

MEMORANDUM

SUBJECT: Hazardous Waste Generated in Laboratories

FROM: Elizabeth Cotsworth, Director
Office of Solid Waste

TO: RCRA Senior Policy Advisors, EPA Regions I-X

The purpose of this memo is to reiterate and clarify the Environmental Protection Agency's (EPA) policies under the Resource Conservation and Recovery Act (RCRA) hazardous waste management program regarding: 1) who may make a hazardous waste identification, and 2) the regulatory status of on-site treatment of hazardous waste. This memo is aimed primarily toward academic institutions that generate hazardous waste in laboratories.

Background Academic institutions across the country vary in size and complexity. Many are large quantity generators (LQGs) of hazardous waste, generating ≥ 1000 kg/month; or >1 kg of acute hazardous waste/month. LQGs must comply with the regulations in 40 CFR 262.34(a) for the accumulation of waste on-site. Hazardous wastes produced by LQGs may be accumulated on-site without interim status or a permit for 90 days or less. Many other academic institutions are small quantity generators (SQGs), generating >100 kg/month but <1000 kg/month of hazardous waste. SQGs must comply with 40 CFR 262.34(d) for accumulation of waste on-site. Hazardous wastes produced by SQGs may be accumulated on-site without interim status or a permit for 180 days or less.

Many of the hazardous wastes managed at academic institutions are produced and initially accumulated in research laboratories. The satellite accumulation provisions of 40 CFR 262.34(c) allow for reduced requirements for hazardous waste accumulated in containers at or near any point of generation. Both LQGs and SQGs may take advantage of the reduced requirements while hazardous waste is in satellite accumulation areas, such as laboratories, provided the waste is managed in accordance with the provisions of 40 CFR 262.34(c) (e.g., properly labeled).

Who may determine whether a waste is hazardous? 40 CFR Section 262.11 states, “A person who generates a solid waste...must determine if that waste is a hazardous waste...” A “person” is defined as “an individual, trust, firm, joint stock company, Federal Agency, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body” (40 CFR Part 262.10). A “person” is not limited to a specific individual. Therefore, any individual who is part of the “person” (as defined) may make a hazardous waste determination. The hazardous waste determination is not limited to the individual who actually produces a solid waste. For example, Environmental, Health & Safety (EH&S) personnel may make a hazardous waste determination for a waste produced by an individual researcher, as long as the EH&S personnel and the researcher are part of the same “person” (e.g., academic institution).

Of course, EPA’s objective is to ensure accurate hazardous waste identification. Proper waste identification is important in order to allow the generator to comply with applicable requirements such as those for labeling and marking pursuant to 40 CFR 262.34. In short, it is the “person’s” responsibility to ensure that the individuals within the organization who are making the hazardous waste determination obtain all the necessary information from whichever individuals within the organization have that information. In practice, a hazardous waste determination in a laboratory setting would ideally be a collaborative effort between the individual researcher who produces the waste and EH&S personnel who may make the hazardous waste determination. That is, EH&S personnel making a hazardous waste determination should receive sufficiently accurate and detailed information about each waste from the individual researcher to ensure accurate waste identification.

We realize that having addressed the question of who may make a hazardous waste determination may also raise the question of where a hazardous waste determination is made. The issue is whether a hazardous waste determination must be made in the laboratory (typically a satellite accumulation area) or at a central accumulation area. EPA is not addressing this question in this memo, but intends to address this question in a future guidance or rulemaking.

What is the regulatory status of on-site treatment of hazardous waste? EPA has consistently interpreted its regulations to allow generators to treat hazardous waste in their accumulation tanks and containers, without obtaining a permit or having interim status. This is true for both LQGs and SQGs. Of course, all generators are allowed to treat only the hazardous waste that is generated on-site. A permit would be required to store and/or treat hazardous waste that is consolidated from off-site locations. Examples of treatment that may be conducted in accumulation tanks and containers include precipitating heavy metals from solutions, and oxidation/reduction reactions.

