

YETTEVILLE

STATE UNIVERSITY

Environmental Health & Safety Laboratory Management Plan

Fayetteville State University

Laboratory Management Plan

Hazardous Waste Compliance

Environmental Health & Safety



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1. Purpose & Scope

This Laboratory Management Plan (LMP) establishes policies, procedures, and responsibilities for the **safe management of hazardous waste** generated in **academic laboratories** at Fayetteville State University (FSU), in compliance with **40 CFR Part 262 Subpart K**.

This plan applies to all:

- Teaching laboratories
- Research laboratories
- Associated stockrooms and prep areas
- Teaching hospitals and affiliated non-profit research institutes (if applicable)

2. Definitions

Refer to 40 CFR §262.200 for full regulatory definitions. Key terms include:

- **Trained Professional** Individual with RCRA hazardous waste training responsible for waste determinations.
- Hazardous Waste As defined by 40 CFR §261.3, including listed and characteristic waste.
- **Laboratory User** Any person who generates or manages waste in a laboratory setting, including students, faculty, and research staff.
- **Laboratory** A location where hazardous chemicals are used on a laboratory scale (e.g., teaching or research spaces).

3. Roles & Responsibilities

3.1. Chemical Hygiene Officer (CHO):

- Serve as the primary hazardous waste authority
- Designate and train "Trained Professionals"
- Make waste determinations
- Maintain records and manage regulatory compliance
- Perform routine lab audits and inspections
- Coordinate waste pickups and manifesting
- Perform weekly inspections (looking for leaks and corrosion) of hazardous waste container in less than 180 day in Central Accumulation Area (CAA) and maintain documentation.

3.2. Trained Professionals:

- Perform RCRA-compliant waste determinations
- Review labeling and accumulation practices
- Approve requests for unknown or complex waste characterization



- Provide guidance on segregation and storage.
- Train students and researcher under their supervision (Appendix D- Train Roster Log)

3.3. Lab managers / Principal Investigators

- Perform weekly inspections of hazardous waste containers. (Refer to Chemical Hygiene Plan Appendix 3. Laboratory Inspection Guidelines and Form)
- Ensures all staff, faculty, principal investigators, students who generated hazardous waste has completed the Hazardous Waste Training.

3.4. Laboratory Users:

- Comply with storage and labeling policies
- Complete assigned hazardous waste and lab safety training
- Maintain good housekeeping
- Identify chemicals no longer needed and submit them for removal
- Do **not** dispose of chemicals via drains, trash, or evaporation

3.5. Environmental Health & Safety (EHS):

- Ensure compliance with CHP
- Ensure EPA, RCRA, and regulatory agency compliance within labs
- Conduct safety assessments of laboratory settings
- Coordinates with CHO to ensure violations in LMP are corrected

4. Hazardous Waste Identification and Determination

4.1. **Process Overview:**

- 1. Laboratory users identify material no longer needed.
- 2. Label the container as "Non-Waste Pending Review" with chemical name and date.
- 3. Submit the item for waste review through the waste tracking system.
- 4. A Trained Professional will:
 - Evaluate waste characteristics (ignitability, reactivity, corrosivity, toxicity)
 - o Classify waste under RCRA regulations
 - o Issue a formal Hazardous Waste label (if applicable)
 - Assign a hazardous waste profile and ensure compliance

5. Labeling Requirements (Appendix 1. Waste Label Template)

5.1. Pending Review (Non-Waste) Containers:

- "Non-Waste Pending Review"
- Full chemical names (no formulas or abbreviations)
- Date container was identified



5.2. Hazardous Waste Containers:

- "Hazardous Waste"
- Contents: Specific chemical names
- Accumulation start date (date first drop added)
- Associated hazards (e.g., flammable, corrosive, toxic) Picture 1. NFPA 704 Hazard Diamond.
- Generator name and lab location



Picture 1. NFPA 704 Hazard Diamond

6. Container Management

- Keep containers closed at all times, except when adding/removing material
- Use containers compatible with the waste type
- No overfilling maintain **10% headspace**
- Secondary containment required for liquids
- Maintain clean and readable labels
- No leaking or deteriorated containers allowed

7. Segregation of Incompatibles

Chemicals and waste must be separated by hazard class:

- Acids vs. bases
- Oxidizers vs. organics
- Flammables vs. oxidizers
- Reactive materials stored under inert conditions (as needed)



Use compatibility charts (Appendix 2. Chemical Segregation Chart) e.g., NFPA, DOT and EHS guidance.

