

<b>Loyola University Chicago Health Sciences Division Office of Research Services Policies &amp; Procedures</b>	
<b>Policy Title:</b> Chemical Hygiene Plan	<b>Originating Department:</b> Office of Research Services
<b>Effective Date:</b> 7/01/11 <b>Review/Revised Date:</b> 12/14/12	<b>Approved By:</b> LUCHSD Chief Safety Officer <b>Matthew Hejna</b>
<b>Approved By:</b> LUCHSD Chief Operating Officer <b>Steve Bergfeld</b>	<b>Approved By:</b> LUCHSD Vice Provost for Research <b>Richard Kennedy, PhD.</b>

**I. PURPOSE**

This purpose of the Chemical Hygiene Plan is to inform Loyola University Chicago Health Sciences Division (LUCHSD) faculty, staff and students of the potential health and safety hazards presented in the workplace and provide precautions and preventive measures to protect employees from injury or illness.

**II. APPLIES TO**

This chemical plan applies to all employees, faculty, staff, students, volunteers and all others authorized to be present in the laboratories.

**III. POLICY**

It is policy of LUCHSD to adhere to all elements of this Chemical Hygiene Plan to protect the laboratory staff from potential health hazards associated with the handling, use, and storage of hazardous chemicals in laboratories. Because few laboratory chemicals are without hazards, general precautions for handling all laboratory chemicals should be adopted to include minimizing exposure and assuming that any mixture of hazardous chemicals is more toxic than the most toxic component.

**IV. DEFINITIONS**

**Hazard Materials Information System (HMIS)** - This system identifies the primary physical, chemical and other health hazards associated with the chemical. The HMIS system uses a hazard rating from Zero (0) - Four (4) Zero = No Hazard to Four = extreme hazard for categories of Health, Flammability and Reactivity.

**V. TYPES OF CHEMICALS**

**A. Flammables**

1. Flammables are liquids with a flash point less than 100 degrees.
2. Flammables can be gases, liquids or solids.
3. Flammables may catch fire or explode when they come into contact with an

ignition source and oxygen.

4. Flammables should be stored separately from other materials.

**B. Corrosives**

1. Corrosives are caustic substances that can destroy living tissue and have a destructive effect on other substances. Corrosives burn, damage the skin, eyes or mucous membranes.
2. Examples of corrosives are acids and bases.
3. Corrosives should be stored in a well ventilated area and separate from other types of chemicals.

**C. Poisons/Toxins**

1. Poisons and toxins can produce serious injury, illness or lethal effects if swallowed, inhaled or contact the skin.
2. Use appropriate Personal Protective Equipment (PPE) while using poisons and toxins.
3. Never store poisons and toxins near food or beverages.
4. Be sure that poison or toxic containers are sealed tightly.

**D. Reactives**

1. A reactive is defined as anything that reacts violently with other substances (even air or water).
2. Improper handling of reactives may result in an explosion, burning or corrosion.

**VI. HAZARD IDENTIFICATION**

**A. Labeling**

1. All containers in the laboratory must be labeled. This includes chemical containers and waste containers. Currently, manufacturers of chemicals provide the following information on labels:
  - a. Chemical name of the product
  - b. Name of hazardous ingredients
  - c. A warning statement, message or symbol
  - d. Chemical manufacturer's name and address
  - e. Safe handling procedures
2. LUCHSD has adopted the Hazard Materials Information System (HMIS) as the standard labeling requirement for hazardous chemicals. Additionally, hazard information regarding routes of entry and target organs affected by the chemical must also appear on the label.
3. Each lab section must supply the additional labeling information for older chemicals without complete information. This information is retrieved from the chemical's most current Safety Data Sheet (SDS).

The laboratory has two options:

- a. Purchase a generic label which includes the hazard categories that can be filled in and affixed to the container; or
- b. Use a "laboratory prepared" label provided it supplies the following information, at a minimum:
  - 1) Name of chemical
  - 2) Primary warning information (i.e. WARNING, DANGER, CAUTION)
4. Any hazardous materials transferred into a secondary container (bucket, spray bottle) should be intended only for the immediate use of the employee who performed the transfer.
5. For all other transfers into secondary containers (chemicals not used during a given work period i.e. 1 shift) must label the secondary containers with:
  - a. Chemical name
  - b. Date of transfer
6. Laboratory staff should report any missing or unreadable labels to the PI or lab supervisor and not use any chemicals that are not properly labeled.

