Division of Environmental Response and Revitalization
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Environmental Protection Agency

Hazardous Waste Evaluation and Use of Generator Knowledge in Complying with OAC rule 3745-52-11

THIS POLICY DOES NOT HAVE THE FORCE OF LAW **Hazardous Waste Program**

This document will assist generators in making a hazardous waste evaluation by clarifying some types of information and documentation you can consider and maintain when relying upon generator knowledge in determining if a waste is hazardous. This guidance is not intended to include your waste evaluation obligations under the Land Disposal Restrictions (LDR) contained in Ohio Administrative Code (OAC) chapter 3745-270, or the types and sources of information necessary to make a LDR determination.

What Are the Waste Generator's Obligations?

Accurately Evaluate your Waste

As a generator of a "waste" (as defined in OAC rule ***3745-51-02***) you are required by OAC rule ***3745-52-11*** to accurately evaluate your waste to determine if it is hazardous. The determination must be made at the point of generation, before any dilution, mixing, or other alteration of the waste. The following sequence should be used when making a hazardous waste determination:

- Determine if the waste is excluded from regulation by OAC rule ***3745-51-04***.
- If it is not excluded:
    - Determine if the waste meets any of the listing descriptions found in OAC rules ***3745-51-30 to 3745-51-35***.
    - Determine if the waste exhibits a hazardous characteristic as identified in OAC rules ***3745-51-21 to 3745-51-24*** using one, or a combination of both, of the methods described in the next section.

What are the Two Waste Evaluation Methods for Determining a Hazardous Characteristic?

A generator can use one of two waste evaluation methods, or a combination of the methods, to help satisfy the requirements of OAC rule ***3745-52-11***. The two waste evaluation methods for determining a hazardous characteristic are laboratory analysis of a representative waste sample and generator knowledge (i.e., evaluating the materials and/or processes). These methods are described below.

Generator Knowledge

Using Generator Knowledge

This method allows a generator to apply knowledge of the hazardous characteristic(s) of the waste in light of the materials or the processes used. This waste evaluation method is often referred to as "generator knowledge." Acceptable knowledge may include:

- process knowledge (e.g., information about chemical feedstocks and other inputs to the production process);
- knowledge of products, by-products, and intermediates produced by the manufacturing process;
- chemical or physical characterization of wastes;
- information on the chemical and physical properties of the chemicals used or produced by the process or otherwise contained in the waste;
- testing that illustrates the properties of the waste;
- or other reliable and relevant information about the properties of the waste or the waste's constituents.

Laboratory Analysis of a Representative Waste Sample

Alternatively, or in the absence of adequate available generator knowledge, a generator conducts representative sampling (as defined in OAC rule ***3745-50-10(R)*** and Appendix I of OAC rule ***3745-51-20***), and laboratory analysis (as described in Appendix II of OAC rule ***3745-51-20***) to test the waste according to test methods set forth in OAC rules ***3745-51-21 to 3745-51-24***, to meet the waste evaluation requirement. Properly performed, valid, analytical data provides the least disputable information regarding the concentration levels of hazardous constituents in the waste and other characteristics of the waste when the waste sampling and analysis are done appropriately.

The waste evaluation methods of generator knowledge and sampling/laboratory analysis can also be used in combination. For example, you can use the generator knowledge approach to determine what hazardous characteristics could not be exhibited by the waste. Once you determine which hazardous waste characteristics the waste could not exhibit, the generator could sample and analyze the waste for the hazardous characteristic(s) that could be present. Whether a waste evaluation is based on sampling/analysis or generator knowledge, you must perform an accurate waste evaluation. Ohio EPA's position is that generators' determinations that their waste is not hazardous, or determinations made without adequate basis, are subject to enforcement action if the waste is later determined to be hazardous.

After I Evaluate My Waste, What Do I Do?

Identify all Applicable Waste Codes

If a waste is determined to be hazardous, OAC rule ***3745-52-11(G)*** requires that the generator identify all applicable waste codes in rules 3745-51-20 to 3745-51-24 and 3745-51-30 to 3745-51-35 of the Administrative Code.

Maintain Documentation of the Waste Evaluation

The generator shall maintain documentation to support the hazardous waste determinations. OAC rule ***3745-52-11(F)*** requires you to retain records and documentation of waste evaluation(s) for a period of three years from the date that the waste was last sent to an on-site or off-site treatment, storage, or disposal facility. Retention of such documentation will facilitate compliance with Ohio EPA requests for waste evaluation results. While you do not need to have the information compiled in one file, it should be readily accessible upon request.

Generator Knowledge

What are the Types and Sources of Information I need to keep in order to Use Generator Knowledge to Make a Hazardous Waste Determination?

If you use generator knowledge to make a hazardous waste determination, you must maintain the documentation that you used to substantiate a waste evaluation. You may use some or all of the information listed below, or may use additional types of information to support your waste evaluation required under OAC rule ***3745-52-11***. The items listed represent the more common and readily available types of information, including:

1) Facility specific process flow diagram or narrative description of the process generating the waste (should be used in most cases);
2) Chemical makeup of all ingredients or materials used in the process that generates the waste (should be used in most cases);
3) List of constituents that you know or have reason to believe are by-products or side reactions to the process that produces the waste;
4) Safety Data sheets (SDSs) and/or product labels or substances used in the process that generates the waste; [**Note:** Concerning SDSs, manufacturers/suppliers are not always required to list all constituents a material may contain. This level of reporting may not be adequate to ascertain the constituent levels in the wastes to be characterized. Therefore, SDSs should be viewed in a supporting fashion and not as the sole means of providing generator knowledge.]
5) Data obtained from approved methods of sampling and laboratory analysis of waste generated from the same process using the same ingredients/materials;
6) Data obtained from literature regarding waste produced from a similar process using the same ingredients and/or materials; and/or
7) Documentation of product specifications of input materials and output products.

What if my Inspector has Concerns that the Use of Generator Knowledge is Inaccurate or Inadequate?

If your inspector has concerns that the use of generator knowledge is inaccurate or inadequate, he or she will communicate these concerns to you. Subsequently, the inspector may ask to sample your waste, have you conduct laboratory analysis on a representative sample of the waste or provide more information regarding the waste generation process.

Contact

For more information, contact the Hazardous Waste Compliance Assurance Section of the ***Division of Environmental Response and Revitalization*** at 614-644-2924.

Generator Knowledge

References

OAC rule ***3745-50-10***

OAC rule ***3745-52-11***

Federal Register, Vol 60, No. 245; ***Dec. 21, 1995***

Federal Register, Vol 62, No. 224; ***Nov. 20, 1997***

US EPA, ***RCRA Orientation Manual***, 2014

US EPA, ***Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Waste***; April 2015