

US EPA ARCHIVE DOCUMENT

RECLAMATION - SPENT MATERIAL 1

Description of Activity:

Spent lead-acid batteries (spent materials exhibiting the characteristics of corrosivity and EP-toxicity) are split by battery crackers, and their contents (lead and oxides) are stored in a pile. The lead and oxides, which still exhibit EP-toxicity, are then shipped to a secondary lead smelter to recover the lead.

What is the status of the lead-acid batteries?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the lead and oxides (the battery cracker) is subject to requirements under 40 CFR 262. Transporters of the lead and oxides are subject to requirements under 40 CFR 263. Generators recycling the lead and oxides on-site, off-site recyclers and other parties handling the lead and oxides prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the lead and oxides for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues from recycling the lead and oxides must be managed as hazardous wastes if they themselves exhibit any hazardous characteristics.

#### Discussion:

Because battery cracking does not complete the reclamation process, the lead and oxides, like the batteries are characteristic spent materials. Smelting of these materials to recover lead constitutes reclamation of a characteristic spent material. Thus, the lead and oxides are solid wastes and are subject to RCRA Subtitle C regulation.

See Also: Reclamation - Spent Materials 1

RECLAMATION - SPENT MATERIAL 2

Description of Activity:

Spent lead-acid batteries (spent materials exhibiting the characteristics of corrosivity and EP-toxicity) are split by battery crackers, and their contents (lead and oxides) are stored in a pile. The lead and oxides, which still exhibit EP-toxicity, are then shipped to a secondary lead smelter to recover the lead.

What is the status of the used batteries?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

Because the batteries are regenerated by the manufacturer, the activity is classified as reclamation. Characteristic spent materials that are reclaimed are solid wastes. However, EPA has issued an exemption stating that when they are returned to the manufacturer for regeneration, used batteries are not subject to RCRA Subtitle C regulation, unless they are speculatively accumulated (see 40 CFR 261.6(a)(3)(ii)).

RECLAMATION - SPENT MATERIAL 3

Description of Activity:

Used batteries from consumers (spent materials exhibiting the characteristic of EP-toxicity) are returned to a battery manufacturer, who adds electrolytes and replaces bad cells to regenerate the batteries. The restored batteries can then be reused.

What is the status of the used batteries?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.

If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent chromic acid is subject to requirements under 40 CFR 262. Transporters of the spent chromic acid are subject to requirements under 40 CFR 263. Generators recycling the spent chromic acid on-site, off-site recyclers and other parties handling the spent chromic acid prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent chromic acid for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the spent chromic acid (such as the resin) must be managed as hazardous wastes.

#### Discussion:

Because the acid is regenerated, the process is classified as reclamation. Listed spent materials that are reclaimed are solid wastes and are subject to RCRA Subtitle C regulation. (The regenerated acid is no longer a waste, but a product.)

See Also: Reclamation - Sludge 3  
Other - Non-Secondary Material 9  
Other - Non-Secondary Material 12

RECLAMATION - SPENT MATERIAL 4

Description of Activity:

Spent chromic acid from metal finishing plating baths (a spent material listed under EPA Hazardous Waste No. P007) is neutralized and goes through an ion exchange process that removes the chromium. The acid is regenerated and returned to the metal finishing plating bath. The ion exchange resin (a listed sludge -- the residue derived from the treatment of a listed waste) is treated with sodium hydroxide solution to remove any impurities. The resin is then returned to the ion exchange column.

What is the status of the contaminated ion exchange resin?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent toluene is subject to requirements under 40 CFR 262. Transporters of the spent toluene are subject to requirements under 40 CFR 263. Generators recycling the spent toluene on-site, off-site recyclers and other parties handling the spent toluene prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent toluene for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues derived from recycling the spent toluene must be managed as hazardous wastes.

#### Discussion:

Because the toluene is recovered, the process is classified as reclamation. Listed spent materials that are reclaimed are defined as solid wastes and are subject to RCRA Subtitle C regulation.

RECLAMATION - SPENT MATERIAL 5

Description of Activity:

Spent toluene that was used as a solvent in a manufacturing process (a spent material listed under EPA Hazardous Waste No. F005) is adsorbed in an on-site carbon adsorption system. After the adsorption and desorption processes, the solvent is decanted from water and reused in the original process.

What is the status of the spent toluene?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

Discussion:

Because the ethyl alcohol is regenerated, the process is classified as reclamation. Characteristic spent materials that are reclaimed are solid wastes. However, because reclamation of industrial ethyl alcohol is regulated by the Bureau of Alcohol, Tobacco and Firearms, EPA has exempted the material from RCRA Subtitle C regulation.

See Also:

Energy Recovery - Spent Material 1

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RECLAMATION - SPENT MATERIAL 6

Description of Activity:

Industrial ethyl alcohol that has been contaminated by oils, perfumes, or other substances added by a variety of manufacturing practices (a spent material exhibiting the characteristic of ignitability) is returned to the ethyl alcohol manufacturer, where it is distilled and regenerated into new industrial ethyl alcohol. The distillation residue (which also exhibits ignitability) is burned as a fuel.

What is the status of the original contaminated ethyl alcohol?

Questions:

- 16.
1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
  2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
  3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
  4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
  5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

reb 10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent pickle liquor is subject to requirements under 40 CFR 262. Transporters of the spent pickle liquor are subject to requirements under 40 CFR 263. Generators recycling the spent pickle liquor on-site, off-site recyclers and other parties handling the spent pickle liquor prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent pickle liquor for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process -- the surface impoundment itself -- is not regulated. Any residues from recycling must be managed as hazardous wastes.

#### Discussion:

The evaporation that occurs in the surface impoundment is a reclamation step. Listed spent materials that are reclaimed are solid wastes and thus are subject to RCRA Subtitle C regulation.

RECLAMATION - SPENT MATERIAL 7

Description of Activity:

Spent pickle liquor (a spent material listed under EPA Hazardous Waste No. K062) is placed in an impoundment to evaporate water and recover concentrated ferrous chloride, which is used as an ingredient to produce ferric chloride.

What is the status of the spent pickle liquor?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent catalyst is subject to requirements under 40 CFR 262. Transporters of the catalyst are subject to requirements under 40 CFR 263. Generators recycling the catalyst on-site, off-site recyclers and other parties handling the catalyst prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the catalyst for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is exempt from regulation. Residues derived from recycling the catalyst must be managed as hazardous wastes, if they themselves exhibit any hazardous waste characteristics.

#### Discussion:

Because material with value -- vanadium -- is recovered from the catalyst, the activity is classified as reclamation. Characteristic spent materials that are reclaimed are solid wastes, and are thus subject to RCRA Subtitle C regulation.

RECLAMATION - SPENT MATERIAL 8

Description of Activity:

A spent Sieglar Matta polymerization catalyst containing aluminum trichloride and vanadium trichloride from a chemicals manufacturing plant (a spent material exhibiting the characteristic of corrosivity) is processed to recover vanadium for commercial applications.

What is the status of the spent catalyst?

