

The University of Southern Indiana Hazardous Waste Management Plan

Policy Purpose:

The Hazardous Waste Management Plan (HWMP) was developed for the University of Southern Indiana full- and part-time faculty and staff who may generate, handle or store hazardous chemical wastes.

Policy Statement:

It is the policy of the University to comply with all local regulations and incorporating by reference U.S. Environmental Protection Agency (EPA) Regulations 40 CFR 260-273. This plan provides the framework for hazardous waste determinations, labeling and container management, hazardous waste storage area requirements, contingency planning, employee training and a clear definition of roles and responsibilities.

1.0 Introduction

With the enactment in 1976 of the Resource Conservation and Recovery Act (RCRA), the transportation, handling, storage and disposal of solid and hazardous wastes became strictly regulated under federal, state and local laws. The Environmental Protection Agency (EPA) and the city of Evansville (and/or Vanderburgh County) have developed regulations for compliance with RCRA. Local regulations are in some instances more stringent or broader in scope than the EPA regulations.

Responsibility for compliance with hazardous waste regulations begins with the person generating the waste material and follows through to disposal. Environmental protection, regulatory requirements and escalating disposal costs underline the importance of waste generators doing their part to ensure that wastes are properly managed at The University of Southern Indiana (USI).

This Hazardous Waste Management Plan (HWMP) serves as a guide for handling hazardous wastes generated at USI. The goal of the HWMP is to handle hazardous waste in a safe, efficient and environmentally sound manner and to comply with local and federal regulations.

2.0 Facility Background

Founded in 1965 as the Indiana State University at Evansville, the University of Southern Indiana (USI) is a residential, coeducational university in Evansville, Indiana. USI's campus is located in the west side of Evansville.

USI grants graduate, undergraduate and professional degrees from eight different schools including: the College of Liberal Arts; the College of Nursing and Health Professions; the Pott College of Science and Engineering; the Bower-Suhrheinrich College of Education and Human Services; the College of Business and the Indiana University Center for Medical Education.

USI employs approximately 250 workers that generate hazardous waste. The university operates on a continuous basis, twenty-four (24) hours a day, seven (7) days a week.

3.0 Scope & Availability of the Plan

This plan applies to each department at The University of Southern Indiana that generates hazardous wastes. It provides directions for containing, labeling, storage, transportation, inspections, training and record keeping for hazardous waste activities.

The HWMP will be made available to all USI employees at any time either via the Office of Risk Management & Safety web site (<http://www.usi.edu/riskmgmt/HazWasteMgtP.asp>) or a copy will be placed in each laboratory

5393). Also the HWMP will be made available to the EPA or the **city of Evansville's (or Vanderburgh County?)** Hazardous Waste Division upon request for examination and copying.

4.0 Chemical Hygiene Officer

Each department that generates hazardous waste must designate an individual or individuals to be its Chemical Hygiene Officer (CHO). CHOs will be responsible for ensuring that their departments comply with hazardous waste regulations. They will be trained to do so by Environmental Health and Safety (EHS).

5.0 Responsibilities

5.1 Environmental Health and Safety (EHS):

- Maintain the HWMP, based on regulatory changes and the needs of the USI community.
- Assist in the implementation of the HWMP on campus.
- Train generators and CHOs in the proper handling and disposal of hazardous waste.
- Remove hazardous wastes from their storage areas upon notification by the CHO.
- Arrange for the transportation and disposal of hazardous waste from campus within 90 days from the accumulation start date listed on the label.
- Be the central repository for record keeping of all documents related to the accumulation, transportation, storage, treatment and disposal of hazardous wastes.
- Maintain names, job titles and job descriptions for all personnel managing and handling hazardous wastes.

5.2 Department Head of Hazardous Waste Generators:

- Designate an individual(s) to be the Chemical Hygiene Officers (CHOs).
- Ensure CHOs receive annual training.
- Ensure that no chemicals are abandoned in place.
- Ensure this plan is implemented within the department.
- Absorb any costs associated with regulatory fines arising from their operation (refer to Appendix I for August 9, 2000 Memo from the Vice President for Academic Affairs.)

5.3 Generators:

- Become familiar with the HWMP.
- Attend training provided by EHS.
- Identify or deem chemical waste as hazardous waste.
- Work with their CHO to properly label, date, segregate and store hazardous wastes.
- Develop and implement an active waste minimization program by investigating material substitution, scale reduction, chemical exchange and purchase control.

