

UNIVERSITY OF TOLEDO

SUBJECT: COLLECTION, STORAGE, TRANSPORT AND
DISPOSAL OF HAZARDOUS WASTE

Procedure No: HM-08-001

PROCEDURE STATEMENT

The storage, transport, and disposal of hazardous wastes shall be completed in accordance with the regulations of the Department of Transportation (DOT), OSHA and Environmental Protection Agency (EPA) as applicable to generators of hazardous waste and the contract requirements of the selected disposal facility.

PURPOSE OF PROCEDURE

To ensure compliance with applicable regulations and to protect the environment.

PROCEDURE

I. Collection

A. Responsibilities of the Environmental Health and Radiation Safety Department.

1. The Environmental Health and Radiation Safety Department will provide information and assistance in the evaluation and determination of materials which should be disposed of as hazardous wastes.
2. The Environmental Health and Radiation Safety Department will ensure that all hazardous wastes identified by departmental managers are disposed of properly.
3. All containers must be labeled as "hazardous waste – chemical name – hazard information (Filled out NFPA diamond, GHS pictograms or plain language flammable, corrosive, toxic, irritant, etc). The label will also list the full chemical name and the accumulation start date.

B. Responsibilities of the departmental manager/lab director.

1. It is the responsibility of the departmental manager/lab director to be knowledgeable of the hazardous wastes generated in their area, to ensure that they are adequately labeled and identified, and to contact the Environmental Health and Radiation Safety Department to arrange for their disposal.
2. It is the responsibility of the departmental manager/lab director to ensure that empty containers that housed hazardous materials are properly disposed of (all empty containers shall be triple rinsed and labels removed or defaced).

C. Responsibilities of the office of Radiation Safety (419-383-4301).

1. The Radiation Safety Office will determine the proper method of disposal for radioactive materials.
2. The Radiation Safety Office will dispose of all regulated radioactive waste.
3. Radioactive waste must be placed in yellow bags marked "Caution: Radioactive Materials", or other suitable containers.
4. Radioactive materials that are also hazardous waste will be transferred to Environmental Health and Radiation Safety once they are determined to be non-radioactive.

II. Storage Prior to Disposal

- A. Hazardous wastes shall be stored on-site no longer than 90 days.
- B. Storage of hazardous waste shall be in accordance with local and state fire codes.
- C. Storage of radioactive waste will comply with federal and state regulations.
- D. No eating, drinking or smoking in hazardous waste storage areas.
- E. All hazardous waste is subject to the Hazardous Material Security Plan to ensure proper and secure storage of all hazardous materials on all campuses of the University of Toledo.

III. Packaging

- A. Only compatible wastes of the same hazard class will be packaged in a single drum.
 - 1. A maximum of 50 gallons of compatible liquid bulk waste will be comingled in a class 17-E closed-head drum.
 - 2. A maximum of 15 gallons of compatible liquid containerized waste will be packaged in a 17-H open-head drum (by approved lab-pack method).
- B. Lab pack drums will have sufficient vermiculite absorbent added to allow transport without breakage and, should breakage occur, to absorb all liquid waste.
 - 1. The maximum allowable volume of hazardous waste packaged by lab-pack methods is as follows:

<u>Container Size</u>	<u>Maximum Volume (liquids)</u>	<u>Maximum Volume (solids)</u>
55-gallon drum	15 gallons	150 pounds
30-gallon drum	8 gallons	75 pounds
20-gallon drum	5 gallons	45 pounds
5-gallon drum	1 gallon	8 pounds

- 2. The maximum volume of containers to be packaged by lab-pack is:
 - a. glass - 1 gallon
 - b. metal - 5 gallon
 - c. plastic - 5 gallon
- C. The constituents of all comingled and lab-pack drums will be inventoried. The inventory must be approved by the disposal facility prior to transport and shall include:
 - 1. A sequential drum number (assigned by University of Toledo), or designee
 - 2. The drum specification (i.e., 17-H)
 - 3. The number, volume, size and chemical name of all constituents
 - 4. The DOT shipping name of the drum
 - 5. The UN/NA identification number of the drum
 - 6. The DOT hazard class
 - 7. The EPA hazardous waste code
 - 8. The signature of the person packing the drum

- D. The following protective apparel will be worn when performing lab packing duties:
1. Tyvek coveralls
 2. Safety goggles
 3. Chemical-resistant gloves
 4. Closed-toe shoes
 5. Appropriate respirator
 6. Or other appropriate PPE
- E. Packaging of radioactive waste will be done by the Radiation Safety Office.

IV. Labeling

- A. A copy of the drum inventory will be affixed to the top of each comingled or lab-packed drum in a plastic bag. The original inventory shall be maintained with the completed manifest as described in item V. below.
- B. Appropriate DOT and EPA labels will be affixed to each drum.
- C. Labeling of radioactive waste will be done by the Radiation Safety Office.

V. Manifesting

The generator and transporter sections of manifests will be completed either by a representative of the company brokering the hazardous waste or the Environmental Health and Radiation Safety representative. The Environmental Health and Radiation Safety representative will sign all manifests as the authorized representative of the University of Toledo.

Generator Copy: The completed and signed generator's copy of the manifest will be maintained by the Environmental Health and Radiation Safety Department.

Regulatory Agency Copy: In accordance with the policy of the hazardous waste disposal facility, the EPA copy of the manifest will be sent to the appropriate EPA office.

TSDF Copy (original): The original of the manifest will accompany the waste to the treatment, storage, and disposal facility (TSDF). The authorized representative of the TSDF shall sign and date the manifest at time of receipt, and will return this completed manifest to the University of Toledo within 35 days. If the completed manifest is not received in this interval, procedures outlined in 40 CFR Part 262.42 shall be followed.

For each shipment of waste containing hazardous wastes which are subject to land disposal restrictions, the Environmental Health and Radiation Safety Department shall complete a notification meeting the requirements of 40 CFR Part 268. This notification shall accompany the manifest. This documentation shall be maintained with the applicable manifest for at least five years from the date the waste is shipped to the TSDF.

Completed manifests shall be maintained for not less than 30 years.

Manifesting for radioactive materials will be performed by the Radiation Safety Office.

- VI. Federal Law requires the Environmental Health and Radiation Safety Manager, as the authorized representative of the University of Toledo, to certify on each manifest the following:

"...I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of...disposal...currently available to me which minimizes the present and future threat to human health and the environment."

To date, the following actions have been taken to fulfill that certification:

1. Centralized purchasing of certain chemicals by the Materials Management Department to minimize unnecessary large stockpiling of chemicals by individual laboratories.
2. Beneficial reclamation of certain materials including mercury, silver from photographic wastes, solvents, lead from discarded shielding material, spent batteries, computer equipment and fluorescent lightbulbs.
3. Redistribution of materials to other than the generating department which may still be beneficially used.

4. Utilization of TSD's which provide incineration or incineration for energy recovery as the primary means of disposal.

VII. Annual (or Biennial, as appropriate) reports compiled by the Environmental Health and Radiation Safety Department for the Ohio Environmental Protection Agency will be provided to the University of Toledo Environmental Health and Radiation Safety Committee.

All hazardous material waste activity shall be compiled into a summary report, listing type of waste, quantity, location of disposal and date. This will be reported to the Environmental Health and Radiation Safety Committee on a routine basis.

The Director of Environmental Health and Radiation Safety, or designee, shall review the above reports and analyze its contents for trends and common occurrences. Decisions will be made as to the appropriateness of further actions in relation to these tendencies.

During this review period, any further follow-ups will be generated immediately and proposed to the appropriate department manager.

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Safety & Health Committee