

FS No. 044-0724

Unknown Waste Analysis

Identifying Unknown Hazardous Waste

According to the Resource Conservation and Recovery Act (RCRA), generators must determine if their waste is a listed hazardous waste or exhibits the characteristics of a hazardous waste (40 Code of Federal Regulation (CFR) 262.11).

Gathering Information

1. Initial Inquiry:

- Determine if anyone has knowledge of the waste.
- Identify the process that generated the waste or possible processes involved.

2. Check Records:

- Look for labels on the container. Original labels might include a name, National Stock Number, catalog number, or manufacturer.
- Check for any records from the building or process where the waste originated. If you find a product name and manufacturer, locate the Safety Data Sheet (SDS) to help determine the proper disposal.

Performing Tests

Before testing, consult your Industrial Hygiene/Safety personnel and hazardous waste personnel for proper training and guidance. Always wear appropriate personal protective equipment when handling the waste.

- pH Testing: For aqueous waste, use a pH meter or pH paper (i.e., ones showing specific pH ranges, not only litmus paper). A pH lower than 2 or higher than 12.5 indicates a characteristic hazardous waste due to corrosivity (EPA #D002).
- Identify Organic Waste: If the waste is liquid with an oily or solvent-like odor, it may be an organic waste (e.g., oil, degreaser, lubricant, solvent). Further analytical testing will be needed to determine if the waste is hazardous.

Use caution with solids while performing tests. Do not dissolve solids in water to test pH unless the waste is known to not be water-reactive. If it is water-reactive, it may explode or release toxic vapors.

Needing More Analysis

If pH tests and research are insufficient to determine if the waste is an EPA hazardous waste, laboratory analyses are required. Contact your installation environmental office, typically located within the DPW (Army), Civil Engineers (Air Force), or NAVFAC (Navy). They will help determine necessary analyses, such as:

- Toxic Characteristic Leaching Procedure (TCLP) test for the eight RCRA heavy metals (Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Selenium, and Silver)
- Flash point
- Percent alcohol
- Halogenated solvents

Managing Waste

Manage waste properly to avoid the need to determine unknown waste by—

- Tracking expiration dates. Use containers that are about to expire first.
- Managing inventory. Use a “hazardous material pharmacy” system or order only the material needed for a specific job or time frame (a period of time that is less than the expiration date of the chemical(s)).
- Keeping SDS accessible. Obtain an SDS when receiving hazardous material and keep in an accessible location.
- Labeling hazardous waste containers properly. Include the words “Hazardous Waste” and relevant hazard pictograms on the label (40 CFR 262.15(a)(5)).
- Maintaining records. Train personnel to keep records of additions to waste container(s) and document when the containers are removed for disposal.
- Using regular disposal. Schedule regular waste removal to avoid forgotten containers.