5.4 Chemical Hygiene Officers (Appointed by the Department Head):

- Attend initial and annual training in Hazardous Waste Management.
- Assist EHS to implement the HWMP.
- Establish waste storage areas in the department with the assistance of EHS.
- Assist generators to properly label, store and segregate hazardous waste.
- Post the log inspection sheet in a highly visible area near the designated storage site.
- Inspect waste storage areas weekly to ensure hazardous waste is properly labeled, stored and segregated.
- Ensure that designated waste storage areas are posted with the DANGER sign (see Appendix 2).
- Contact EHS to collect and remove hazardous waste from the waste storage areas in a timely manner.
- Notify EHS on the 60th day of the accumulation start date of the hazardous waste.
- Assist EHS to identify hazardous waste to be removed from campus within 90 days from the accumulation start date listed on the label.

6.0 Requirements for Personnel Leaving the University

The abandonment of hazardous waste without proper disposal or identification is a regulatory violation and also creates both a dangerous storage situation and an expensive disposal problem. Risk Management recommends that all researchers planning to leave campus properly identify all hazardous wastes and arrange for their disposal before departing the University. It is also recommended that department chairs and principal investigators take responsibility for ensuring that laboratory personnel properly identify all hazardous wastes and arrange for hazardous waste removal before leaving the campus.

7.0 Generator Status

According to regulations, "a generator is a large quantity generator if he or she generates more than one hundred (100) kg but less than one thousand (1000) kg of hazardous waste or less than one (1) kg of acutely hazardous waste in a calendar month." Since the University generates more than 100

waste): ignitability, corrosivity, reactivity or toxicity. (See Section 8.1)

- Solid waste that is identified on any of the hazardous waste lists (termed a **listed** waste): nonspecific source wastes (F list), specific source wastes (K list), commercial chemical products (P and U lists).

Maximum Concentration of Contaminants for the Toxicity Characteristics

Contaminant	Chemical Abstracts Service (CAS) Number	Regulatory Level (mg/L)
Arsenic	7440-38-2	5.0
Barium	7440-39-3	100.0
Benzene	71-43-2	0.5
Cadmium	7440-43-9	1.0
Carbon Tetrachloride	56-23-5	0.5
Chlordane	57-74-9	0.03
Chlorobenzene	108-90-7	100.0
Chloroform	67-66-3	6.0
Chromium	7440-47-3	5.0
o-Cresol	95-48-7	200.0 _a
m-Cresol	108-39-4	200.0 _a
p-Cresol	106-44-5	200.0 _a
Cresol	...	200.0 _a
2,4-D	94-75-7	10.0
1,4-Dichlorobenzene	106-46-7	7.5

8.2 Listed Waste

A solid waste is a listed hazardous waste if it is not excluded from regulation, incorporating by reference 40 CFR 261 Subpart D. These lists include:

- Hazardous waste from nonspecific sources (F List).
- Hazardous waste from specific sources (K List).
- Discarded commercial chemical products, off specification species, container residues and spill residues thereof (P List and U List).

Hazardous Waste from Nonspecific Sources:

Wastes on EPA's F List: These are wastes EPA has determined to be hazardous but not generated by a particular industry or manufacturing process. (See Appendix 4)

Hazardous Wastes from Specific Sources:

Wastes on EPA's K List: These are wastes from particular industries that EPA has determined to be hazardous. (See Appendix 5)

Discarded Commercial Products, Off-Specification Species, Container Residues and Spill Residues:

This classification of hazardous waste includes certain commercial chemical products having the generic names listed on the P and U lists when they are discarded or intended to be discarded. Materials on the P list are classified as acute hazardous waste and materials on the U list are classified as toxic waste. (See Appendix 6 for P-List and Appendix 7 for U-List)

The following materials on the P List or the U List are classified as hazardous **wastes if they are intended for disposal**:

- The material itself, including commercially pure grades and technical grades of the material that are produced or marked for commercial or manufacturing use.
- A formulated product in which the chemical is the sole active ingredient.
- Off-specification commercial chemical products or manufacturing intermediates, which, if specifications were met, would have the generic name, listed.
- Residues remaining in a container or in a container liner that has held any of the materials on the P or U list, unless the container is empty.
- P-or U- listed materials contained in products, which are applied to the land in lieu of their original intended purpose.
- P or U listed materials that are produced for use as (or as a component of) a fuel, distributed for use as a fuel or burned as a fuel.
- Spill residues of P and U listed materials, including contaminated soil, contaminated water and other debris resulting from the cleanup of a spill of any of the items listed above.