8. Accumulation Time Limits

- All hazardous waste must be removed from labs at least once every 180 days as a small quantity generator.
- Waste may be removed earlier depending on volume, hazard, or program needs
- Accumulation start dates must be monitored via CHO database

9. Waste Collection and Removal

- Laboratories must submit pickup requests (Appendix 3. Waste Pick Up Request Form) to CHO.
- CHO schedules waste removal and performs a final inspection
- Waste is transferred to a **Central Accumulation Area (CAA)** within 180 days of start date of accumulation.
- All manifests, shipping papers, and waste profiles are maintained in accordance with **40 CFR Part 262 Subpart K and 40 CFR 262.40**

10. Unknown Waste Identification Procedures

If a chemical or waste is unknown:

- Label as: "Hazardous Waste Unknown"
- Submit for review through CHO
- CHO may:
 - Conduct in-house screening (pH, oxidizer/peroxide strips, water solubility)
 - o Coordinate external lab analysis
 - Consult manufacturer or MSDS archives

11. Training

11.1. Laboratory Users:

- Must complete Hazardous Waste & Lab Safety Training before working in labs
- Refresher training is required **annually.**

Training includes:



- o Waste handling procedures
- Spill response
- o Labeling requirements
- Emergency contact procedures

11.2. Trained Professionals:

- Must complete RCRA training per 40 CFR 265.16
- Documented annually (Appendix D. Training Roster Log)
- Includes chemical compatibility, DOT shipping, contingency plans, and waste profiling

12. Emergency Response Procedures

- Labs must have emergency spill kits and eyewash stations (Refer to Chemical Spill Prevention and Response Plan)
- SDS and evacuation routes posted
- Larger spills or involving unknowns, reactive, or P-list chemicals must be reported to CHO/EHS (Refer toChemical Spill Prevention and Response Plan)
- In case of fire, explosion, or serious exposure: CALL 911 -1911 and notify CHO/EHS

13. Recordkeeping and Documentation

CHO will maintain:

- Waste tracking logs and pickup records
- Waste determinations and profiles
- Annual training records
- Waste manifest copies and Land Disposal Restrictions (LDRs)
- Laboratory inspections and compliance reports

Note: Hazardous waste must be manifested properly (complete with LDRs and signed, returned copy from designated disposal facility must be retained on site for **at least 3 years**, as required by EPA. Exception reports on file if signed manifest is not returned from disposal facility within 60 days of receipt from transporter.

14. Laboratory Cleanouts

Planned cleanouts must be coordinated with CHO:

- Schedule at least **two weeks in advance**
- Identify and remove all hazardous materials



- Dispose of obsolete chemicals
- Update chemical inventories and labeling

Large-scale cleanouts (renovation, PI departure) may require additional waste services and contractor involvement.

15. Plan Review and Updates

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- This LMP is reviewed **annually** by the Environmental Health & Safety Office
 - Updates are made to reflect changes in:
 - EPA/OSHA regulations
 - University operations
 - Campus construction or personnel shifts



16. Appendices

16.1. Appendix 1. Waste Label Template

A HAZARDOUS WASTE LABEL TEMPLATE

🚹 HAZARDOUS WASTE 🛕

Contents: [Full Chemical Names – No abbreviations] [List each component and % concentration]

Physical State: [Liquid / Solid / Sludge / Other] **Hazards:** [Flammable / Corrosive / Reactive / Toxic / Oxidizer]

Date Waste First Added: [MM/DD/YYYY]

Generator: [Name of Lab PI or Staff] **Building/Room #:** [Location where waste is generated]

Emergency Contact: [Name and Phone #]

DO NOT MIX INCOMPATIBLE CHEMICALS. KEEP CLOSED WHEN NOT IN USE.





16.2. Appendix 2. Chemical Segregation Chart

Group	Examples	Keep Separate From		
Acids (Inorganic)	Hydrochloric, Sulfuric, Nitric	Bases, cyanides, sulfides		
Bases	Sodium hydroxide, Potassium hydroxide	Acids		
Flammables	Ethanol, Acetone, Methanol, Hexane	Oxidizers, acids		
Oxidizers	Hydrogen peroxide, Nitric acid, Bleach	Flammables, organics, reducing agents		
Toxics	Arsenic compounds, cyanides, pesticides	Acids (some release toxic gases)		
Reactive Materials	Sodium metal, Peroxides, Picric acid	Water, air, flammables		
Compressed Gases	CO ₂ , O ₂ , Ethylene, Hydrogen chloride	Store upright, secured, by compatibility		
Metals & Salts	Lead nitrate, Chromium salts	Keep labeled and segregated by hazard class		

Storage Tips:

- Use secondary containment
- Segregate based on chemical compatibility, not alphabetically
- Label storage cabinets clearly (e.g., Acids, Flammables)



16.3. Appendix 3. Waste Pickup Request Form

Hazardous Waste Pickup Request

Fayetteville State University 1200 Murchison Rd, Fayetteville, North Carolina

Date Submitted:	
Requested By:	
Email / Phone:	
Department:	
Building/Room #: _	

Container	Chemical	Physical	Volume	Accumulation Start	Hazards
#	Name(s)	State		Date	
1		[L/S]			
2		[L/S]			

Notes:

- Submit completed forms to: irittenhouse@uncfsu.edu
- Attach photos of containers if possible
- CHO will follow up within 48 hours to coordinate pickup



16.4. Appendix 4. Training Roster Log

Training Roster Log

Fayetteville State University					
1200 Murchison Rd, Fayetteville, North Carolina					

Trainee Name	Department	Lab Number	Date of Training	Trainer Name	СНР	Waste Mgmt	Labeling	Spill Response	PPE

Trainer's Signature: _____ Date: ___ / ___ / ____

Training Notes:

- Keep this log for a minimum of 3 years
- Training is required **annually** and when job duties change
- Attach training materials or sign-in sheets for EHS records