Questions:

1. Is the material that is recycled a secondary material?

yes                       no

If yes, go on to question (2).  
If no, the material is not a solid waste.

2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)

yes                       no

If yes, go on to question (3).  
If no, the material is not a solid waste.

3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?

yes                       no

If yes, the material is not a solid waste.  
If no, go on to question (4).

4. Is the material inherently waste-like (see the list in Exhibit 4)?

yes                       no

If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).

5. Does the activity serve a beneficial use?

yes                       no

If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?

yes                       no

If yes, go on to question (6a).  
If no, go on to question (6b).

- 6a. Is at least 75 percent of the material recycled within one calendar year?

yes                       no

If yes, go on to question (7).  
If no, go on to question (6b).

- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?

yes                       no

If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.

7. Is the material placed on the ground or used in a product that is placed on the ground?

yes                       no

If yes, go on to question (7a).  
If no, go on to question (8).

- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.

8. Is the material used as a fuel or used to produce a fuel?

yes                       no

If yes, go on to question (8a).  
If no, go on to question (9).



8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent solvents is subject to requirements under 40 CFR 262. Transporters of the spent solvents are subject to requirements under 40 CFR 263. Generators recycling the spent solvents on-site, off-site recyclers and other parties handling the spent solvents prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent solvents for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the spent solvents must be managed as hazardous wastes.

#### Discussion:

Because the solvents are regenerated by carbon adsorption and distillation, the activity is defined as reclamation. Listed spent materials that are reclaimed are solid wastes and thus are subject to RCRA Subtitle C regulation.

RECLAMATION - SPENT MATERIAL 9

Description of Activity:

Spent contaminated solvents from the manufacture of printed circuit boards (spent materials listed under EPA Hazardous Waste Nos. F001-F005) are regenerated through activated carbon adsorbers. The resulting liquid is distilled to recover the solvents, which are returned to their original use.

What is the status of the contaminated solvents prior to regeneration by carbon adsorption and distillation?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the contaminated methylene chloride is subject to requirements under 40 CFR 262. Transporters of the contaminated methylene chloride are subject to requirements under 40 CFR 263. Generators recycling the methylene chloride on-site, off-site recyclers and other parties handling the methylene chloride prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the methylene chloride for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues derived from recycling the methylene chloride must be managed as hazardous wastes.

#### Discussion:

Because the contaminated methylene chloride is regenerated, the activity is classified as reclamation. Listed spent materials that are reclaimed are solid wastes and are thus subject to RCRA Subtitle C regulation.

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RECLAMATION - SPENT MATERIAL 10

Description of Activity:

Contaminated methylene chloride that was used as a solvent in industrial applications (a halogenated spent material listed under EPA Hazardous Waste No. F002) is regenerated through distillation and reused in the original process.

What is the status of the contaminated solvent?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the waste acid is subject to requirements under 40 CFR 262. Transporters of the spent acid are subject to requirements under 40 CFR 263. Generators recycling the spent acid on-site, off-site recyclers and other parties handling the spent acid prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent acid for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues from recycling must be managed as hazardous waste, if they themselves exhibit any hazardous waste characteristics.

#### Discussion:

Because the spent acid is regenerated, and material with value -- copper -- is recovered, the activity is classified as reclamation. Characteristic spent materials that are reclaimed are solid wastes and thus are subject to RCRA subtitle C regulation.

See Also:                      Other - Non-Secondary Material 6

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RECLAMATION - SPENT MATERIAL 11

Description of Activity:

Spent acid from a brass mill (a spent material exhibiting the characteristics of corrosivity and EP-toxicity) is reclaimed for its copper content. The copper is then reused as an ingredient in the production of brass. The regenerated acid is returned to its original use.

What is the status of the spent acid?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).  
If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the spent carbon is subject to requirements under 40 CFR 262. Transporters of the spent carbon are subject to requirements under 40 CFR 263. Generators recycling the spent carbon on-site, off-site recyclers and other parties handling the spent carbon prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent carbon for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues derived from recycling the spent carbon must be managed as hazardous wastes.

#### Discussion:

Because the spent carbon is regenerated prior to reuse, the activity is classified as reclamation. Listed spent materials that are reclaimed are solid wastes and thus are subject to RCRA Subtitle C regulation.

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RECLAMATION - SPENT MATERIAL 12

Description of Activity:

Spent carbon from decolorization operations in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds (a spent material listed under EPA Hazardous Waste No. K102) is regenerated and reused in the original process.

What is the status of the spent carbon?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.

If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the acid etching solution is subject to requirements under 40 CFR 262. Transporters of the acid etching solution are subject to requirements under 40 CFR 263. Generators recycling the acid etching solution on-site, off-site recyclers and other parties handling the acid etching solution prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the acid etching solution for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues from recycling the acid etching solution must be managed as hazardous wastes if they themselves exhibit any hazardous waste characteristics.

#### Discussion:

Because material with value -- the zinc -- is reclaimed from the waste, the activity is classified as reclamation. Characteristic spent materials that are reclaimed are solid wastes and are thus subject to RCRA Subtitle C regulation.

#### See Also:

Use Constituting Disposal - Spent Material 1  
Other - Non-Secondary Material 7  
Other - Non-Hazardous Secondary Material 3  
Other - Non-Hazardous Secondary Material 4

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RECLAMATION - SPENT MATERIAL 13

Description of Activity:

An acid etching solution (a spent material exhibiting the characteristic of corrosivity) is reclaimed for its zinc content. The zinc is then used as an ingredient in paint manufacture.

What is the status of the acid etching solution?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent pickle liquor is subject to requirements under 40 CFR 262. Transporters of the spent pickle liquor are subject to requirements under 40 CFR 263. Generators recycling the spent pickle liquor on-site, off-site recyclers and other parties handling the spent pickle liquor prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent pickle liquor for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the spent pickle liquor must be managed as hazardous wastes.

#### Discussion:

Because the pickle liquor is regenerated prior to reuse, the activity is classified as reclamation. Listed spent materials that are reclaimed are solid wastes and are thus subject to RCRA Subtitle C regulation.

RECLAMATION - SPENT MATERIAL 14

Description of Activity:

Spent pickle liquor (a spent material listed under EPA Hazardous Waste No. K062) is regenerated by a liquid-liquid extraction process, and reused in steel pickling operations.

What is the status of the spent pickle liquor?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotlines for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under VFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the spent bright dipping solution is subject to requirements under 40 CFR 262. Transporters of the spent bright dipping solution are subject to requirements under 40 CFR 263. Generators recycling the spent bright dipping solution on-site, off-site recyclers and other parties handling the spent bright dipping solution prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent bright dipping solution for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues derived from recycling the spent bright dipping solution must be managed as hazardous wastes, if they themselves exhibit any hazardous waste characteristics.

#### Discussion:

The initial ion exchange process is a reclamation step. Characteristic spent materials that are reclaimed are solid wastes, and are thus subject to RCRA Subtitle C regulation.