Examples of commercial chemical product hazardous wastes include products with the generic names listed on the P and U lists from research laboratories (expiration dated or unused reagents intended for disposal), photography laboratories and analytical laboratories. These items become hazardous waste when a

8.3 Examples of Hazardous Waste

- Solvents used for parts cleaning or degreasing
- Paint thinners and paint removing compounds
- Organic solvents
- Battery acid and other waste acids
- Phenol wastes
- Dyes
- Adhesives
- Cements
- Lubricants
- Photographic film processing waste
- Laboratory waste
- Ethidium Bromide
- Water treatment chemicals
- Wastes containing metals such as lead, chromium, silver or cadmium
- Mercury waste
- Paints
- Inks
- Pigments
- Glazes
- Compressed gas cylinders (empty, partially full or full)
- Residues of spill materials
- Household cleaning supplies
- Used oil contaminated with PCBs or chlorinated refrigerant oil
- Pesticides

8.4 Wastes Requiring Special Handling

Used Oil: Support Building near Transportation Garage collects Used Oil and it is recycled. (See Appendix 8) Link to Used Oil regulations and EHS program).

Oil filters: Transportation to collect in separate drum and recycle.

Computer Monitors: Monitors that are broken and can no longer be used should be deemed hazardous waste. Those that are still working, but no longer needed should be donated for reuse. Contact Computer Services at 812 465-1255 during the hours of 8 a.m. through 4:30 p.m. on Monday through Friday.

Universal waste: Thermostats, bulbs and batteries are collected by EHS for recycling and proper handling. (See Appendix 9 for Mercury-Containing Lamp Program and Appendix 10 for Used Batteries)

Toner Cartridges: Many toner cartridges used in office equipment can be refurbished and used again. Check with the manufacturer of the toner cartridge to see if they will accept them back. For Hewlett Packard and Xerox cartridges contact Jeff Spohn at (812) 465-1601 during the hours of 8:00 a.m. through 4:30 p.m. on Monday through Friday. Any non-returnable toner cartridges, contact Environmental Health and Safety for other options. If any cartridge cannot be recycled than it should be deemed hazardous waste.

Spray paint cans/aerosol cans: Use cans until empty. Do not puncture the empty cans; dispose of in regular

8.5 Examples of Wastes That Do Not Fall Under HWMP

8.5.1 Biomedical waste:

EHS is not responsible for collecting or disposing of sharps, needles, broken glass or biohazard material. These items must be disposed of through a work ticket. Work tickets may be called in at (812) 464-0000. Custodial Services will be responsible for collecting these items. Disposal procedure poster is located in **Appendix 11**.

Infectious waste boxes are the cardboard boxes with the red plastic liners that are used for the disposal of research materials that are contaminated with hazardous biological agents or chemicals to include: tissue samples, animal cadavers, animal organs, slides, broken lab glassware, absorbent pads, pharmaceuticals and small quantities of chemicals. Sharps should be collected in the red puncture resistant collection containers. The red puncture resistant sharps collection containers are purchased through each department. Following are the instruction for the infectious waste boxes:

- The boxes are delivered constructed (from Custodial Services).
- All sharps must be placed in a puncture resistant collection container inside of the infectious waste box.
- Do not pour liquids in the boxes or over pack -- weight limit is 40 lbs.
- Use only the infectious waste boxes provided.
- Do not deliver the boxes to the loading dock.
- Do not use for disposal of non-hazardous material.
- When the infectious waste box is ready for disposal:
- Label the box with the building name and lab room #.
- Seal the plastic liner, NOT the cardboard top.
- **Call (812) 464-0000, request a pickup and a replacement box.**

Any questions regarding these procedures please contact EHS at (812) 461-5393.

The red puncture resistant sharps container for labs that generate needles should be purchased through each department.

8.5.2 Select Agent List

In recent years, the threat of illegitimate use of infectious agents has attracted increasing interest from the perspective of public health, in view of concern that certain select agents could have serious adverse consequences for human health and safety. "The Antiterrorism and Effective Death Penalty Act of 1996," enacted on April 24, 1996, established new provisions to regulate transfer of hazardous agents. The term "select agent" means "a microorganism (virus, bacterium, fungus, rickettsia) or toxin listed in this section."

If you have in your possession any of the following select agents, please contact the **Office of Laboratory Safety and Compliance** to ensure that the agent has been properly registered with the Center for Disease Control and Prevention.

