

Chapter XXVIII Precious Metals

A. GENERAL.

1. Hazardous wastes that contain economically significant amounts of gold, silver, platinum, and other precious metals that are destined to be reclaimed, are defined by EPA as “recyclable materials” [40 CFR 261.6 (a)(1)]. DRMOs that generate or store such recyclable materials must comply with 40 CFR 266.70 and adhere to the following requirements:

- a. Meet RCRA notification requirements.
- b. Manifest HW that is to be reclaimed.
- c. Maintain records showing:

(1) Volume of recyclable material stored at beginning of calendar year.

(2) Amount of recyclable material generated or received during calendar year.

(3) Amount of recyclable material remaining at end of the year.

2. **The 75 Percent Rule.**

a. DRMOs that recycle 75 percent of recyclable materials accumulated during a calendar year is not involved in speculative accumulation. If a DRMO fails to recycle at least 75 percent of recyclable materials per year, it becomes subject to all applicable provisions of parts 262 through 265, 270, and 124 of 40 CFR.

b. Accountable records, per paragraph A1c above, should be kept to demonstrate that the DRMO is not engaged in speculative accumulation. The records should show that 75 percent or more of the materials are recycled within a calendar year beginning on 1 January.

B. SPECIFIC.

1. **Silver Bearing Hypo Solution.** Spent hypo solution must be manifested by the generating activity if applicable under RCRA regulations. Exceptions to the manifesting requirements are granted in 40 CFR 261.5 to Conditionally Exempt Small Quantity Generators (CE-SQG). See DRMS-I 6050.1, Chapter IV, paragraph S for additional guidance on unmanifested waste. Additional guidance on turn-in of hypo solution is found in DRMS-I 4160.14, Volume VIII, Chapter 4, paragraph E5.

2. **Management of Steel Wool Silver Recovery Cartridges.**

a. *Cartridges managed as material.* It is important that spent steel wool cartridges (SCL P06) are always filled with liquid before storage and transport to preclude the potential of fire. Steel wool cartridges will not be regulated under RCRA if they have been flushed of all hypo solution and refilled with water for storage and transport.

(1) This guidance is based on the following interpretation. We consider spent hypo solution a hazardous waste because it is a spent material exhibiting a characteristic. However, once the silver has been removed from the hypo solution and the silver is in the cartridges, it is not regulated. This is because it is no longer a solid waste but a material reclaimed from a hazardous waste and meets the criteria of 40 CFR 261.3(c)(2)(i), e.g., material reclaimed for beneficial use and not burned for energy recovery or used in a manner constituting disposal.

(2) Additionally, final rule guidance in the Federal Register, Volume 50, No. 3, 4 Jan 85, states: “Similarly, reclaimed metals that are suitable for direct use, or that only have to be refined

to a usable product, are products and not wastes.” The silver contained in the cartridges is picked up by our refining contractor and the silver does not require further reclaiming before recovery is complete.

b. **Cartridges managed as hazardous waste.** Silver recovery cartridges containing spent hypo solution will be managed under RCRA, 40 CFR, Subpart F of Part 266, if they exhibit one or more of the hazardous waste characteristics.

c. To manage cartridges as material, the generating activity must identify on the DTID that the cartridges have been flushed and are filled with water and not hypo solution. If flushing cannot be determined or if the cartridge is filled with hypo solution, then regulate the cartridges as hazardous waste.

d. State regulations may differ. Even though the cartridge has been flushed of all hypo solution and the liquid is only water, some states may still regulate the cartridge as a waste. Contact the appropriate state regulatory agencies to determine what state regulations apply.

e. **Manifesting instructions and shipping.**

(1) Cartridges that are not hazardous waste and are not regulated by the state in which they are generated do not need to be manifested with one exception. If the state the recovery contractor is located in regulates the cartridges, i.e., California, they must then be manifested. As recovery contractors change from year to year, specific instructions as to whether to manifest and what to put on the manifest will be provided by DRMS with each delivery order message.

(2) Cartridges which are hazardous waste and/or are regulated by the state they are generated in will be manifested as “hazardous waste liquid, n.o.s., 9, NA 3082, III, (D011).” Land disposal restriction notifications, as stated in 40 CFR 268.7(a)(1), should be sent with cartridges which are determined to be regulated waste.

f. Each cartridge that is determined to be a regulated waste, shipped under contract, must be marked in accordance with 40 CFR 262.32 and 49 CFR 172.304. Cartridges shipped within California must also be marked according to Title

22, Section 68504(c), California Code of Regulations.

g. The proper shipping name for cartridges shipped to California, from states that do not regulate them as waste, should be non-RCRA Hazardous Waste Liquid, as cartridges must always be filled with liquid to preclude possible fire.

h. California does not require incoming shipments from other states to use California's manifest form. The California manifest form is required for shipments originating in California.

3. **Passive Silver Cells.** Passive silver cells (SCL PSC) submitted for analysis passed TCLP analysis. Therefore, passive silver cells should not be managed as HW, unless otherwise dictated by state/local regulations. They must be drained and stored/shipped dry in order to retain this regulatory status.

4. **Film.** Film samples submitted for analysis to determine the toxicity of silver did not exhibit the characteristics of toxicity in accordance with 40 CFR 261.24, Table I. Therefore, film should not be managed as a HW.

5. **Film Ash.** Film ash samples submitted for analysis to determine the toxicity of the following metals: Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver, did not exhibit the characteristics of toxicity in accordance with 40 CFR 261.24, Table I. Therefore, film ash should not be managed as a HW.

6. **Silver Bearing Batteries.** See DRMS-I 6050.1, Chapter XXI, paragraph H6 and DRMS-I 4160.14, Volume VIII, Chapter 4.

7. **Dental Amalgam.** This precious metal bearing commodity has been tested and evaluated, and found not to be economical for precious metals recovery. This material is not to be collected for precious metals recovery, but received for other aspects of disposal such as RTDS, recycling and hazardous disposal. See DoD 4160.21-M, Chapter 10, for further guidance.

8. Additional precious metals guidance is contained in DRMS-I 4160.14, Volume VIII.

9. Overseas DRMOs wanting to ship hazardous waste precious metals bearing materials to CONUS are to contact the receiving DRMO to verify material can be received. If receiving DRMO cannot accommodate the issuing DRMOs material, contact DRMS-LMS for further guidance.

10. Questions concerning the Precious Metals Program should be directed to DRMS-LMS, (DSN) 932-7071/7293.