See Also: Reclamation - Spent Material 16  
Reclamation - Spent Material 17

RECLAMATION - SPENT MATERIAL 15

Description of Activity:

Spent bright dipping solution -- a phosphoric acid/nitric acid solution -- (a spent material exhibiting the characteristic of corrosivity) goes through an ion exchange process. Aluminum is recovered from the resin (which is EP-toxic) and is treated with sulfuric acid to produce aluminum sulfate. The liquid (which also exhibits corrosivity) is further evaporated and recondensed to remove impurities, and the purified acid is reused in the bright dipping process.

What is the status of the spent bright dipping solution?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the process exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the liquid is subject to requirements under 40 CFR 262. Transporters of the liquid are subject to requirements under 40 CFR 263. Generators recycling the liquid on-site, off-site recyclers and other parties handling the liquid prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the liquid for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues derived from recycling must be managed as hazardous wastes, if they themselves exhibit any hazardous waste characteristics.

#### Discussion:

The liquid is a product of the reclamation of a characteristic spent material. Such materials are not solid wastes themselves unless they exhibit a hazardous characteristic and (a) are placed on the ground in a manner constituting disposal, (b) are burned as a fuel, or (c) must be further reclaimed before they can be reused. In this case the liquid exhibits corrosivity, and further reclamation steps -- evaporation and recondensation -- are required before the liquid can be reused. Thus the liquids are solid wastes and therefore are subject to RCRA Subtitle C regulation.

See Also: Reclamation - Spent Material 15  
Reclamation - Spent Material 17

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RECLAMATION - SPENT MATERIAL 16

Description of Activity:

Spent bright dipping solution -- a phosphoric acid/nitric acid solution -- (a spent material exhibiting the characteristic of corrosivity) goes through an ion exchange process. Aluminum is recovered from the resin (which is EP-toxic) and is treated with sulfuric acid to produce aluminum sulfate. The liquid (which also exhibits corrosivity) is further evaporated and recondensed to remove impurities, and the purified acid is reused in the bright dipping process.

What is the status of the corrosive liquid that must be evaporated and recondensed before reuse?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
  - 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
  - 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
  - 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).



8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

- as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),
- as an effective substitute for commercial products in a particular function or application, or
- as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

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10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).  
If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

- a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under CFR 261.33),
- a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or
- a scrap metal?
- If any of the above apply, the material is a solid waste. See applicable regulations, below.  
If none of the above apply, go on to question (10b).

10b. Is the material

- either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or
- a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.  
If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the resin is subject to requirements under 40 CFR 262. Transporters of the resin are subject to requirements under 40 CFR 263. Generators recycling the resin on-site, off-site recyclers and other parties handling the resin prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the resin for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues from recycling must be managed as hazardous wastes, if they themselves exhibit any hazardous waste characteristics.

#### Discussion:

The resin is a residue derived from the reclamation of a characteristic spent material. Such residues are solid wastes if they themselves exhibit a hazardous characteristic. In this case, the resin (which exhibits EP-toxicity) is further reclaimed for its aluminum content, which is used in the production of aluminum sulfate. Because the resin is hazardous, it is a solid waste and is subject to RCRA Subtitle C regulation.

See also: Reclamation - Spent Material 15  
Reclamation - Spent Material 16

RECLAMATION - SPENT MATERIAL 17

Description of Activity:

Spent bright dipping solution -- a phosphoric acid/nitric acid solution -- (a spent material exhibiting the characteristic of corrosivity) goes through an ion exchange process. Aluminum is recovered from the resin (which is EP-toxic), and is treated with sulfuric acid to produce aluminum sulfate. The liquid (which also exhibits corrosivity) is further evaporated and recondensed to remove impurities, and the purified acid is reused in the bright dipping process.

What is the status of the resin prior to being reclaimed?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent solvents is subject to requirements under 40 CFR 262. Transporters of the spent solvents are subject to requirements under 40 CFR 263. Generators recycling the spent solvents on-site, off-site recyclers and other parties handling the spent solvents prior to carbon adsorption may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent solvents for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the spent solvents must be managed as hazardous wastes.

#### Discussion:

Because the solvents are regenerated, the process is classified as reclamation. Listed spent materials that are reclaimed are defined as solid wastes and are thus subject to RCRA Subtitle C regulation.

RECLAMATION - SPENT MATERIAL 18

Description of Activity:

Spent solvents contaminated by inks used in the printing and publishing (graphic arts) industry (spent materials listed under EPA Hazardous Waste No. K086) are recovered in carbon adsorption systems, regenerated and returned to their original use.

What is the status of the spent solvents?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

- as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),
- as an effective substitute for commercial products in a particular function or application, or
- as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).  
If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the spent cyanide plating bath is subject to requirements under 40 CFR 262. Transporters of the spent cyanide plating bath are subject to requirements under 40 CFR 263. Generators recycling the spent cyanide plating baths on-site, off-site recyclers and other parties handling the spent cyanide plating baths prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent cyanide plating bath for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the spent cyanide plating baths must be managed as hazardous wastes.

#### Discussion:

Since evaporation of the plating bath solution separates the liquid and solid constituents for recovery and reuse, the evaporation process constitutes reclamation. Listed spent materials that are reclaimed are solid wastes and are thus subject to RCRA Subtitle C regulation.

See also: Other - Non-Secondary 8  
Reclamation - Spent Material 20

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RECLAMATION - SPENT MATERIAL 19

Description of Activity:

A spent cyanide plating bath solution from electroplating operations (a spent material listed under EPA Hazardous Waste No. P007) goes through an evaporation process to separate its liquid and solid constituents. The liquids are purified in activated carbon beds, yielding water, which is recycled to the rinsing operations. The solids are directly recycled to the plating operations.

What is the status of the spent cyanide plating bath?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the liquids is subject to requirements under 40 CFR 262. Transporters of the liquids are subject to requirements under 40 CFR 263. Generators recycling the liquids on-site, off-site recyclers and other parties handling the liquids prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the liquids for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the liquids must be managed as hazardous wastes.

#### Discussion:

The liquids are a product of the reclamation of a listed hazardous waste. Such products are not solid wastes themselves unless they (a) are placed on the ground in a manner constituting disposal, (b) are burned as a fuel, or (c) must be further reclaimed before they can be reused. In this case, the liquids thus must go through activated carbon adsorption before the purified water is recycled to the rinsing operations. Purification of the liquids constitutes further reclamation. Therefore, the liquids are a solid waste and are subject to RCRA Subtitle C regulation.

See also:                      Other - Non-Secondary Material §  
Reclamation - Spent Material 19

RECLAMATION - SPENT MATERIAL 20

Description of Activity:

A spent cyanide plating bath solution from electroplating operations (a spent material listed under EPA Hazardous Waste No. F007) goes through an evaporation process to separate its liquid and solid constituents. The liquids are purified in activated carbon beds, yielding water, which is recycled to the rinsing operations. The solids are directly recycled to the plating operations.

What is the status of the liquid materials that must be purified before they are recycled to the rinsing operations?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 3)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the spent solvents is subject to requirements under 40 CFR 262. Transporters of the spent solvents are subject to requirements under 40 CFR 263. Generators recycling the spent solvents on-site, off-site recyclers and other parties handling the spent solvents prior to distillation may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent solvents for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the spent solvents must be managed as hazardous wastes.