The Office of Health and Safety, Centers for Disease Control and Prevention, 1600 Clifton Road N.E., Mail Stop F05 Atlanta, Georgia 30333, USA last modified this list on 5/20/97.

Viruses

1. Crimean-Congo haemorrhagic fever virus
2. Eastern Equine Encephalitis virus
3. Ebola viruses
4. Equine Morbillivirus
5. Lassa fever virus
6. Marburg virus

Exemptions: Vaccine strains of viral agents (Junin Virus strain candid #1, Rift Valley fever virus strain MP-12, Venezuelan Equine encephalitis virus strain TC-83, Yellow fever virus strain 17-D) are exempt.

Bacteria

1. Bacillus anthracis
2. Brucella abortus, B. melitensis, B. suis
3. Burkholderia (Pseudomonas) mallei

that is generated must be disposed of through the Radiation Safety Officer (Kent Scheller). He may be contacted at 812 464-1903.

9.0 Hazardous Waste Handling

Once solid waste is identified as hazardous waste by the generator, the CHO or EHS, it must be handled in accordance with the HWMP. Hazardous waste must not be: disposed or recycled with other forms of trash or waste, burned or allowed to evaporate into the air, disposed or diluted in water (i.e., down the drain), disposed on or buried in the land.

An appropriate container (bottle, jar, etc.) must be used to accumulate waste. It must be labeled properly, as discussed in Section 9.1, at the time the first drop of waste is added to the container. This is known as *The First Drop Rule*.

Hazardous waste containers must be kept closed except when adding or transferring waste and the contents of the containers must be compatible with the container. Hazardous waste containers must be segregated based on the hazards of the waste.

Hazardous wastes must be stored in designated waste storage areas; these areas must be equipped with secondary containment in the form of bins or a berm that would contain liquid waste in the event of a spill. A *DANGER* sign must be posted at waste storage areas to indicate the presence of hazardous waste. The room that has a waste storage area will have a phone, access to an emergency eyewash/shower, basic spill cleanup equipment, a fire extinguisher, adequate aisle space and will be incorporated into the University's contingency plan. Weekly inspections of the waste storage area are required and the inspection must be documented and maintained.

9.1 Labeling Containers

A chemical container must be labeled as hazardous waste at the time its content is designated as a hazardous waste. When a hazardous waste is added to a container, it must also be labeled as a hazardous waste at the time the first drop of hazardous waste is added to it. This is referred to as the First Drop Rule.

Chemicals that are to be reused should be clearly labeled as such to avoid confusion with hazardous waste. EHS will not remove any material that is not clearly labeled as hazardous waste.

The person who identifies the hazardous waste is responsible for labeling the container that stores the waste with the "Hazardous Waste" sticker or tag supplied by EHS.

If a sticker is too large for the container, use a tag in its place. Attach the tag with a rubber band or string. Use only a sticker or a tag to label but not both.

If a mistake is made on the sticker after it has already been attached to the container, use a one-line cross out with initial and date to modify and add the correction. **Do not place a new sticker on top of an old sticker, unless changing the old one would make it legible.** Do not change the accumulation start date on the label. The hazardous waste regulations strictly prohibit this act and it will not be tolerated.

If a mistake is made on the tag, discard the old tag and complete a new one immediately. Dispose of the old tag

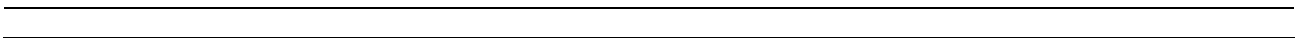
hazardous waste must have the label(s) for labeling the tag and date.

Lime wastewater
Lime and water
Spent caustic

Spent acid
Spent mixed acid
Spent sulfuric acid

Potential consequences: Heat generation; violent reaction

GROUP 2-A



Once a waste storage area has been established, a weekly inspection of that area is required, regardless of the quantity of waste in the storage area. Even if no waste has been added to a storage area, an inspection is still required.

The exception to this rule will be the December Winter break when the University is officially closed. CHOs will not have to perform the weekly inspection during that break. EHS will complete a waste pickup prior to the closure to ensure the majority of all waste is removed from the waste storage areas. EHS will document this via a memorandum at that time. It is the CHOs responsibility to resume inspections the week following the holiday break when the University reopens.

If the CHO for a designated waste storage area is not able to complete the weekly inspection due to absence, it is his/her responsibility to ensure the inspection is completed. A database of CHOs, established by EHS, will be available.

