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REGULATORY INTERPRETATION OF A MOBILE MERCURY RETORTING PROCESS  
FOR MERCURY CONTAMINATED SOILS

United States Environmental Protection Agency  
Washington, D.C. 20460  
Office of Solid Waste and Emergency Response

November 29, 1993

Mr. William F. Sutton  
President  
Mercury Recovery Services  
700 Fifth Avenue  
New Brighton, Pennsylvania 15066

Dear Mr. Sutton:

In your letter of August 27, 1993 to Sylvia Lowrance, you requested an EPA interpretation of the classification of your mobile mercury retorting process for mercury contaminated soils from natural gas pipeline meters as a recycling process. You also indicate in your letter an interest on the part of natural gas pipeline companies to understand permitting requirements for field operation of your process.

In response to your request, EPA has reviewed the written materials that you have submitted with your letter and during your meeting with EPA Headquarters on August 25, 1993. EPA recognizes that mercury roasting and retorting are two methods of reclamation, a type of recycling (40 CFR §261.1(c)(7)).

Under Federal RCRA Subtitle C regulations, recycling processes are generally not subject to regulation including permitting requirements (40 CFR §261.6(c)(1)). However, recycling in industrial furnaces or boilers represents an exception to this general rule (see 40 CFR Part 266 Subpart H generally). In particular, roasting and retorting operations meet the definition of an industrial furnace (40 CFR §260.10) since they are types of smelting, melting or refining furnaces (see footnote 1). However, if the retorting operation is burning solely for metal recovery, it is conditionally exempt from most of the boiler and industrial furnace (BIF) requirements including the requirement to obtain a

permit (40 CFR §266.100(c)).

To meet the conditions of the exemption, the owner/operator of a smelting, melting or refining device must submit a one-time written notice to the Director stating that: 1) the owner/operator claims the exemption, 2) the hazardous waste is being burned solely for metal recovery and contains recoverable levels of metals, and 3) the owner/operator will comply with sampling, analysis and recordkeeping requirements (40 CFR §266.100(c)(1). (The owner/operator must also meet the management standards prior to burning (40 CFR 266.101) and the regulation of residues (40 CFR 266.112).)

In order to be considered burning solely for metal recovery, an owner/operator of an industrial furnace (e.g., smelting, melting or refining furnace) must meet two conditions. First, hazardous waste burned in the furnace, as fired, must have no more than a total of 500 ppm of organic compounds listed in 40 CFR Part 261 Appendix VIII. Second, the hazardous waste must have heating value of less than 5000 BTU/lb. 40 CFR §266.100(c)(2).

Note that if the hazardous waste as fired in the furnace exceeds a total of 500 ppm Appendix VIII organic constituents by weight, it is considered burning for destruction and therefore cannot qualify for the metal recovery exemption under the BIF rule. Alternatively, if the waste is greater than 5000 BTU/lb heating value, it is considered to be burned as a fuel. In either event, the industrial furnace would be subject to 40 CFR Part 266 Subpart H BIF requirements, including permit requirements. The hazardous waste to be burned in the furnace may be treated either below 500 ppm Appendix VIII organic constituents or less than 5000 BTU/lb by bona fide treatment that removes or destroys organic constituents. If this type of partial treatment were to occur prior to entry of the waste into an industrial furnace, then the industrial furnace could still be eligible for the metal recovery exemption under the BIF rule. However, blending to dilute below either of these levels is prohibited. 40 CFR §266.100(c)(2).

Based on information provided in your incoming, it appears that your operation is a roasting/retorting operation that may be exempt from RCRA permitting requirements. However, this regulatory determination will depend on situation specific factors such as the type of material fed into the retorting unit. Therefore, you should consult with the appropriate EPA Region or State for particular

regulatory determinations regarding specific sites.

Please be aware that under Section 3006 of RCRA (42 U.S.C. Section 6926) individual States can be authorized to administer and enforce their own hazardous waste programs in lieu of the Federal program. When States are not authorized to administer their own program, the appropriate EPA Regional office administers the program and is the appropriate contact for any case-specific determinations. Please also note that under Section 3009 of RCRA (42 U.S.C. Section 6929) States retain authority to promulgate regulatory requirements that are more stringent than Federal regulatory requirements.

If you have any additional questions regarding this matter, please contact Mike Petruska of my staff at (202) 260-8551.

Sincerely,  
Michael Shapiro, Director  
Office of Solid Waste

cc: Waste Combustion Permit Writers Workgroup

- 1 Roasting involves the heating of a material such as an ore or metal compound in order to remove impurities such as sulfides from metal compounds such as mercury sulfides. Roasters are a type of smelting, melting and refining furnace listed in 40 CFR 260.10. A retorter is a furnace where metal compounds are refined from a metal oxide to metal form through distillation and condensation. EPA believes that retorters are also a type of pyrometallurgical device that meets the definition of smelting, melting or refining furnace even though they are not specifically listed in 40 CFR 260.10 as an example of such devices.