#### Discussion:

Because the solvents are regenerated through distillation, the process is classified as reclamation. Listed spent materials that are reclaimed are solid wastes and are thus subject to RCRA Subtitle C regulation.

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RECLAMATION - SPENT MATERIAL 21

Description of Activity:

Spent solvents from scouring and degreasing operations in the wool industry, contaminated with lanolin and other greases, (spent materials listed under EPA Hazardous Waste Nos. F001-F005) are distilled and reused in the original process.

What is the status of the spent solvents?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the spent acetone is subject to requirements under 40 CFR 262. Transporters of the acetone are subject to requirements under 40 CFR 263. Generators recycling the acetone on-site, off-site recyclers and other parties handling the acetone prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the acetone for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the acetone must be managed as hazardous wastes.

#### Discussion:

Because the acetone is regenerated, the process is defined as reclamation. Listed spent materials that are reclaimed are solid wastes and thus are subject to RCRA Subtitle C regulation.

RECLAMATION - SPENT MATERIAL 22

Description of Activity:

Spent acetone used in cleaning processes (a spent material listed under EPA Hazardous Waste No. F003) is redistilled in an acetone recovery machine and reused for cleanup.

What is the status of the spent acetone?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the plating bath rinsewater is subject to requirements under 40 CFR 262. Transporters of the rinsewater are subject to requirements under 40 CFR 263. Generators recycling the rinsewater on-site, off-site recyclers and other parties handling the rinsewater prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the rinsewater for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues derived from recycling the rinsewater must be managed as hazardous wastes, if they themselves exhibit any hazardous characteristics.

#### Discussion:

The reverse osmosis and evaporation processes are reclamation steps. Characteristic spent materials that are reclaimed are solid wastes and thus are subject to RCRA Subtitle C regulation.

See Also: Other - Non-Secondary Material 14

RECLAMATION - SPENT MATERIAL 23

Description of Activity:

Plating bath rinsewaters from copper and zinc electroplating operations (spent materials exhibiting the characteristic of EP-toxicity) are concentrated in a reverse osmosis system and an evaporator. The distillate, which does not exhibit hazardous characteristics, is recycled as process water. The concentrate, which exhibits the characteristic of EP-toxicity, is recycled to the plating baths.

What is the status of the plating bath rinsewaters?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent methanol is subject to requirements under 40 CFR 262. Transporters of the methanol are subject to requirements under 40 CFR 263. Generators recycling the methanol on-site, off-site recyclers and other parties handling the methanol prior to the on-site recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the methanol for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues derived from recycling the methanol must be managed as hazardous wastes.

#### Discussion:

Because the methanol is regenerated, the activity is classified as reclamation. Listed spent material that are reclaimed are solid wastes and are subject to RCRA Subtitle C regulation.

See Also:                      Other - Non-Secondary Material 15

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RECLAMATION - SPENT MATERIAL 24

Description of Activity:

Spent methanol that was used as a solvent in pharmaceutical manufacturing operations (a spent material listed under EPA Hazardous Waste No. P003) goes through a reclamation process on site that regenerates the methanol to better than 99.5 percent purity. When sent off-site for reuse in a variety of manufacturing processes, it must undergo further reclamation.

What is the status of the spent methanol?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the wastes?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).



8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned, as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the waste etchants is subject to requirements under 40 CFR 262. Transporters of the etchants are subject to requirements under 40 CFR 263. Generators recycling the etchants on-site, off-site recyclers and other parties handling the etchants prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the etchants for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues from recycling the etchants must be managed as hazardous wastes, if they themselves exhibit any hazardous waste characteristics.

#### Discussion:

Because the etchants are regenerated, the process is classified as reclamation. Characteristic spent materials that are reclaimed are solid wastes and thus are subject to RCRA Subtitle C regulation.

See Also:                      Other - Non-Hazardous Secondary Material 8

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RECLAMATION - SPENT MATERIAL 25

Description of Activity:

Waste etchants containing chromium and sulfuric acid from surface-finishing operations, (a spent material exhibiting the characteristics of EP-toxicity and corrosivity), are treated with a substrate, producing trivalent chromium. The other metals (which do not exhibit hazardous characteristics) are transferred to a catholyte and then sold to a secondary smelter for reclamation, leaving a regenerated etchant.

What is the status of the waste etchants?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the contaminated isopropyl alcohol is subject to requirements under 40 CFR 262. Transporters of the alcohol are subject to requirements under 40 CFR 263. Generators recycling the alcohol on-site, off-site recyclers and other parties handling the alcohol prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the alcohol for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Residues derived from recycling the alcohol must be managed as hazardous wastes, if they themselves exhibit any hazardous waste characteristics.

#### Discussion:

Because the isopropyl alcohol is regenerated, the process is classified as reclamation. Characteristic spent materials that are reclaimed are solid wastes. Although industrial ethyl alcohol is exempt from RCRA when regenerated, isopropyl and other alcohols are subject to RCRA Subtitle C regulation.

See Also:                      Reclamation - Spent Material 6  
   Energy Recovery - Spent Material 1

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RECLAMATION - SPENT MATERIAL 26

Description of Activity:

Isopropyl alcohol that has been contaminated by oils, perfumes, or other substances added by a variety of manufacturing practices (a spent material exhibiting the characteristic of corrosivity) is returned to the isopropyl alcohol manufacturer, where it is distilled and regenerated into pure isopropyl alcohol.

What is the status of the contaminated isopropyl alcohol?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent methyl ethyl ketone is subject to requirements under 40 CFR 262. Transporters of the spent methyl ethyl ketone are subject to requirements under 40 CFR 263. Generators recycling the spent methyl ethyl ketone on-site, off-site recyclers and other parties handling the spent methyl ethyl ketone prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent methyl ethyl ketone for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues from recycling the spent methyl ethyl ketone must be managed as hazardous wastes.

#### Discussion:

Because the spent methyl ethyl ketone must be reclaimed before being reused, the process is classified as reclamation. Listed spent materials that are reclaimed are solid wastes and thus are subject to RCRA Subtitle C regulation.

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RECLAMATION - SPENT MATERIAL 27

Description of Activity:

Spent methyl ethyl ketone (a spent material listed under EPA Hazardous Waste No. P005) is reclaimed and used as an adhesive thinner for quick drying when applied on the magnesium casting in the assembling of chain saws and string trimmers.

What is the status of the spent methyl ethyl ketone?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent activated carbon is subject to requirements under 40 CFR 262. Transporters of the spent activated carbon are subject to requirements under 40 CFR 263. Generators recycling the spent activated carbon on-site, off-site recyclers and other parties handling the spent activated carbon prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent activated carbon for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the spent activated carbon must be managed as hazardous wastes.

#### Discussion:

The spent activated carbon is a listed sludge because it is a pollution control residue derived from the treatment of a listed waste. Because the activated carbon is regenerated, the process is defined as reclamation. Listed sludges that are reclaimed are solid wastes and are subject to RCRA Subtitle C regulation.

