HAZARDOUS WASTE HANDLING FACT SHEET

UNC-Charlotte Environmental Health & Safety Office

Introduction

Hazardous waste **(HW)** may be generated from laboratory operations, facilities operations, construction activities, and a variety of other activities at UNC-Charlotte. Hazardous waste is a particular class of "solid" waste which, if improperly managed, poses a substantial threat or potential hazard to human health and the environment. Typical wastes generated at UNC Charlotte include, but are not limited to: spent solvents, waste laboratory chemicals, and Universal waste (discussed separately in the Universal Waste Handling Fact Sheet due to differing regulatory requirements).

HW is subject to complex federal regulations to ensure that consistent waste identification, storage, and disposal procedures are followed by facilities that manage it. The *Environmental Protection Agency* (**EPA**) assigns the generator of HW "*cradle to grave*" responsibility for the proper management of these substances after the point of generation. In North Carolina, the *Department of Environmental and Natural Resources* (**NC DENR**) is the agency responsible for the implementation and enforcement of these federal regulations. The *Environmental Health and Safety Office* (**EH&S**) is responsible for assisting the University with hazardous waste management procedures including waste identification, storage, packaging, manifesting, shipping, disposal, reporting, recordkeeping, and training. This Fact Sheet provides individuals involved in the generation of hazardous waste with an overview of regulatory requirements for the management of these wastes.

Summary of Requirements

The regulatory requirements that HW generators are subject to is directly related to a generator's "status". A generator's "status" is based on the quantity of hazardous waste generated per site on a monthly basis. The U.S. EPA and NC DENR have established specific hazardous waste regulations for large quantity generators (LQG) and small quantity generators (SQG). UNC-Charlotte is a classified as a **LQG**. This "status" is the norm for educational and research institutions similar in size to UNC-Charlotte.

The following requirements provide a general overview of regulations applicable to UNC-Charlotte:

1. **Waste Identification**: HW includes substances that are solids, liquids and gases. The EPA definition of includes substances that possess a hazardous characteristic (*e.g. toxic, ignitable, corrosive, or reactive with other substances*), or substances that are listed by the EPA on the basis of their usage or chemical constituents. Consider all waste chemical formulations a HW unless EH&S determines otherwise. Contact EH&S for technical assistance at 7-1111.

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2. **Labeling:** Containers which store HW must be properly and clearly labeled. Labels must include the following:
    - "HAZARDOUS WASTE" wording or appropriate content identifier
    - contents in words not chemical formulas (e.g. “Acetone”)
    - amount of each waste constituent in the container
    - name and telephone number of waste generator
    - building & room number where waste is generated or located
    - physical state of the waste (e.g. “solid or liquid”)
    - hazard class or category of the waste (e.g. corrosive, flammable, toxic, reactive).
    - a date when the container has become **FULL – do not date any containers prior to them becoming full and ready for final disposal.**

3. **Accumulation and Storage**: EPA regulations have established a two-tiered waste accumulation and storage system: *satellite* accumulation and *main* accumulation.

Satellite Accumulation: HW accumulation and storage which is at the point of generation and under the control of the person generating the waste is called satellite accumulation. Regulations allow a maximum of 55 gallons of HW or 1 quart of *acutely* hazardous waste at each satellite accumulation area. Satellite accumulation containers must be closed at all times except when waste is being added to the container. Containers should be stored in leak-proof tubs or another type of secondary containment within satellite storage areas. **These containers should only be dated when full and ready for disposal via the EH&S Office or transport to the Chemistry Stockroom main storage area.**

Main Accumulation: Main accumulation and storage of HW is subject to strict time limitations. UNC Charlotte is an **LQG** and as a result, the University is allowed to store hazardous waste on-site for a *maximum of 90 days*. The UNC Charlotte main accumulation areas are located in Hazardous Materials Storage Building and the Chemistry Department Stockroom.

4. **Transportation and Disposal**: Hazardous waste may be transported only by a licensed hazardous waste transporter and may be sent only to a licensed treatment, storage and disposal facility (TSDF). **Environmental Enterprises (EEI)** is the University’s current hazardous waste transporter and disposal contractor.

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5. **Emergency Preparedness and Prevention**: In accordance with regulatory requirements, UNC Charlotte maintains a Hazardous Waste Contingency Plan. This Plan is designed to prevent and to minimize hazards to the public or to the environment from fires, explosions, spills or other unplanned releases of hazardous waste. EPA regulations also require generators to comply with emergency preparedness and prevention requirements. UNC Charlotte is required to make arrangements with local emergency agencies such as Charlotte Mecklenburg Fire and Police departments, spill response contractors and State and local emergency planning committees.

6. **Waste Minimization**: Generators of hazardous waste are required by the EPA to minimize the volume and toxicity of the hazardous waste they generate. Minimization may be accomplished through source reduction, recycling and product substitution. The elements of a hazardous waste minimization may be found in the UNC-Charlotte hazardous waste minimization program.

7. **Recycling**: Hazardous waste recycling activities require a permit. The University actively pursues viable recycling opportunities for non-hazardous waste including fluorescent bulbs, used oil, and batteries. To access other UNC Charlotte recycling programs, go to UNC-Charlotte's recycling website.

8. **Training:** Persons working with hazardous materials should receive annual training that addresses storage, use, and disposal of hazardous materials, emergency procedures, and other safety topics specific to their workplace. The EH&S Office will ensure that EH&S hazardous waste personnel and the personnel that handle waste at the main storage areas meet annual hazardous waste training requirements. Those that work at satellite accumulation points must receive annual hazardous waste training from a PI, Laboratory Manager, or **UNC Charlotte EH&S ONLINE Hazardous Waste Management Training** if personnel handle hazardous waste after accumulation, such as transporting waste to a main storage area. Personnel must be thoroughly familiar with waste handling and emergency procedures applicable to their job responsibilities. All records pertaining to employee training must be retained for as long as the employee is employed in a covered job plus an additional three years.

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9. **Reporting and Recordkeeping:** The EH&S department provides the reporting and recordkeeping requirements that the University is to follow as a **LQG.** The following outlines typical reporting requir ements for generators of hazardous waste. These include the following:

   - *Biennial Reporting:* A hazardous waste report which summarizes hazardous waste generation and management activity for the previous reporting year
   - *Prompt notification to NCDENR* any changes in waste generation status
   - *Records retention* of all hazardous waste manifests, waste determinations, and annual reports for three years
   - *Inspections* of all hazardous waste main accumulation areas that are to be conducted and documented on a weekly basis.

Land disposal restriction (LDR) notifications/certifications, which typically accompany hazardous waste manifests, are required to be maintained for a minimum of 5 years. Manifest and LDR notifications/certifications copies are maintained by EH&S for retention and compilation into an EPA-required Annual Report of waste activities.