There are three reasons for this interpretation. First, we discussed the relationship between storage, treatment and disposal in the preamble of the January 12, 1981, Federal Register (46 FR 2806-2808). In that preamble, we noted that treatment can occur at a permitted disposal or storage facility without affecting that facility’s regulatory status. We believe that treatment activities should similarly not change the regulatory status of generators. Since the regulations

do not impose additional standards for treatment when it occurs at a storage facility that requires a permit, there is no basis for regulating treatment more strictly at a storage facility which does *not* require a permit, such as a generator's accumulation area.

Second, the provisions of 40 CFR 262.34(a) for LQGs and 40 CFR 262.34(d) for SQGs require generators to comply with most of the technical standards for containers (Part 265 Subpart I) and tanks (Part 265 Subpart J) with which an interim status storage facility would have to comply. Of the provisions for treatment, storage and disposal facilities only the financial responsibility, closure/post-closure and corrective action regulations would not apply to generators that treat hazardous waste.

Third, treatment often renders waste less hazardous, or more amenable for further treatment, recycling, shipment off site, etc. A requirement for generators to obtain a permit for any on-site treatment would very likely discourage such practices.

Finally, with regard to who may treat a hazardous waste, a generator is defined as "any person, by site, whose act or process produces hazardous waste..." (40 CFR. 2601.10). Therefore, again, any individual who is part of the "person," as defined, including EH&S personnel, is allowed to conduct treatment, provided that the individual complies with the training requirements of 40 CFR 262.34(a)(4) for LQGs , or 40 CFR 262.34(d)(5) for SQGs. Additionally, nothing in 40 CFR 262.34 precludes generators from transferring waste between tanks or containers to facilitate storage or treatment.

It should be noted, however, that some forms of treatment by generators are not allowed without a permit. For example, incineration is regulated by specific standards for incinerators (Part 264/265 Subpart O), and burning waste in boilers and industrial furnaces is regulated under the specific standards for those units (Part 266 Subpart H).

If the waste is being treated on-site and the treatment residue is destined to be land disposed, the generator still has responsibilities under the land disposal restrictions (LDR) program. The LDRs require that hazardous waste must be treated by a specified method or to a specified constituent concentration level before it (or its residue) may be placed in the land. The generator must know the treatment standard applicable to his/her waste and either treat to meet the treatment standard or send it to a treater to do so. Generators who treat waste on-site to remove a hazardous characteristic must prepare a waste analysis plan if treatment occurs in units that do not require a RCRA permit (see 40 CFR 262.34(a)(4) for LQGs, and 40 CFR 262.34(d)(4) for SQGs). In addition, there are some generator paperwork requirements associated with the LDRs (40 CFR 268.7(a)). More information about the LDR program may be found in "Land Disposal Restrictions: Summary of Requirements" at <http://www.epa.gov/epaoswer/hazwaste/ldr/new.htm>.

Some treatment units have been and continue to be specifically excluded from permitting. For example, owners and operators of elementary neutralization units are not required to obtain a

RCRA permit (40 CFR 270.1(c)(2)(v)). Similarly, many forms of on-site recycling of hazardous waste can be performed without a permit, since EPA generally does not regulate the recycling process itself. However, any accumulation of hazardous waste prior to placement in an exempt unit or prior to recycling would be regulated under 40 CFR 262.34, as discussed above.

On a related matter, for those LQGs that accumulate hazardous waste for longer than 90 days, or SQGs that accumulate hazardous waste for longer than 180 days, and therefore require a permit, the Agency recently proposed a rule that would streamline the permitting requirements for facilities that store and/or treat their hazardous waste on-site in tanks and containers (October 12, 2001; 66 FR 52192). The Agency anticipates finalizing the rule in early 2003.

Please note that this letter discusses only the federal hazardous waste regulations. States that are authorized to implement the RCRA program may have regulations that are different than the federal regulations provided they are not less stringent than the federal program. If you have any questions, please contact Kristin Fitzgerald at (703) 308-8286 or fitzgerald.kristin@epa.gov.

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