## **B. Signage**

1. Emergency telephone numbers must be posted prominently in the laboratory and should include; but are not limited to the following information.
  - a. Critical Emergencies 911
  - b. Occupational Health x1-7900 (708-531-7900)
  - c. Security x69077
  - d. Director of Research Compliance and Safety x66738
  - e. Environmental Health & Safety x72334 (SAFE4)
  - f. Radiation Control x63239
  - g. Infection Control (Bioterrorism) x63654
  - h. Lab Director (Loyola & Home Phone #)
2. All containers (including waste receptacles) need to be labeled with the chemical content and associated hazard (toxic, corrosive, flammable, explosive, carcinogenic or radioactive).
3. Eyewash stations, safety showers and exits are labeled.
4. Warning labels are posted on equipment or in areas where special or unusual hazards exist.

## **C. Safety Data Sheets (SDS)**

1. SDS provide helpful information about chemicals, how to use or handle them and emergency procedures.
2. SDS are available to all LUCHSD employees via the SDS Provider System located on *Loyola.wired*.  
<http://www.luhs.org/internal/employee/index.htm>
3. LUCHSD staff are instructed on how to obtain and properly utilize an SDS.

4. If a department does not have a necessary SDS or is requesting a hard copy, contact the Security Communication Center (SCC) at 69077 (during emergencies).
  - a. A hardcopy SDS inventory for the health system is located in the Mulcahy Building (Room 1583).
  - b. If a SDS is not available online, SCC will dispatch an officer to the Mulcahy Building (Room 1583) to obtain a hardcopy. The officer will make a copy of the particular SDS and supply it to the department, as necessary.

**D. Chemical Inventory**

1. Each department/laboratory/unit is required to perform an annual chemical inventory. During this inventory chemicals and containers will be examined for replacement, deterioration and container integrity.
2. Each department/laboratory/unit is required to maintain a current chemical inventory and provide a copy of this inventory to the Environmental Health & Safety Department in conjunction with the Office of Research Services on an annual basis.
3. Chemical inventories are available via the SDS Provider System located on *Loyola.wired*.  
<http://www.luhs.org/internal/employee/index.htm>

**VII. ENGINEERING CONTROLS**

**A. Fume Hoods**

1. Any chemical manipulation that could result in the release of harmful gases or vapor must be conducted in a chemical fume hood.
2. Confirm adequate hood ventilation performance prior to working with chemicals inside the hood. An inward flow of air can be confirmed by holding a piece of paper at the face of the hood and observing the movement of the paper. If the hood is not working properly, discontinue use and contact PP&G (69044) for repair.
3. Confirm the chemical fume hood's certification is current prior to utilization.
4. Chemical fume hoods are certified annually. If the chemical fume hood's certification is older than one-year, discontinue use and contact PP&G (69044).
5. Keep the sash of the hood closed at all times except when working within the hood.
6. Move the sash to the marked level when working within the hood.
7. Minimize interference with the inward flow of air into the hood.
8. Minimize chemicals and equipment inside the hood that are required for the task at hand.

**B. Biological Safety Cabinets**

1. Use the proper biological safety cabinet for biological work.
2. Confirm adequate hood ventilation performance prior to working.
3. Confirm the biological safety cabinet's certification is current prior to working.
4. Biological safety cabinets are certified annually. If the biological safety cabinet's certification is older than one-year, discontinue use and contact PP&G (69044).
5. The cost for repair of biological safety cabinets to meet certification including the cost of hepa filters is the responsibility of the individual department and or lab.
6. Do not use toxic, explosive, or flammable substances in biological safety cabinet.

**C. Emergency Eyewash Stations/Showers**

1. Each laboratory section has an eyewash station to be used in the event of accidental exposure to the face or eyes.
2. Laboratories should conduct a weekly test and document activities to ensure proper function, water temperature is appropriate, and to flush out stagnant water.
3. Water temperature for emergency eyewash stations and showers should be between 60-100 degrees.
4. Physical Plant and Grounds (PP&G) is responsible for inspecting emergency showers semi-annually and maintaining all inspection documentation.