10.0 Contingency Plan

- keep them for the duration of three years.
- Weekly inspection forms should be managed by the CHO, filed and saved for three years.
- Photocopies of the weekly inspection forms will be managed by EHS, filed and saved for three years.
- All other hazardous waste documentation relating to shipment, regulatory reports and land disposal records will be maintained by EHS for at least three years. Land disposal records will be maintained for at least five years.

14.0 Little Known but Allowable Ways to Manage Hazardous Waste

At times, chemicals may be reacted with other chemicals, to render them non-hazardous or to reduce the volume of hazardous waste. Treatment in containers is permitted only when the treatment occurs in the container in which the waste was generated. Some examples include:

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15.0 References

- Title 40 of the Code of Federal Regulations, Parts 260-268, 270, 273, 279.
- Environmental Protection Agency, Hazardous Waste Regulation, 40 CFR 260

ADDENDUM

- 1. Section 9.3 does not make the provisions of §4415.16 concerning incompatibles clear.**

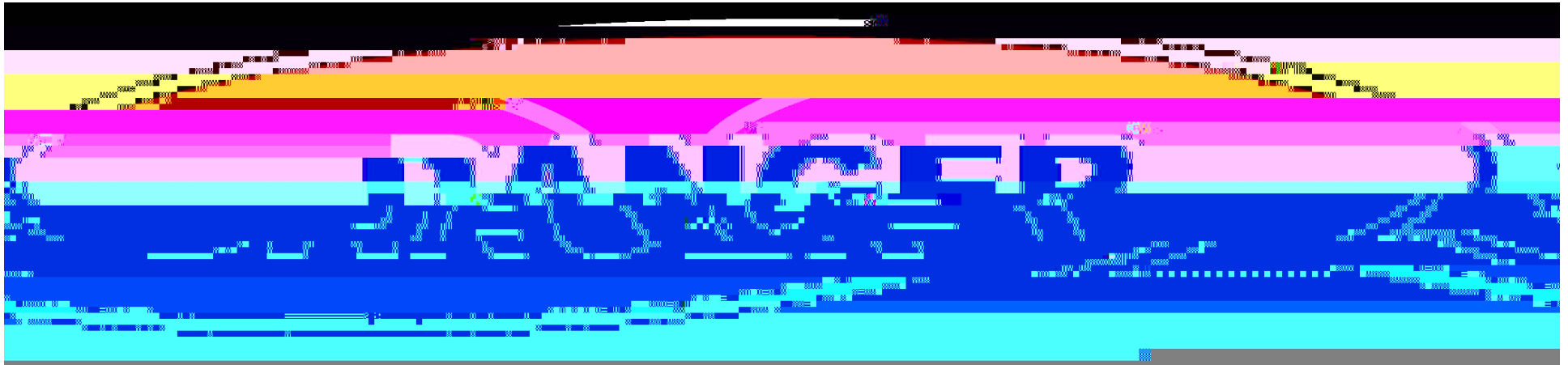
Section 4415.16 of the DCMR states that storage containers holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, or open tanks will be separated from the other materials or protected from them by means of a dike, berm, wall or other device.

ensure that in case of a spill, the hazardous waste is contained and does not mix with inc
Contact EHS to obtain secondary containment bins.

- 2. Section 12.0 does not make it clear that training is required within six months of that writ(3i7)4**

APPENDIX 1:
**AUGUST 9, 2000 MEMO FROM VICE
PRESIDENT OF ACADEMIC AFFAIRS**

APPENDIX 2:
WASTE STORAGE AREA DANGER
SIGN



HAZARDOUS WASTE STORAGE AREA

UNAUTHORIZED PERSONNEL KEEP OUT

To dispose of hazardous waste submit removal request to
<http://www.usi.edu/riskmgt/HazMaterials.asp>

In case of emergency call Security (7777 or 812 464-1845) and
Environmental Health and Safety (812 461-5393)

APPENDIX 3:
HAZARDOUS WASTE
DETERMINATION & CLASSIFICATION

APPENDIX 4:
F-LISTED WASTES

Hazardous Waste Generated By Generic Processes ("F" List)

EPA Waste No.	Hazardous waste	Hazard code
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing that contain, before use, a total of 10% or more (by volume) of 1 or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F002	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2 trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloro-ethane; all spent solvent mixtures/blends containing, before use, a total of 10% or more (by volume) of 1 or more of the above halogenated solvents or those listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F003	The following spent non-halogenated* solvents: xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, 1 or more of the above non-halogenated solvents, and a total of 10% or more (by volume) of 1 or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I)
F004	The following spent non-halogenated solvents: cresols, cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of 10% or more (by volume) of 1 or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of those spent solvents and spent solvent mixtures.	(T)

F005

The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-

-those solvents listed in F001, F002, F003, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

Hazardous Waste Generated By Generic Processes ("F" List) *(continued)*

EPA

Waste No.

