (a)(27)(i) of this section, **the use of the remanufactured solvent does not involve cleaning or degreasing oil, grease, or similar material from textiles, glassware, metal surfaces, or other articles.** (These disallowed continuing uses correspond to chemical functional uses in Industrial Function Code U029 under the Chemical Data Reporting Rule of the Toxics Substances Control Act.); and

(vi) **Both the hazardous secondary material generator and the remanufacturer must:**

(A) **Notify EPA or the State Director**, if the state is authorized for the program, and update the notification **every two years** per [40 CFR 260.42](#);

(B) **Develop and maintain an up-to-date remanufacturing plan which identifies:**

(1) The name, address and EPA ID number of the generator(s) and the remanufacturer(s),

(2) The types and estimated annual volumes of spent solvents to be remanufactured,

(3) The processes and industry sectors that generate the spent solvents,

(4) The specific uses and industry sectors for the remanufactured solvents, and

(5) **A certification from the remanufacturer** stating “on behalf of [insert remanufacturer facility name], I certify that this facility is a remanufacturer under pharmaceutical manufacturing (NAICS 325412), basic organic chemical manufacturing (NAICS 325199), plastics and resins manufacturing (NAICS 325211), and/or the paints and coatings manufacturing sectors (NAICS 325510), and will accept the spent solvent(s) for the sole purpose of remanufacturing into commercial-grade solvent(s) that will be used for reacting, extracting, purifying, or blending chemicals (or for rinsing out the process lines associated with these functions) or for use as product ingredient(s). I also certify that the remanufacturing equipment, vents, and tanks are equipped with and are operating air emission controls in compliance with the appropriate Clean Air Act regulations under [40 CFR part 60, part 61 or part 63](#), or, absent such Clean Air Act standards for the particular operation or piece of equipment covered by the remanufacturing exclusion, are in compliance with the appropriate standards in [40 CFR part 261, subparts AA \(vents\), BB \(equipment\) and CC \(tank storage\)](#),”;

(C) **Maintain records of shipments and confirmations of receipts for a period of three years from the dates of the shipments;**

(D) **Prior to remanufacturing, store the hazardous spent solvents in tanks or containers that meet technical standards found in subparts I and J of 40 CFR part 261, with the tanks and**

containers being labeled or otherwise having an immediately available record of the material being stored;

(E) During remanufacturing, and during storage of the hazardous secondary materials prior to remanufacturing, the remanufacturer certifies that the remanufacturing equipment, vents, and tanks are equipped with and are operating air emission controls in compliance with the appropriate Clean Air Act regulations under [40 CFR part 60, part 61 or part 63](#); or, absent such Clean Air Act standards for the particular operation or piece of equipment covered by the remanufacturing exclusion, are in compliance with the appropriate standards in [40 CFR part 261 subparts AA \(vents\), BB \(equipment\) and CC \(tank storage\)](#); and

(F) Meet the requirements prohibiting speculative accumulation per [40 CFR 261.1\(c\)\(8\)](#).

Relevant Federal Registers

[80 FR 1694](#): Definition of Solid Waste final rule that established the remanufacturing exclusion for high-value solvents. Specific discussion of the remanufacturing exclusion. [80 FR 1715-1719] 1/13/2015