**D. Personal Protective Equipment (PPE) - Each department or laboratory must supply adequate and appropriate PPE at no charge for all individuals working in the laboratory. Inspect all personal protective equipment prior to use, and wear appropriate protective equipment as procedures dictate and when necessary to avoid exposure.**

**1. Laboratory Coats and Gloves**

- a. Both laboratory coats and gloves must be worn when working with chemicals and should be removed before leaving any laboratory area.
- b. Laboratory coats and gloves are not to be worn in cafeterias, lunchroom of other food areas or clerical offices.
- c. Each department or laboratory must provide adequate and appropriate laundry service for laboratory coats at no charge.

**2. Eye Protection**

- a. Eye protection is to be used as necessary. Contact lenses are strongly discouraged in the laboratory, and if worn, must be completely protected by safety goggles.
- b. Appropriate eye protection should be worn when exposed to eye or face hazards from liquid chemicals, acids or caustics, chemical gases or

vapors, or potentially injurious light radiation.

3. **Respiratory Protection**

- a. Appropriate respiratory protection should be used during maintenance or shutdowns of any fume hoods or biological safety cabinets.
- b. Appropriate respiratory protection should be used during disaster or emergency situations.
- c. Laboratory employees must be properly fit-tested before using any respiratory protection.

**VIII. ADMINISTRATIVE CONTROLS**

**A. Chemical Procurement**

1. The decision to procure a chemical shall be a commitment to handle and use the chemical properly from initial receipt to ultimate disposal.
2. Before a new chemical is ordered, the requestor must determine the known potential hazards (e. g., toxicity, flammability, reactivity), proper handling, storage, and disposal of the chemical.
3. Personnel initiating the order shall be knowledgeable of the proper procedures for receipt and shall be responsible for the proper disposition of the chemical.
4. All chemicals must be acquired through the Lawson System or established LUCHSD mechanisms.
5. An updated SDS must be requested to accompany the purchase.
6. Chemical containers shall not be accepted without accompanying labels and proper packaging in accordance with all appropriate regulations.
7. The SDS must be consulted before opening the shipping packaging.
8. Shipping packaging for chemicals with vented shipping containers or chemicals known to have harmful fumes must be opened inside a working fume hood.
9. Staff and Faculty initiating the order of the chemical shall insure that upon its receipt, it is properly entered into the department/laboratory/unit chemical database. Upon disposal of any chemicals, staff and faculty should log the chemical out of the system.
10. Do not order excessive amounts chemicals. Any chemical of a gallon or more that constitutes more than a six-month supply is considered excessive.

**B. General Safety Guidelines**

1. Avoid skin contact with all chemicals.
2. Use work practices that minimize chemical exposure.
3. Wash your hands prior to leaving the laboratory.
4. Do not smell or taste chemicals.
5. Do not use mouth suction for pipeting or starting a siphon.
6. Do not eat, drink, chew gum, apply cosmetics, handle contact lens, or smoke in the laboratory.
7. Do not store food or beverages in the laboratory, laboratory storeroom or any

- laboratory refrigerator or freezer.
8. Risk determinations shall be conservative in nature.
  9. Any chemical mixture shall be assumed to be as toxic as its most toxic component.
  10. Substances of unknown toxicity shall be assumed to be toxic.
  11. Laboratory workers shall be familiar with the symptoms of exposure for the chemicals with which they work and the precautions necessary to prevent exposure.
  12. Do not allow release of toxic substances in cold rooms and warm rooms, since these have re-circulated atmospheres.

**C. Hazardous Materials Transport**

1. Received chemicals shall be immediately moved to designated storage area.
2. When transporting chemicals in commerce, containers should be placed in an outside container or bucket. Freight-only elevators should be used if possible.

**D. Hazardous Materials Storage**

**1. Storage Areas**

- a. The storage area shall be well illuminated with storage maintained in such a way that it can be seen and obtained without the use of a stepstool.
- b. Departments/units are expected to maintain adequate and appropriate space and equipment for safe storage of chemicals.
- c. Store chemicals separated according to class: acids, bases, oxidizers, reducers, peroxides, water-reactive chemicals, flammable, carcinogens and toxic substances. **Do not store incompatible chemicals such as nitric and perchloric acid near each other or near other chemicals.**

**2. Storage Containers**

- a. All chemicals must be properly labeled by the manufacturer. No container should be accepted without an adequate identifying label.
- b. Storage containers with labels applied by laboratory staff must contain complete health hazard information including the names of target organs.
- c. Store chemicals in appropriate cabinets that are designed and labeled as chemical storage: acid storage cabinets, flammables storage cabinets.
  - 1) Store concentrated acids and bases and gallon containers of alcohol, acetone, xylene or formalin in low cabinets that do not exceed face height.
  - 2) Storage on bench tops and hoods is inadvisable.
- d. Unless stored in a flammable storage cabinet, no more than 1 gallon (or a one day supply) of any flammable liquid may be stored in any room.

