

March 10, 2000

Frank Termine
Molten Salt Oxidation Corporation
33 Bonair Drive
Warminster, PA 18974

Dear Mr. Termine:

This letter is in response to your September 22, 1999 letter regarding the permitting of your molten salt oxidation (MSO) process to treat hazardous waste under the Resource Conservation and Recovery Act (RCRA). You asked various permitting questions which appear below, along with our responses. However, please note that the final decisions regarding the permitting of your unit should be made by the appropriate permitting authority (i.e., the region or state where you apply for a RCRA permit).

You asked:

- 1) Assume we feed 1,000,000 lb/yr of a completely organic hazardous waste to the unit.
 - a) Would the unit be permitted under Subpart X? The case as presented in the attached paper appears pretty compelling.

Answer: The decision on how to permit your unit (i.e., subpart X -vs- subpart O) would be made by the appropriate permitting authority. As presented, we believe your unit would be permitted under the 40 CFR part 264 subpart X regulations. There appears to be no flame combustion occurring within the process.

- b) What performance standards should we expect?

Answer: The regulations under subpart X do not refer to specific technical standards, as do other hazardous waste management units, but specify Aenvironmental performance standards@ under which units must be operated to be protective of human health and the environment (see 40 CFR 264.601). Subpart X permits Aare to contain such terms and provisions as necessary to protect human health and the environment.@ The regulations direct the permitting agency to look at the requirements (e.g., performance standards, operating parameters, monitoring requirements, etc.) from other sections in the regulations when developing appropriate permit conditions for miscellaneous units.

Section 264.601 was recently modified (see 64 FR 52993, September 30, 1999) to include a reference to the new part 63 subpart EEE standards (NESHAPS: Final Standards for Hazardous Waste Air Pollutants for Hazardous Waste Combustors; Final Rule; September 30, 1999; 64 FR 52828 (HWC MACT Rule)). The section now states that permit terms and provisions Amust include those requirements of subparts I through O and subparts AA through CC of this part, part 270, part 63 subpart EEE, and part 146 of this chapter that are appropriate for the miscellaneous unit being permitted.@ We expect that the permit writer would look to the part 63 subpart EEE standards for new incinerators in setting standards for your unit.

c) What specific air emissions standards would we have to meet? In terms of lb/hr, tons/yr, ppm, or whatever.

Answer: Again, the final decision on what emissions standards would apply to your unit would be made by the appropriate permitting authority. We expect that the permit writer would look to the part 63 subpart EEE standards for new incinerators in setting standards for your unit. Those standards are found at 40 CFR 63.1203(b) (see 64 FR 53040, September 30, 1999). They are:

Dioxin/Furan	0.20 ng TEQ/dscm
Mercury	45 µg/dscm
Particulate Matter	34 mg/dscm (0.015 gr/dscf)
Semivolatile Metals	24 µg/dscm
(lead and cadmium)	
Low Volatile Metals	97 µg/dscm
(arsenic, beryllium, and chromium)	
Hydrochloric Acid/Chlorine Gas	21ppmv
Hydrocarbons	10 ppmv (or 100 ppmv carbon monoxide)

Destruction and Removal Efficiency 99.99% for each specific principal organic hazardous constituent, except 99.9999% for specified dioxin-listed wastes.

d) Would the spent salt be considered hazardous or not? If the spent salt is considered hazardous, what regulation is making it that? How would we have to dispose of it?

Answer: The spent salt may be considered hazardous waste. Section 261.3(c)(2) states that any residue generated from the treatment, storage, or disposal of hazardous wastes is a hazardous waste. All residues that are generated are considered to be derived-from the original hazardous waste that was treated. However, if the original waste treated was only a characteristic waste, the spent salt would not be considered a hazardous waste if it does not exhibit a characteristic (see 40 CFR 261.3(d)).

If the original waste treated was a listed waste, the spent salt would also be considered a listed waste. The spent salt would carry the same waste codes and would need to meet the appropriate land disposal restriction (LDR) standards prior to land disposal.

e) Are there any other permitting issues that we need to be concerned with?

Answer: Yes. Your permitting authority may require that a risk assessment be completed in order to assure that the applied standards are fully protective of human health and the environment. Subpart X specifies that the permittee must examine the potential for health risks caused by human exposure to waste constituents (see '264.601(a)(8), (b)(10), and (c)(6)). Furthermore, '270.23 (Specific part B information requirements for miscellaneous units) states that Ainformation on the potential pathways of exposure of humans or environmental receptors to hazardous waste ...@ be provided (see '270.23(c)). The decision as to whether or not a risk assessment will be required will be made on a site-specific basis by the permitting authority.

2) Suppose the waste stream in #1 contained some chlorinated hydrocarbons. Does that change any of the answers in #1 a-e?

Answer: No. We believe the answers would not change.

3) Suppose the waste stream in #1 contained some heavy metals.

a) Which heavy metals are of a concern to permit writers?

Answer: The short answer is all of them, since metals are not destroyed by treatment. A permit writer should consider which metals are in the waste streams and set appropriate limits to control stack emissions. For additional discussions on metals and metal emissions see "AGuidance on Collection of Emissions Data to Support Site-Specific Risk Assessments at Hazardous Waste Combustion Facilities, Peer Review Draft; August 1998; EPA530-D-98-002" and the preamble to the HWC MACT rule (64 FR 52845, September 30, 1999).

b) How does that change any of the answers in #1 a-e?

Answer: We believe the answers would not change.

4) Suppose the waste stream in #1 contained some PCBs. How does that change any of the answers in #1 a-e?

Answer: Polychlorinated biphenyls (PCBs) are regulated under the Toxic Substances Control Act (TSCA). If your waste stream contains PCBs above regulatory levels, your unit would need both a Resource Conservation and Recovery Act (RCRA) permit and TSCA permit in order to operate. The TSCA regulations are found in 40 CFR part 761. For more information on specific TSCA requirements, please contact the appropriate permitting authority, or you can contact Dody Dodahara in the Environmental Protection Agency's (EPA's) Office of Pollution Prevention and Toxics at (202) 260-3959.

5) Suppose the waste stream in #1 contained some low level radioactive materials and is now considered LLMW. How does that change any of the answers in #1 a-e?

Answer: Mixed waste (waste that is both radioactive and is a RCRA hazardous waste) is dually regulated in most states by both the EPA and the Nuclear Regulatory Commission (NRC). In addition to meeting all RCRA requirements, you would need to meet NRC requirements imposed by your license for managing this waste.

Thank you for the opportunity to respond to your questions. If you have any further questions, please contact Andrew O=Palko of my staff at (703) 308-8646.

Sincerely,

signed by Matt Hale for

Elizabeth A. Cotsworth, Director
Office of Solid Waste