See Also: Other - Non-Secondary Material 1

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RECLAMATION - SLUDGE 1

Description of Activity:

Spent activated carbon (charcoal) from the pollution control treatment of a listed hazardous waste (a listed sludge) is regenerated.

What is the status of the spent carbon?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).



8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

- as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),
- as an effective substitute for commercial products in a particular function or application, or
- as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. Because the sludge is reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, or any combination of these precious metals, generators, transporters and storers of the sludge are subject to notification requirements under Section 3010 of RCRA. The generator of the sludge is subject to requirements under Subpart B of 40 CFR Part 262. Transporters of the sludge are subject to requirements under 40 CFR 263.20 and 263.21, and persons who store the sludge are subject to requirements under 40 CFR 265.71 and 265.72. In addition, persons who store the wastes are subject to recordkeeping requirements under 40 CFR 266.70 to show that the sludge is not speculatively accumulated. Requirements applicable to precious metal reclamation are summarized under 40 CFR 266, Subpart F.

#### Discussion:

Because materials with value -- the metals -- are recovered from the sludge, the activity is classified as reclamation. Listed sludges that are reclaimed are solid wastes, and are subject to RCRA Subtitle C regulation. However, because precious metals are being recovered, the material is subject only to RCRA requirements pertaining to notification, manifesting (if sent off-site), record-keeping, and overaccumulation.

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RECLAMATION - SLUDGE 2

Description of Activity:

Wastewater treatment sludge from metal finishing operations (a sludge listed under EPA Hazardous Waste No. F006) is reclaimed for the precious metals it contains: gold, silver, platinum, palladium, iridium, osmium, rhodium, or ruthenium. The precious metals are returned to the metal finishing operation.

What is the status of the sludge?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the contaminated ion exchange resin is subject to requirements under 40 CFR 262. Transporters of the resin are subject to requirements under 40 CFR 263. Generators recycling the resin on-site, off-site recyclers and other parties handling the resin prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the resin for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. Any residues derived from recycling the resin must be managed as hazardous wastes.

#### Discussion:

Because the contaminated ion exchange resin is regenerated, the process is classified as reclamation. Listed sludges that are reclaimed are solid wastes and are subject to RCRA Subtitle C regulation. (The ion exchange resin is deemed to be listed because it is derived from treating a listed waste. See 50 FR 619 n.7.)

#### See Also:

Reclamation - Spent Material 4  
Other - Non-Secondary Material 9  
Other - Non-Secondary Material 12

RECLAMATION - SLUDGE 3

Description of Activity:

Spent chromic acid from metal finishing plating baths (a spent material listed under EPA Hazardous Waste No. P007) is neutralized and goes through an ion exchange process that removes the chromium. The acid is regenerated and returned to the metal finishing plating bath. The ion exchange resin (a listed sludge -- the residue derived from the treatment of a listed waste) is treated with sodium hydroxide solution to remove any impurities. It is then returned to the ion exchange column.

What is the status of the contaminated ion exchange resin?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

- as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),
- as an effective substitute for commercial products in a particular function or application, or
- as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).  
If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

- a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),
- a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or
- a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

Because the ion exchange resins are regenerated, the process is classified as reclamation. Characteristic sludges that are reclaimed are not solid wastes and are not subject to RCRA Subtitle C regulation, unless they are speculatively accumulated, or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply in this case, the ion exchange resins are not a solid waste and are not subject to RCRA Subtitle C regulation. If EPA were to list these sludges, the Agency would consider the factors set forth at 50 FR 641.

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RECLAMATION - SLUDGE 4

Description of Activity:

Contaminated ion exchange resins from pollution control measures in the production of phenoxy herbicides and their intermediates (a sludge exhibiting the characteristic of EP-toxicity) are regenerated through the addition of methanol and distillation of the regenerant solution.

What is the status of the contaminated ion exchange resins?

Questions:

1. Is the material that is recycled a secondary material?

yes                     no

If yes, go on to question (2).  
If no, the material is not a solid waste.

2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)

yes                     no

If yes, go on to question (3).  
If no, the material is not a solid waste.

3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?

yes                     no

If yes, the material is not a solid waste.  
If no, go on to question (4).

4. Is the material inherently waste-like (see the list in Exhibit 4)?

yes                     no

If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).

5. Does the activity serve a beneficial use?

yes                     no

If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?

yes                     no

If yes, go on to question (6a).  
If no, go on to question (6b).

- 6a. Is at least 75 percent of the material recycled within one calendar year?

yes                     no

If yes, go on to question (7).  
If no, go on to question (6b).

- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?

yes                     no

If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.

7. Is the material placed on the ground or used in a product that is placed on the ground?

yes                     no

If yes, go on to question (7a).  
If no, go on to question (8).

- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?

yes                     no

If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.

8. Is the material used as a fuel or used to produce a fuel?

yes                     no

If yes, go on to question (8a).  
If no, go on to question (9).

8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.

If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

When reclaimed, characteristic sludges are not solid wastes and are not subject to RCRA Subtitle C regulation unless they are speculatively accumulated, or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply in this case, the emission control dust is not a solid waste and is not subject to RCRA Subtitle C regulation.

RECLAMATION - SLUDGE 5

Description of Activity:

Emission control dust from a primary zinc smelting furnace (a sludge exhibiting the characteristic of EP-toxicity) is reclaimed to recover zinc, which is returned to the zinc production process.

What is the status of the emission control dust?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the spent carbon is subject to requirements under 40 CFR 262. Transporters of the spent carbon are subject to requirements under 40 CFR 263. Generators recycling the spent carbon on-site, off-site recyclers and other parties handling the spent carbon prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the spent carbon for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the spent carbon must be managed as hazardous wastes.

#### Discussion:

Because the spent carbon is regenerated prior to reuse, the activity is defined as reclamation. When reclaimed, listed sludges are solid wastes and thus are subject to RCRA Subtitle C regulation. (The spent carbon is deemed to be listed because it is derived from treating a listed waste. See 50 FR at 619 n.7.)

RECLAMATION - SLUDGE 6

Description of Activity:

Spent carbon from the treatment of wastewater containing explosives (a sludge listed under EPA Hazardous Waste No. K045) is regenerated and reused in the wastewater treatment process.

What is the status of the spent carbon?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

#### Discussion:

Because material with value -- the zinc -- is recovered from the baghouse dusts, the process is classified as reclamation. Characteristic sludges that are reclaimed are not solid wastes and thus are not subject to RCRA Subtitle C regulation unless they are speculatively accumulated or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply to this case, the baghouse dusts are not a solid waste and are thus not subject to RCRA Subtitle C regulation.

RECLAMATION - SLUDGE 7

Description of Activity:

Baghouse dusts from brass mills (a sludge exhibiting the characteristic of EP-toxicity) are reclaimed for their zinc content by secondary zinc smelters. The zinc is sold back to the mill for use as an ingredient in the production of brass.