- e. Flammable and combustible liquids, including ether must be stored in an explosion proof refrigerator.
- f. Access to chemical storage areas is limited to qualified laboratory personnel.
- g. Chemicals that are highly toxic are stored in unbreakable secondary containers in a well-identified area with local exhaust ventilation.

**3. Storage Amounts**

- a. The amount of each chemical stored in the laboratory must be kept as small as is practical.
- b. Exposure of chemicals to heat or sunlight is to be avoided.

**E. Disposal of Hazardous Waste**

- 1. Discard outdated chemicals, chemicals that are no longer in use, and any chemicals with damaged storage containers.
  - a. Complete the *Chemical Waste Disposal Form* (ATTACHMENT A) and contact the Director of Research Compliance and Safety (x66738) and/or Clean Harbors, an approved chemical disposal vendor on campus at 773-571-5825 for disposal of these materials.

**IX. EMERGENCY RESPONSE**

**A. Chemical Exposures**

**1. Eye/Face Exposures**

- a. Immediately use the eyewash station to flush the face area.
- b. Continue to flush the eyes and face for 15 minutes, opening and closing the eyes to assist in the removal of the chemical from the eyes.
- c. Complete an LUCHSD Occupational Injury/Illness Form and report to Occupational Health (normal business hours) or the Emergency Department for treatment.

**2. Body Exposures**

- a. Immediately take off contaminated clothing and use the safety shower to flush skin for 15 minutes.
- b. Contaminated clothing must be collected for appropriate action. The clothing must never be taken home for laundering, rather dispose of all contaminated clothing as hazardous waste.
- c. Complete an LUCHSD Occupational Injury/Illness Form and report to Occupational Health (normal business hours) or the Emergency Department for treatment.



## B. Chemical/Chemical Waste Spills

### 1. Nominal/Small Chemical Spills (less than 1 gallon)

- a. Nominal/Small spills are those that can be safely cleaned up by staff in the specific area of the spill.
- b. Staff are trained and provided with personal protective equipment and materials needed to safely clean up spills.
- c. Confine the spill using an absorbent material. The material used should be applied carefully from the outer edge of the spill inward.
- d. Spill kits containing neutralizers and absorbent materials are located throughout the laboratory. Each kit contains instructions for the proper use of its constituent materials.
  - 1) **Acid neutralizer** (example, Sasco acid handler) - to be used on all acids **except** for picric acid, iodic acid, sulfurous fluoride, phosphorus pentachloride, hydrogen peroxide and sodium hypochlorite spills.
  - 2) **Inert or sorbent material** (kitty litter) - to be used on picric acid, iodic acid, sulfurous fluoride, phosphorus pentachloride, hydrogen peroxide and sodium hypochlorite spills.
  - 3) **Base neutralizer** (example, Sasco base handler) - use on all bases **except** hydrogen peroxide, sodium hypochlorate, sodium azide or any products containing chlorine.
  - 4) **Solvent handler** (activated charcoal) - use on organic solvents such as methanol, acetone, heptane, n-propyl alcohol and triethylamine.
- e. Once the spilled chemical has been cooled and absorbed, it can be swept up and placed in a chemical resistant container for final disposal by Clean Harbors, an approved vendor on campus.
- f. The container must be labeled with the name of the chemical.
- g. Complete the *Chemical Disposal Form* and contact Clean Harbors at 773-571-5825 for disposal.

### 2. Large Chemical Spills (greater than 1 gallon)

- a. Spills that exceed the limits of nominal spill and/or staff knowledge and capability will be handled by Clean Harbors and/or the Safety and Security Departments who are trained to clean up hazardous material spills.
- b. Department staff should evacuate the area, closing all doors to the area to prevent the spread of vapors, and contact Security at extension 911 from a safe location:
  - 1) Identify name, location and the chemical involved

- 2) If the spill involves a chemical mixture, identify the major chemical constituent and the most toxic chemical in the mixture and use the appropriate clean up technique for the major chemical component of the mixture.

