



Hazardous Waste Determination Evaluation

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Fact Sheet

Introduction

- EPA's Resource Conservation and Recovery Act (RCRA) Subtitle C regulations are designed as a cradle-to-grave system to ensure proper hazardous waste (HW) management and thereby protect human health and the environment. RCRA's HW determination regulations (40 CFR 262.11), initially developed in 1980, require entities that generate waste to determine if it is a HW. EPA is concerned that HW generators that do not properly identify wastes as hazardous will not follow the relevant RCRA regulations, and may introduce hazardous wastes to the environment. An EPA review of RCRA compliance data for 2008 and 2009 suggested that HW generators have twice as many HW determination violations as any other type of RCRA violation.
- Most states are authorized to implement the RCRA regulations. EPA Headquarters and Regions define the national program regulations, but primarily work in an oversight and support role, e.g., offering interpretation of the federal regulations, compiling and tracking compliance data, and providing compliance assistance materials and information.
- An independent evaluator (Industrial Economics or IEC) conducted a program evaluation of the HW determination program. The specific goals of the evaluation were to determine the extent to which the federal HW determination program is working, identify potential problems that HW generators experience, and assess whether the Office of Resource Conservation and Recovery (ORCR) and the Office of Enforcement and Compliance Assurance (OECA) can improve the regulations and better assist HW generators in achieving compliance.

Evaluation Questions

1. What is the national non-compliance rate with the HW determination regulations? What is the non-compliance rate with the HW determinations by sector?
2. What obstacles or challenges do HW generators face in complying with the HW determination regulations?
3. What firm characteristics influence HW generators' compliance with the HW determination regulations?
4. How do state program activities influence HW generators' compliance with the HW determination regulations?
5. How do assistance providers/HW service providers/trade associations' activities influence HW generators' compliance with the HW determination regulations?
6. What changes are recommended by stakeholders to make the national HW program more successful?

<http://www.epa.gov/evaluate>

For more information on completed evaluations at EPA or the Evaluation Support Division, visit the above link.

Evaluation Methods

To answer the evaluation questions, the evaluators and EPA used a variety of methods, including:

- 34 interviews and open discussions with various stakeholders, including HW generators, HW service providers, industry representatives, state regulatory agencies, assistance providers, and EPA Regions
- An analysis of non-compliance data regarding HW determination violations
- A survey of federal facilities that generate HW and
- Three case studies of state HW programs.

Key Findings

- The average non-compliance rate with RCRA HW determination regulations across the United States is 34 percent, based on an analysis of HW determination violations identified during EPA or EPA-contractor led comprehensive evaluation investigations recorded in RCRAInfo over the last 10 years. Note that there are a number of uncertainties and limitations associated with these data (e.g., the inspections are not conducted at a representative sample of facilities).
- Among the sectors with the greatest overall number of HW determination violations, the following five sectors have the highest HW determination non-compliance rates (i.e., the greatest number of violations per inspection conducted):
 1. Printed circuit board manufacturing
 2. Copper foundries
 3. Hospitals
 4. Colleges, universities, and professional schools
 5. Fabricated structural metal manufacturing
- Overall, the top ten challenges stakeholders identified as leading to inaccurate hazardous waste determination are:
 1. Difficulty making waste determinations for listed wastes
 2. Reliance upon third parties (vendors, suppliers, disposers) for information used to make determinations
 3. Lack of training/staff turnover at generators
 4. The need for industry specific guidance and outreach
 5. Lack of consistency of the regulations and how to interpret them at the different levels of government (federal, state, county)
 6. Generally confusing and difficult to follow regulations (e.g., narrative interpretations, references to previous sections)
 7. The need for more interpretation/guidance/definitive answers from EPA
 8. Difficulty understanding the hazardous waste recycling regulations
 9. Lack of awareness on the part of generators that they are generating a hazardous waste at all and therefore are subject to RCRA
 10. Cost constraints in making hazardous waste determinations (e.g., high cost associated with testing a waste sample)
- State HW programs are diverse in role and scope, offering different strategies for HW determination assistance and compliance monitoring. The three states profiled in this evaluation combine compliance monitoring and assistance approaches, such as:
 - Industry-specific fact sheets, made available online for a broad array of industries and processes
 - Outreach targeting new businesses to alert them to their requirements
 - Generator self-certification programs
 - HW generator training programs

- Requirements for generators to notify the state of their waste streams, and state audits of the waste streams
- Inspections conducted by state and local inspectors
- Assistance providers, HW service providers, and trade associations are deeply embedded in generators HW determination process. HW service providers, in particular, have a strong influence on HW determination, since many generators have essentially subcontracted out their HW determination function.
- During interviews and discussions, stakeholders had many suggestions for making the national HW determinations program more successful. The top five stakeholder recommendations are :
 1. Provide, improve, and/or increase the guidance available for making HW determinations
 2. Simplify the regulations in general
 3. Define and clearly interpret specific sections of the regulations
 4. Address situations where applying the regulations is not practical
 5. Increase collaboration with the regulated industries

Evaluator Recommendations to EPA

Based on the information gathered via interviews and discussions, the survey of federal facilities, and the three state case studies, the evaluators developed their own recommendations for EPA. The evaluators suggest nine recommendations for EPA, divided into two groups:

Changes EPA can Make Directly

1. To the extent possible, simplify and improve the regulations, and provide sector-specific guidance
2. Establish a direct line of communication between EPA and HW stakeholders
3. Make guidance documents easily accessible via RCRA Online and make the generator website more user-friendly
4. Improve tracking of compliance rates for HW determination

Opportunities to Work with Other Stakeholders

5. Identify opportunities to improve communications with state agencies to inform regulatory interpretations
6. Improve coordination with other agencies whose regulations overlap with those of EPA
7. Encourage best practices among states
8. Promote best practices from federal facilities
9. Develop a communications strategy to increase awareness of compliance monitoring presence and enforcement actions related to HW determination

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