Hazardous Waste Generated By Generic Processes ("F" List) (continued)		
EPA Waste No.	Hazardous waste	Hazard code
F032	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with RCRA Section 261.35 or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F034	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F037	Petroleum refinery primary oil/water/ solids separation sludge – Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in RCRA Section 261.31(b)(2) (including sludges generated in 1 or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.	(T)
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge –	

Hazardous Waste Genera

APPENDIX 5:
K-LISTED WASTES

Hazardous Waste From Specific Sources ("K" list)

Wood Preservation

K001(T) Bottom sediment sludge from the treatment of wastewaters from wood-preserving processes that use creosote and/or pentachlorophenol.

Inorganic Pigments

K002(T) Wastewater treatment sludge from the production of chrome yellow and orange pigments.

K003(T) Wastewater treatment sludge from the production of molybdate orange pigments.

K004(T) Wastewater treatment sludge from the production of zinc yellow pigments.

K005(T) Wastewater treatment sludge from the production of chrome green pigments.

K006(T) Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).

K007(T) Wastewater treatment sludge from the production of iron blue pigments.

K008(T) Oven residues from the production of chrome oxide green pigments.

Organic Chemicals

K009(T) Distillation bottoms from the production of acetaldehyde from ethylene.

K010(T) Distillation side cuts from the production of acetaldehyde from ethylene.

K011(R,T) Bottom stream from the wastewater stripper in the production of acrylonitrile.

K013(R,T) Bottom stream from the acrylonitrile column in the production of acrylonitrile.

K014(T) Bottoms from the acetonitrile purification column in the production of acrylonitrile.

K015(T) Still bottoms from the distillation of benzyl chloride.

K016(T) Heavy ends or distillation residues from the production of carbon tetrachloride.

K017(T) Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.

K018(T) Heavy ends from the fractionation column in ethyl chloride production.

K019(T) Heavy ends from the distillation of ethylene dichloride production.

K020(T) Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.

K021(T) Aqueous spent antimony catalyst waste from fluouromethanes production

K022(T) Distillation bottom tars from the production of phenol/acetone from cumene.

K023(T) Distillation light ends from the production of phthalic anhydride from naphthalene.

K024(T) Distillation bottoms from the production of phthalic anhydride from naphthalene.

K025(T) Distillation bottoms from the production of nitrobenzene by the nitration of benzene.

K026(T) Stripping still tails from the production of methyl ethyl pyridin otf-h6359.25 0 TD 0 Tc 0.2895 Tw () T333417 -

Organic Chemicals (continued)

- K108(I,T) Condensed column overheads from product separation and condensed reactor vent gases for the production of UDMH from carboxylic acid hydrazides.
- K109(T) Spent filter cartridges from the product purification from the production of UDMH from carboxylic acid hydrazides.
- K110(T) Condensed column overheads from intermediate separation from the production of UDMH from carboxylic acid hydrazides.
- K111(C,T) Product washwaters from the production of dinitrotoluene via nitration of toluene.
- K112(T) Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.
- K113(T) Condensed liquid light ends from the purification of toluenediamine via hydrogenation of dinitrotoluene.
- K114(T) Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.
- K115(T) Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.
- K116(T) Organic condensate from the solvent recovery in the production of toluene diisocyanate via phosgenation of toluenediamine.
- K117(T) Wastewater from reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethylene.
- K118(T) Spent adsorbent solids from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethylene.
- K136(T) Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethylene.
- K149(T) Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillation of benzyl chloride.)
- K150(T) Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzyl chlorides, and compounds with mixtures of these functional groups.
- K151(T) Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzyl chlorides, and compounds with mixtures of these functional groups.

Inorganic Chemicals

- K071(T) Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.
- K073(T) Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.
- K106(T) Wastewater treatment sludge from the mercury cell process in chlorine production.