**C. Biohazardous Spill/Cleanup Procedures**

1. Selected healthcare and ancillary staffs are trained to contain, neutralize and clean-up spills of blood/body fluids.
2. Neutralizing agents include chlorinated compounds, bleach, alcohol and other products approved by the Infection Control Department.
3. Staff members are also able to decontaminate and sanitize surfaces that have been affected by a spill. All related refuse is disposed of in the appropriate PIMW waste receptacle.

**D. Chemotherapeutics and Cytotoxic Spill/Cleanup Procedures**

1. Areas preparing or administering chemotherapeutic agents maintain materials for controlling and absorbing small spills of these items.
2. Refuse from a small spill is discarded into the chemotherapeutic/sharps containers.

**E. Radioactive Isotope Spill/Decontamination Procedures**

1. All staff using isotopes are trained on the protocols for clean up and decontamination of work surfaces involving small volume isotope spills.
2. Staff members are instructed to contact the Radiation Control Department for assistance with all but nominal spills. Departments are instructed to contact the Radiation Control Department at 63239 for removal of all contaminated waste.

**D. Fire Response**

1. Do not block exits or use stairways or hallways as storage areas.
2. BC type fire extinguishers, used for liquid and electrical fires, are mounted throughout the hallways and laboratories.
  - a. A water extinguisher to be used for paper and trash fires is located near each laboratory section.
3. Refer to the LUHS/LUCHSD Code Red: Fire Plan for fire response and procedures.
4. Refer to the LUHS/LUCHSD Code Purple Evaluation Plan for evacuation response and procedures.

**X. EXPOSURE MONITORING**

**A. Periodic Monitoring**

1. The laboratory manager in consultation with the Office of Research Services as well as the Environmental Health & Safety Department conducts annual

monitoring of airborne concentrations of specific hazardous chemicals on selected staff, room locations and processes.

2. Results of this monitoring are reviewed by the PI/Lab Supervisor and are presented to the staff for their review within fifteen (15) days.

**B. Personal Monitoring**

1. Personal monitoring or badge testing will be the responsibility of the specific lab.
  - a. PI/Lab Supervisor is responsible for ordering, distributing and collecting badges and sends badges to accredited lab for monitoring results.
  - b. Designated employees/students will wear monitoring badges depending on periodic exposure evaluation frequencies.

**C. Medical Surveillance Program**

1. Persons who experience accidental chemical exposure must report to Occupational Health for examination and treatment. Occupational Health is open Monday - Friday, 7:30 AM to 7:30 PM. If the exposure occurs when Occupational Health is closed, report to the Emergency Department. Contact Security at extension 911 for assistance.
2. Medical surveillance shall be established for employees working in an area where exposure monitoring results reveals an exposure level above the OSHA action level (or in absence of an action level, exposure above the OSHA action level).

**XI. TRAINING & EDUCATION**

**A. New Employees**

1. Laboratory personnel receive training on the chemical hygiene plan during their initial training and annually during the course of their employment.
2. Training includes the following:
  - a. Explanation of material safety data sheets (SDS)
  - b. Review of the chemical hygiene plan
  - c. Emergency response to chemical exposure
  - d. Methods for spill cleanup
3. Laboratory personnel who have questions regarding the safe use of chemicals should contact their manager or technical specialist.

**B. Annual Education**

- a. Annual Continuing Education Program for LUCHSD include self-directed computer based learning modules (medtraining.org). These modules contain learning materials and test.
- b. All employees at LUCHSD are required to participate in annual safety training education. Employee participation with annual safety education is reviewed as

part of each employee's annual performance evaluation.

- c. Training includes instructions on how to use and obtain a Safety Data Sheet (SDS), labeling requirements of hazardous material containers, and the use of engineering controls, administrative controls, the use of personal protective equipment (PPE), and instructions for handling spills.

### **C. Departmental Specific Education**

1. Departmental Specific Education for labs includes the following:
  - a. The availability and location of the written Chemical Hygiene Plan. A copy of the standard will be available to employees for review with the department and on the Loyola Intranet (Loyola.wired).
  - b. The Permissible Exposure Limits (PELs) for the substances regulated by OSHA or the Threshold Limit Values (TLVs) established by ACGIH for other hazardous chemicals where there is no applicable OSHA standard.
  - c. Signs and symptoms associated with exposures to hazardous chemicals used in the laboratory.
  - d. Location and availability of known reference material on the hazards, safe handling, storage, and disposal of hazardous chemicals found in the laboratory including, but not limited to, material safety data sheets received from chemical suppliers.