What is the status of the baghouse dusts?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

Because material with value -- the cadmium -- is recovered, the process is classified as reclamation. Characteristic sludges that are reclaimed are not solid wastes and are not subject to RCRA Subtitle C regulation unless they are speculatively accumulated or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply to this case, the emission control dust is not a solid waste and thus is not subject to RCRA Subtitle C regulation. [Note: This operation would not be defined as a closed-loop process since the cadmium recovery operation is an ancillary unit operation to the zinc smelting furnace.]

RECLAMATION - SLUDGE 8

Description of Activity:

Emission control dust from a zinc smelting furnace (a sludge exhibiting the characteristic of EP-toxicity) is sent to a by-product cadmium recovery operation. The cadmium is then sold to metal finishers for use in electroplating operations.

What is the status of the emission control dust?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the sludge is subject to requirements under 40 CFR 262. Transporters of the sludge are subject to requirements under 40 CFR 263. Generators recycling the sludge on-site, off-site recyclers and other parties handling the sludge prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the sludge for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the sludge must be managed as hazardous wastes.

#### Discussion:

Because this sludge is dewatered and materials with value -- the metals -- are recovered from it, the process is classified as reclamation. Listed sludges that are reclaimed are solid wastes and thus are subject to RCRA Subtitle C regulation.

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RECLAMATION - SLUDGE 9

Description of Activity:

Electroplating sludge from the wastewater treatment processes of an electronics and computer manufacturing firm (a sludge listed under EPA Hazardous Waste No. P006) is dewatered and reclaimed for its metals content, after which the metals (mostly copper) are sold.

What is the status of the sludge?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                       no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                       no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                       no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                       no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                       no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                       no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                       no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                       no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                       no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                       no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                       no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                     no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                     no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                     no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

Because material with value -- the zinc -- is recovered from the flue dusts, the process is classified as reclamation. Characteristic sludges that are reclaimed are not solid wastes and are not subject to RCRA Subtitle C regulation unless they are speculatively accumulated or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply in this case, the flue dusts are not a solid waste and are thus not subject to RCRA Subtitle C regulation.

RECLAMATION - SLUDGE 10

Description of Activity:

Flue dusts from secondary copper smelters (a sludge exhibiting the characteristic of EP-toxicity) are reclaimed for their zinc content by secondary zinc smelters. The zinc is sold for use as an ingredient in the production of galvanized metals.

What is the status of the flue dusts?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.

If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

Because material with value -- zinc -- is recovered from the electrostatic precipitator ash, the process is classified as reclamation. Characteristic sludges that are reclaimed are not solid wastes, and are not subject to RCRA Subtitle C regulation, unless they are speculatively accumulated, or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply in this case, the ash is not a solid waste and thus is not subject to RCRA Subtitle C regulation.

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RECLAMATION - SLUDGE 11

Description of Activity:

Electrostatic precipitator ash from refuse incineration flue gas in municipal incinerators (a sludge exhibiting the characteristic of EP-toxicity) is extended with a weak acidic solution to dissolve zinc. The zinc is then extracted with an organic solvent and stripped electrolytically, yielding 100 percent pure zinc that can be used in the production of galvanized metals.

What is the status of the electrostatic precipitator ash?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33,

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

Discussion:

Because separation of the metals and oxides does not complete the reclamation process, the metals, like the unprocessed dross skimmings, are a characteristic by-product. Smelting of the metals to recover copper and zinc constitutes reclamation. Characteristic by-products that are reclaimed are not solid wastes and are not subject to RCRA Subtitle C regulation.

See Also:                      Use Constituting Disposal - By-Product 1  
   Use Constituting Disposal - By-Product 2

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RECLAMATION - BY-PRODUCT 1

Description of Activity:

Brass dross skimmings (a by-product exhibiting the characteristic of EP-toxicity) go through a processor which separates the metals from the oxides. The oxides (which exhibit EP-toxicity) are then sold to a fertilizer company that uses them as an ingredient in fertilizer. The fertilizer, which also exhibits EP-toxicity, is sold to the general public. The metals, which also exhibit EP-toxicity, are sold to a secondary smelter for recovery of copper and zinc.

What is the status of the metals?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the column bottoms and heavy ends is subject to requirements under 40 CFR 262. Transporters of the column bottoms and heavy ends are subject to requirements under 40 CFR 263. Generators recycling the column bottoms and heavy ends on-site, off-site recyclers and other parties handling the column bottoms and heavy ends prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the column bottoms and heavy ends for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling must be managed as hazardous wastes.

Discussion:

Stripping of volatile materials and distillation to recover hexachlorobutadiene are reclamation steps. Listed by-products that are reclaimed are solid wastes and are subject to RCRA Subtitle C regulation.

See Also: Other - Non-Secondary Material 5

RECLAMATION - BY-PRODUCT 2

Description of Activity:

Column bottoms and heavy ends containing hexachlorobutadiene from the production of perchlorethylene (a by-product that is listed under EPA Hazardous Waste No. K030) are stripped of volatile materials (which are recycled back into the perchlorethylene process) and further distilled to recover marketable hexachlorobutadiene.

What is the status of the column bottoms and heavy ends?

Questions:

1. Is the material that is recycled a secondary material?  
[X] yes [ ] no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
[X] yes [ ] no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
[ ] yes [X] no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
[ ] yes [X] no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
[X] yes [ ] no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
[X] yes [ ] no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
[X] yes [ ] no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
[ ] yes [ ] no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
[ ] yes [X] no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
[ ] yes [ ] no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
[ ] yes [X] no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the still bottoms is subject to requirements under 40 CFR 262. Transporters of the still bottoms are subject to requirements under 40 CFR 263. Generators recycling still bottoms on-site, off-site recyclers and other parties handling the still bottoms prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the still bottoms for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the still bottoms must be managed as hazardous wastes.

#### Discussion:

Because materials with value -- the chlorides -- are reclaimed from the still bottoms, the process is classified as reclamation. Listed wastes that are reclaimed are solid wastes, and are thus subject to RCRA Subtitle C regulation.

See Also: Reclamation - By-Product 4

RECLAMATION - BY-PRODUCT 3

Description of Activity:

Still bottoms from the distillation of benzyl chloride in chemical manufacturing (a by-product listed under EPA Hazardous Waste No. K014) are reclaimed for their chloride content. (The reclamation operation is not carried out in an incinerator.) The chlorides are used as an ingredient to produce hydrochloric acid, which is used as a feedstock in chemical manufacturing.

What is the status of the still bottoms prior to being reclaimed?

Questions:

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1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
  2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
  3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
  4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
  5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the process exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

Because materials with value -- the chlorides -- are reclaimed from the still bottoms, the process is classified as reclamation. Characteristic by-products that are reclaimed are not defined as solid wastes and thus are not subject to RCRA Subtitle C regulation unless they are speculatively accumulated, or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply in this case, the still bottoms are not a solid waste and thus are not subject to RCRA Subtitle C regulation.

See Also: Reclamation - By-Product 3

RECLAMATION - BY-PRODUCT 4

Description of Activity:

Still bottoms from chemicals manufacturing (a by-product exhibiting the characteristic of corrosivity) are reclaimed through a chemical treatment process for their chloride content. (The reclamation operation is not carried out in an incinerator.) The chlorides are used as an ingredient to produce hydrochloric acid, which is used as a feedstock in chemical manufacturing.