Pesticides

- K031(T) By-product salts generated in the production of Methanearsonic Acid (MSMA) in the production of chlordane.
- K034(T) Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.
- K035(T) Wastewater treatment sludges generated in the production of creosote.
- K036(T) Still bottoms from toluene reclamation distillation in the production of disulfoton.
- K037(T) Wastewater treatment sludges from the production of disulfoton
- K038(T) Wastewater from the washing and stripping of phorate production.
- K039(T) Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.

(continued)

Pesticides (continued)

- K040(T) Wastewater treatment sludge from the production of phorate.
- K041(T) Wastewater treatment sludge from the production of toxaphene.
- K042(T) Heavy ends of distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.
- K043(T) 2,6-Dichlorophenol waste from the production of 2,4-D.
- K097(T) Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.
- K098(T) Untreated process wastewater from the production of toxaphene.
- K099(T) Untreated wastewater from the production of 2,4-D.
- K123(T) Process wastewater (including supermates, filtrates, and washwaters) from the production of ethylebisdithiocarbamic acid and its salt.
- K124(C,T) Reactor vent scrubber water from the production of ethylebisdithiocarbamic acid and its salts.

Primary Aluminum

K088(T) Spent potliners from primary aluminum reduction.

Ferroalloys

K090(T) Emission control dust or sludge from ferrochromiumsilicon production.

K091(T) Emission control dust or sludge from ferrochromium production.

Secondary Lead

K069(T) Emission control dust/sludge from secondary lead smelting. (NOTE: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action affecting this stay, EPA will publish a notice of the action in the *Federal Register*.)

K100(T) Waste leaching solution from acid leaching of emission control dust sludge from secondary lead smelting.

Veterinary Pharmaceuticals

K084(T) Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

K101(T) Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

K102(T) Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

Ink Formulation

K086(T) Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.

Coking

K060(T) Ammonia still lime sludge from coking operations.

K087(T) Decanter tank tar sludge from coking operations.

K141(T) Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke byproducts produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations).

K142(T) Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.

K143(T) Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.

K144(T) Wastewater sump residues from light oil refining, including but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.

K145(T) Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.

K147(T) Tar storage tank residues from coal tar refining.

K148(T) Residues from coal tar distillation, including but not limited to, still bottoms.

Key: (T) = toxic; (C) = corrosive; (R) = reactive.

APPENDIX 6:
P-LISTED WASTES

Hazardous Waste "P" List		
HW No.	CAS No.	Substance
P023	107-20-0	Acetaldehyde, chloro
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro
P058	62-74-8	Acetic acid, fluoro, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-2	Aldicarb
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide (R,T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate (R)
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate(1-), bis(cyano-C)-potassium
P010	7778-39-4	Arsenic Acid H(3)AsO(4)
P012	1327-53-3	Arsenic oxide As(2)O(3)
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-6	Arsonous dichloride, phenyl-
P054	151-56-4	Aziridine
P067	75-55-8	Aziridine, 2-methyl-
P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)-
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-
P046	122-09-8	Benzeneethanamine, alpha, alpha-dimethyl-
P014	108-98-5	Benzenethiol
P001	[1]81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)- and salts when present at concentrations greater than 0.3%
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium Powder
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1 -(methylthio)-, O-[methylamino] carbonyl] oxime
P021	592-01-8	Calcium cyanide
P022	75-15-0	Carbon disulfide
P095	75-44-5	Carbonic dichloride
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea

(continued)

Hazardous Waste "P" List (continued)

HW No.	CAS No.	Substance
P057	640-19-7	Fluoroacetamide
P058	62-74-8	Fluoroacetic acid, sodium salt
P065	628-86-4	Fluminic acid, mercury(2+) salt (R,T)
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyl tetraphosphate
P116	79-19-6	Hydrazinecarbothioamide
P068	80-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid (Hydrogen cyanide)
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Isodrin
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P092	62-38-4	Mercury, (acetato-O)phenyl
P065	628-86-4	Mercury fulminate (R,T)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-83-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis[chloro-
P112	509-14-8	Methane, tetranitro- (R)
P118	75-70-7	Methanethiol, trichloro-
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin,6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro
P066	16752-77-5	Methomyl