## **XII. RESPONSIBILITIES**

### **A. Laboratory Staff**

1. Follow all LUCHSD Safety Policies and Procedures.
2. Do not block access to exits and emergency equipment.
3. Properly respond to chemical spills to minimize exposure of others, including housekeeping staff, to hazardous chemicals.
4. Keep work areas clean with chemicals properly labeled and stored.

### **B. Office of Research Services (LUCHSD) and Environmental Health & Safety Department (LUHS)**

1. Performs routine inspections (environmental tours) and initiates correction of identified hazardous conditions.
2. Assists in chemical waste disposal, emergency spill response and control services.
3. Maintains Master chemical inventory listing of all hazardous chemicals throughout health system.

### **C. Security Department/Clean Harbors:**

1. Routinely removes hazardous chemicals from LUHS departments, upon request (Clean Harbors).
2. Performs fire extinguisher inspections and coordinates Broadview Fire

- Department response (Security).
3. Participates in initial response to hazardous chemical spills and assists in clean-up (Clean Harbors).

**D. Physical Plant and Grounds (PP&G):**

1. Monitors and maintains physical environment and infrastructure utilities.
2. Contracts with outside vendors to inspect, maintain and repair chemical fume hoods and the certification of biological safety cabinets.

**E. Chemical Safety Officer**

1. Establishing and implementing a Chemical Hygiene Plan, based on a template provided by EHS, and updating the plan at least annually.
2. Provide general chemical safety guidance to department staff, students and faculty.
3. Investigating accidents and chemical exposures within the laboratory areas.
4. Make copies of the approved Chemical Hygiene Plan available to staff.
5. Maintaining records of training and exposure monitoring.
6. Ensure laboratory workers receive chemical and procedure-specific training.
7. Review and approve use of particularly hazardous substances.
8. Provide reports to the LUHS Hazardous Materials and Waste Committee on chemical hygiene activities performed.

**F. LUHS Hazardous Materials & Waste Committee**

1. Meet at least bimonthly or more frequently at the call of the chairperson.
2. Assimilate all medical center departments in all related activities and Management Plans.
3. Assist with the monitoring of the hospital-wide right-to-know program.
4. Ensure an annual review of chemical inventories occurs.
5. Evaluate the educational needs for right-to-know and hospital waste programs and make appropriate recommendations.
6. Monitor and assess waste control procedures and recommend policy/procedure changes as needed.
7. Monitor city, state, and federal environmental laws and regulations and recommend policy/procedure changes as required.
8. Evaluate products to promote hazardous materials and waste minimization for purchase or use.
9. Review hazardous material and/or waste handling problems, spills or employee incidents and make recommendations for process improvement, personal protective equipment and environmental monitoring.
10. Monitor program recommendations, changes or implementations for effectiveness.
11. Annually assess the effectiveness of the hazardous materials and waste management programs for selection, storage, handling, use and disposal and

- recommend changes as appropriate.
12. Annually assess the effectiveness of the committee and its membership.

### **XIII. DOCUMENTATION & RECORD KEEPING**

1. **Occupational Health Services**
  - a. Maintains medical consultation records.
  - b. Illness and injury records and environmental monitoring records are maintained by Occupational Health.
2. **Laboratories**
  - a. Annual chemical inventory and training/education records are maintained by each individual department.
  - b. Each laboratory section is required to maintain a copy of the chemical hygiene plan and the OSHA standard for Chemical Hygiene in Laboratories.
3. **Environmental Health & Safety Department and Office of Research Services**
  - a. Maintains master listing of Safety Data Sheets (SDS). SDS are maintained for 30 years.