What is the status of the still bottoms prior to being reclaimed?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

2. The generator of the chlorinated hydrocarbon waste is subject to requirements under 40 CFR 262. Transporters of the chlorinated hydrocarbon waste are subject to requirements under 40 CFR 263. Generators recycling the chlorinated hydrocarbon waste on-site, off-site recyclers and other parties handling the chlorinated hydrocarbon waste prior to smelting may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the chlorinated hydrocarbon waste for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the chlorinated hydrocarbon waste must be managed as hazardous wastes.

#### Discussion:

Because materials with value -- the lead -- are recovered from the waste, the process is classified as reclamation. Listed by-products that are reclaimed are solid wastes and are thus subject to RCRA Subtitle C regulation.

RECLAMATION - BY-PRODUCT 5

Description of Activity:

Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production (by-products listed under EPA Hazardous Waste No. K073) are smelted to recover lead.

What is the status of the chlorinated hydrocarbon waste?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (3), below.

2. The generator of the sludges is subject to requirements under 40 CFR 262. Transporters of the sludges are subject to requirements under 40 CFR 263. Generators recycling the sludges on-site, off-site recyclers and other parties handling the sludges prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the sludges for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. The reclamation process itself is not regulated. Any residues derived from recycling the sludges must be managed as hazardous wastes.

#### Discussion:

Because material with value -- mercury -- is recovered from the waste, the process is classified as reclamation. Listed by-products that are reclaimed are solid wastes and are thus subject to RCRA Subtitle C regulation.

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RECLAMATION - BY-PRODUCT 6

Description of Activity:

Chloralkali sludges (by-products listed under EPA Hazardous Waste No. K071) are dewatered, roasted, condensed and demisted to recover mercury.

What is the status of the sludges?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

- as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),
- as an effective substitute for commercial products in a particular function or application, or
- as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).  
If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

- a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),
- a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or
- a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.  
If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

2. The generator of the polypropylene residues is subject to requirements under 40 CFR 262. Transporters of the polypropylene are subject to requirements under 40 CFR 263. Generators recycling the polypropylene on-site, off-site recyclers and other parties handling the polypropylene prior to recycling may be subject to storage facility requirements under 40 CFR 264 and 265 Subparts A through L. Generators who store the polypropylene for no more than 90 days in tanks or containers prior to recycling are subject only to the requirements for accumulation under 40 CFR 262.34. Residues from recycling the polypropylene must be managed as hazardous wastes if they themselves exhibit any hazardous waste characteristics.

#### Discussion:

The processor who separates the residual solvents and the polymeric residues from the polypropylene residues is reclaiming this material. When reclaimed, a characteristic by-product ordinarily is not defined as a solid waste. However, because a product of the reclamation process is incorporated into a product that is placed on the ground, this activity starts a chain that results in use constituting disposal. Hence the polypropylene is a solid waste, and is subject to RCRA Subtitle C regulation.

See Also: Other - Non-Secondary Material 13  
Other - Non-Hazardous Secondary Material 6  
Other - Non-Hazardous Secondary Material 7

RECLAMATION - BY-PRODUCT 7

Description of Activity:

Steam stripper condensate from the petroleum refining process, contaminated with phenol (a by-product exhibiting the characteristic of ignitability) goes through a solvent extraction process to recover the phenol, which is reused in petroleum refining to improve the viscosity of lube oils.

What is the status of the steam stripper condensate prior to solvent extraction?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

- as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),
- as an effective substitute for commercial products in a particular function or application, or
- as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).  
If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

- a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),
- a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or
- a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

Because solvent extraction recovers materials of value -- phenol -- from the condensate, the process is defined as reclamation. Characteristic by-products that are reclaimed are not defined as solid wastes and thus are not subject to RCRA Subtitle C regulation unless they are speculatively accumulated, or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply in this case, the steam stripper condensate is not a solid waste and thus is not subject to RCRA Subtitle C regulation.

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RECLAMATION - BY-PRODUCT 8

Description of Activity:

A waste stream containing hexachlorobenzene and hexachlorobutadiene from the manufacture of chloromethanes (by-products exhibiting the characteristic of ignitability) is distilled. The distillate, which is also ignitable, is chlorinated in a nickel tube to produce carbon tetrachloride. The carbon tetrachloride is then marketed.

What is the status of the waste stream containing hexachlorobenzene and hexachlorobutadiene?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

Distillation of the waste stream containing hexachlorobenzene and hexachlorobutadiene constitutes a reclamation step. Characteristic by-products that are reclaimed are not defined as solid wastes and are not subject to Subtitle C regulation unless they are speculatively accumulated, or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply in this case, the initial waste stream is not a solid waste and thus is not subject to RCRA Subtitle C regulation.

#### See also:

Other - Non-Secondary Material 10

RECLAMATION - BY-PRODUCT 9

Description of Activity:

Polyurethane residues (a by-product exhibiting the characteristic of ignitability) are distilled to recover methylene chloride for use in industrial applications.

What is the status of the polyurethane residues?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

Because material with value -- the methylene chloride -- is recovered, the distillation is classified as a reclamation step. Characteristic by-products that are reclaimed are not defined as solid wastes and are not subject to RCRA Subtitle C regulation unless they are speculatively accumulated or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply to this case, the polyurethane residues are a solid waste and thus are not subject to RCRA Subtitle C regulation.

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RECLAMATION - BY-PRODUCT 10

Description of Activity:

Solder drosses that are generated in soldering integrated circuits to printed circuit boards (a by-product exhibiting the characteristic of EP-toxicity) are sold to recyclers who recover lead in secondary smelters. The lead is sold to battery manufacturers for use in the production of lead-acid batteries.

What is the status of the solder drosses?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

- as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),
- as an effective substitute for commercial products in a particular function or application, or
- as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).  
If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

- a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),
- a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or
- a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.  
If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

#### Discussion:

Because material with value -- lead -- is recovered from the solder drosses, the process is classified as reclamation. Characteristic by-products that are reclaimed are not solid wastes and are not subject to RCRA Subtitle C regulation unless they are speculatively accumulated or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply in this case, the solder drosses are not a solid waste and thus are not subject to RCRA Subtitle C regulation.

RECLAMATION - BY-PRODUCT 11

Description of Activity:

Acid digested coal ash (a by-product exhibiting the characteristic of EP-toxicity) goes through an adsorptive bubble technique, adding the sulfite ion and adjusting the solution pH, to recover metal cations of copper, cobalt, nickel, manganese, iron, lead, zinc, vanadium, aluminum, and chromium.

What is the status of the acid digested coal ash?

Questions:

1. Is the material that is recycled a secondary material?  
 yes                     no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes                     no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes                     no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes                     no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes                     no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes                     no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes                     no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes                     no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes                     no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes                     no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes  no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

- as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),
- as an effective substitute for commercial products in a particular function or application, or
- as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes  no

If yes, the activity is reclamation. Go on to question (10a).  
If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

- a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),
- a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or
- a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes  no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

Discussion:

Because materials with value -- the metal cations -- are recovered as end products from the acid digested coal ash, the activity is classified as reclamation. Characteristic by-products that are reclaimed are not solid wastes and are not subject to RCRA Subtitle C regulation, unless they are speculatively accumulated, or the product of reclamation is used in a manner constituting disposal or burned as a fuel. Since these exceptions do not apply in this case, the acid digested coal ash is not a solid waste and thus is not subject to RCRA Subtitle C regulation.

RECLAMATION - SCRAP METAL 1

Description of Activity:

Non-magnetic automobile shredder rejects (scrap metals exhibiting the characteristic of EP-toxicity) go through a water elutriator system to recover nonferrous mixed metals (which also exhibit EP-toxicity), which are sent to a secondary smelter for reclamation.

What is the status of the automobile shredder rejects?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4):
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

Because materials with value -- the nonferrous mixed metals -- are recovered from the shredder rejects, the process is classified as reclamation. Characteristic scrap metals that are reclaimed are defined as solid wastes but are currently exempt from RCRA Subtitle C regulation (see 40 CFR 261.6(a)(3)(iv)).

See Also:                      Reclamation - Scrap Metal 3

RECLAMATION - SCRAP METAL 2

Description of Activity:

Scrap metal that exhibits the characteristic of EP-toxicity is smelted to recover lead. The lead is sold and used to manufacture batteries.

What is the status of the scrap metal?

Questions:

1. Is the material that is recycled a secondary material?

yes             no

If yes, go on to question (2).  
If no, the material is not a solid waste.

2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)

yes             no

If yes, go on to question (3).  
If no, the material is not a solid waste.

3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?

yes             no

If yes, the material is not a solid waste.  
If no, go on to question (4).

4. Is the material inherently waste-like (see the list in Exhibit 4)?

yes             no

If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).

5. Does the activity serve a beneficial use?

yes             no

If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?

yes             no

If yes, go on to question (6a).  
If no, go on to question (6b).

- 6a. Is at least 75 percent of the material recycled within one calendar year?

yes             no

If yes, go on to question (7).  
If no, go on to question (6b).

- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?

yes             no

If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.

7. Is the material placed on the ground or used in a product that is placed on the ground?

yes             no

If yes, go on to question (7a).  
If no, go on to question (8).

- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?

yes             no

If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.

8. Is the material used as a fuel or used to produce a fuel?

yes             no

If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste.  
If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste.  
If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.  
If no, the material is regulated. See item (2), below.

#### Discussion:

Because materials with value -- lead -- are recovered from the scrap metal, the process is classified as reclamation. Hazardous scrap metals that are reclaimed are solid wastes. However, EPA has exempted scrap metals from RCRA Subtitle C regulation.

RECLAMATION - SCRAP METAL 3

Description of Activity:

Non-magnetic automobile shredder rejects (scrap metals exhibiting the characteristic of EP-toxicity) go through a water elutriator system to recover nonferrous mixed metals (which also exhibit EP-toxicity), which are sent to a secondary smelter for reclamation.

What is the status of the recovered mixed metals?

Questions:

1. Is the material that is recycled a secondary material?  
 yes             no  
If yes, go on to question (2).  
If no, the material is not a solid waste.
2. Is the material hazardous? (A material is hazardous if it is listed under 40 CFR 261.30-.33 or exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and is not specifically excluded from the definition of hazardous waste under 40 CFR 261.4(b).)  
 yes             no  
If yes, go on to question (3).  
If no, the material is not a solid waste.
3. Is the material specifically excluded from the definition of solid waste under 40 CFR 261.4(a) (see the list in Exhibit 5)?  
 yes             no  
If yes, the material is not a solid waste.  
If no, go on to question (4).
4. Is the material inherently waste-like (see the list in Exhibit 4)?  
 yes             no  
If yes, the material is a solid waste. See applicable regulations, below.  
If no, go on to question (5).
5. Does the activity serve a beneficial use?  
 yes             no  
If yes, go on to question (6).  
If no, the activity is not recycling, and the material is a solid waste. See applicable regulations, below.

6. Is there a feasible means for recycling the waste?  
 yes             no  
If yes, go on to question (6a).  
If no, go on to question (6b).
- 6a. Is at least 75 percent of the material recycled within one calendar year?  
 yes             no  
If yes, go on to question (7).  
If no, go on to question (6b).
- 6b. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed as a hazardous waste in 40 CFR 261.33?  
 yes             no  
If yes, go on to question (7).  
If no, the practice is speculative accumulation, and the material is a solid waste. See applicable regulations, below.
7. Is the material placed on the ground or used in a product that is placed on the ground?  
 yes             no  
If yes, go on to question (7a).  
If no, go on to question (8).
- 7a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 that is produced for application to the land?  
 yes             no  
If yes, the material is not a solid waste.  
If no, the activity results in use constituting disposal and the material is a solid waste. See applicable regulations, below.
8. Is the material used as a fuel or used to produce a fuel?  
 yes             no  
If yes, go on to question (8a).  
If no, go on to question (9).

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8a. Is the material a commercial chemical product that exhibits a hazardous waste characteristic or is listed in 40 CFR 261.33 and that is produced to be burned as fuel?

yes                       no

If yes, the material is not a solid waste. If no, the activity results in burning for energy recovery, and the material is a solid waste. See applicable regulations, below.

9. Is the material used or reused

as an ingredient in an industrial process to make a new product without intermediate reclamation (regeneration or recovery of materials),

as an effective substitute for commercial products in a particular function or application, or

as a substitute for raw material feedstock in the primary production process from which it was generated, without being first reclaimed (a closed-loop process)?

If any of the above apply, the activity is use or reuse, and the material is not a solid waste. If none of the above apply, go on to question (10).

10. Is the material regenerated or are materials with value recovered from the original material?

yes                       no

If yes, the activity is reclamation. Go on to question (10a).

If no, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

10a. Is the material

a hazardous waste listed under 40 CFR 261.31 or 261.32 (this provision excludes commercial chemical products, which are listed under 40 CFR 261.33),

a spent material exhibiting one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, or

a scrap metal?

If any of the above apply, the material is a solid waste. See applicable regulations, below.

If none of the above apply, go on to question (10b).

10b. Is the material

either a sludge or a by-product that exhibits one of the characteristics of a hazardous waste given in 40 CFR 261.20-.24, and that is not listed under 40 CFR 261.31-.32, or

a commercial chemical product that exhibits a hazardous waste characteristic or is listed under 40 CFR 261.33?

If any of the above apply, the material is not a solid waste.

If none of the above apply, please review the definitions of activities in this manual and reconsider your answers, or call the RCRA Hotline for assistance.

#### Applicable Regulations:

1. Is the waste exempt from regulation (see the list in Exhibit 6)?

yes                       no

If yes, the material is not regulated.

If no, the material is regulated. See item (2), below.

#### Discussion:

The mixed metals are products of the reclamation of a characteristic scrap metal. However, they are still scrap metals exhibiting the characteristic of EP-toxicity, and must undergo further reclamation at the secondary smelter. Characteristic scrap metals that are reclaimed are defined as solid wastes but are currently exempt from RCRA Subtitle C regulation.