### **XIV. ATTACHMENTS**

- A. Chemical Disposal Form
- B. LUHS Emergency Eyewash Inspection and Testing
- C. DOT Hazard Classification List
- D. EPA Hazard Classification List

## ATTACHMENT A

### Loyola University Chicago Health Sciences Division Chemical Disposal Form

Department:		Principal Investigator/Supervisor:		PI/Supervisor Phone#:		
Date:		Requested by:		Phone#		
Location of waste	Building		Room #			
(After completion call Javier Ortega at Clean Harbors at ext. 63373/(773)571-5825 for pick up.)						
Item#	Chemical Description (List each container. Use full chemical or product names. Do not use abbreviations. For mixtures - list the most hazardous ingredients as the chemical name)	Physical State Solid/Liquid/ Gas/Aerosol	Number of Containers (The container must be leak free, have a tight screw cap and be clean on the outside)	Container Size	Amount of waste in container	Hazard Warning (e.g. Toxic, Flammable, Explosive, Corrosive, Irritant, Oxidizer)
Example 1.	Xylene	L	2	1 gallon	1 gallon	F

Note: Please consolidate compatible chemicals only. *Biological, radioactive, DEA controlled substances will not be accepted. NO RED BAGS!!*  
 Chemical description on the form must match the label on the container. Make sure all writing is legible.  
 If you have any questions, call Matthew Hejna, Director of Research Compliance and Safety x 66738.  
**Give the original to Clean Harbors representative or leave it next to the chemicals for a pickup and make a copy for your file.**

Office of Research Services use only: Safety Officer: _____ Date _____
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## ATTACHMENT B: LUCHSD SELF-CONTAINED EMERGENCY EYEWASH INSPECTION AND TESTING

Eyewash stations are inspected and tested weekly by the Department in which they are located.

Verify the following:

- Access to the eyewash is unobstructed.
- Protective covers are in place, clean and intact.
- Unit and basin are clean and free of trash and debris.
- Solution bottles not expired.
- Inspection/Testing documented - initial below.
- Deficiencies recorded, reported, and corrected - initial or enter N/A below.

Week/Test Complete	Deficiencies Corrected	Week/Test Complete	Deficiencies Corrected
1.		27.	
2.		28.	
3.		29.	
4.		30.	
5.		31.	
6.		32.	
7.		33.	
8.		34.	
9.		35.	
10.		36.	
11.		37.	
12.		38.	
13.		39.	
14.		40.	
15.		41.	
16.		42.	
17.		43.	
18.		44.	
19.		45.	
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22.		48.	
23.		49.	
24.		50.	
25.		51.	
26.		52.	



## ATTACHMENT C:

### DOT HAZARD CLASSIFICATION LIST

<u>HAZARD CLASSIFICATION</u>	<u>EXAMPLE</u>
Explosive A & B	Dynamite
Explosive C	Fireworks
Blasting agents	Plastic Explosives
Radioactive material	Co-60 or I-130
Flammable liquids	Alcohol
Pyrophoric liquids	Phosphorus hydrids
Non-flammable compressed gases	Nitrogen
Flammable gases	Oxygen
Combustible liquids	Kerosene
Flammable solids	Picric acid/ 10% wet
Oxidizer	Nitric acid
Corrosive material	Hydrochloric acid
Irritating material	Lacramator
Poison A	Heptachlor
Poison B	Phenol
Organic peroxide	Bensoyl peroxide
*ORM-A	Formaldehyde
*ORM-B	Mercury
*ORM-C	Asbestos
*ORM-D	Bleach
*ORM-E	Ferric sulfate
Etiological agents	Microorganisms (e. coli)

\*ORM = Other Regulated Material

## ATTACHMENT D:

### EPA HAZARD CLASSIFICATION LIST

1. Ignitable Waste - Flash point < 140 F  
Flammable solids (10)  
Oxidizers (11)  
Flammable gases (8)  
Some combustible liquids (9)  
Flammable liquids (5)  
Pyrophoric liquids (6)
  
2. Corrosives - Any liquid of pH <2 or >12.5 (12)
  
3. Reactive - Explosives A, B, or C (1,2, or 3)  
Water reactive  
Cyanide or sulfide  
Organic peroxides (16)  
Poison B (15)
  
4. Extraction Procedure (EP) Toxic
  - 8 Metals: Arsenic Silver  
Cadmium Lead  
Chromium Beryllium  
Mercury Thallium
  
  - 4 Pesticides: Lindane Toxaphene  
Endrin Methoxychlor
  
  - 2 Herbicides: 2,4 D 2,3,5 T

Poison A and some Poison B (14 and 15)  
Irritating material (13)  
Radioactive material (14)  
ORM-A-B-C (17, 18, and 19)  
ORM-E (21)

Note: Numerals in parentheses indicate chemical categories on the DOT list.