Hazardous Waste "P" List *(continued)*

APPENDIX 7:
U-LISTED WASTES

HW No.	CAS No.	Substance
U001	75 07 0	Salts & Esters of Acetic acid, ethylester (I) Acetic acid, ethylester (I) Acetic acid, lead(2+) salt Acetic acid, thallium(1+) salt
	See '93 76 5	Acetic acid, (2,4,5 trichlorophenoxy)
		F027
U002	67 64 1	Acetone (I)
U003	75 05 8	Acetonitrile (I,T)
U004	98 86 2	Acetophenone
U005	53 96 3	2 Acetylamino fluorene
U006	75 36 5	Acetylchloride (C,R,T)
U007	79 06 1	Acrylamide
U008	79 10 7	Acrylic acid (I)
U009	107 13 1	Acrylonitrile
U011	61 82 5	Amitrole
U012	62 53 3	Aniline (I,T)
U136	75 60 5	Arsinic acid, dimethyl
U014	492 80 8	Auramine
U015	115 02 6	Azaserine
U010	50 07 7	Azirino[2',3':3,4]pyrrolo[1,2 a]indole 4,7 dione, 6 amino 8 [[(aminocarbonyl)oxy]methyl] 1,1a,2,8,8a,8b hexahydro 8a methoxy 5 methyl ,[1aS (1aalpha,8beta,8aalpha,8balpha)]
U157	50 49 5	Benz[j]aceanthrylene, 1,2 dihydro 3 methyl
U016	225 51 4	Benz(c)acridine
U017	98 87 3	Benzalchloride
U192	23950 58 5	Benzamide, 3,5 dichloro N (1,1 diethyl 2 propynyl)
U018	56 55 3	Benz[a]anthracene
U094	57 97 6	Benz[a]anthracene, 7,12 dimethyl
U012	62 53 3	Benzenamine (I,T)
U014	492 80 8	Benzenamine, 4,4 carbonimidoylbis (N,N dimethyl)
U049	3165 93 3	Benzenamine, 4 chloro 2 methyl hydrochloride
U093	60 11 7	Benzenamine, N,N dimethyl 4 (phenylazo)
U328	95 53 4	Benzenamine, 2 methyl
U353	106 49 0	Benzenamine, 4 methyl
U158	101 14 4	Benzenamine, 4,4' methylenebis[2 chloro
U222	636 21 5	Benzenamine, 2 methyl ,hydrochloride
U181	99 55 8	Benzenamine, 2 methyl 5 nitro
U019	71 43 2	Benzene (I,T)
U038	510 15 6	Benzeneacetic

Hazardous Waste "U" List

HW No.	CAS No.	Substance
U037	108 90 7	Benzene,chloro
U221	25376 45 8	Benzenediamine,ar methyl
U028	117 81 7	1,2 Benzenedicarboxylic acid,bis(2 ethylhexyl)ester
U069	84 74 2	1,2 Benzenedicarboxylic acid,dibutylester
U088	84 66 2	1,2 Benzenedicarboxylic acid,diethylester
U102	131 11 3	1,2 Benzenedicarboxylic acid,dimethylester
U107	117 84 0	1,2 Benzenedicarboxylic acid,dioctyl
U070	95 50 1	Benzene,1,2 dichloro
U071	541 73 1	Benzene,1,3 dichloro
U072	106 46 7	Benzene,1,4 dichloro
U060	72 54 8	Benzene,1,1' (2,2 dichloroethylidene)bis[4 chloro
U017	98 87 3	Benzene,(dichloromethyl)
U223	26471 62 5	Benzene,1,3 diisocyanatomethyl (R,T)
U239	1330 20 7	Benzene,dimethyl (I,T)
U201	108 46 3	1,3 Benzenediol
U127	118 74 1	Benzene,hexachloro
U056	110 82 7	Benzene,hexahydro (I)
U220	108 88 3	Benzene,methyl
U105	121 14 2	Benzene,1 methyl 2,4 dinitro
U106	606 20 2	Benzene,2 methyl 1,3 dinitro
U055	98 82 8	Benzene,(1 methylethyl) (I)
U169	98 95 3	Benzene, nitro
U183	608 93 5	Benzene, pentachloro
U185	82 68 8	Benzene, pentachloronitro
U020	98 09 9	Benzene sulfonic acid chloride (C,R)
U020	98 09 9	Benzene sulfonyl chloride (C,R)
U207	95 94 3	Benzene,1,2,4,5 tetrachloro
U061	50 29 3	Benzene,1,1' (2,2,2 trichloroethylidene)bis[4 chloro
U247	72 43 5	Benzene,1,1' (2,2,2 trichloroethylidene)bis[4 methoxy
U023	98 07 7	Benzene,(trichloromethyl)
U234	99 35 4	Benzene,1,3,5 trinitro
U021	92 87 5	Benzidine
U202	(1)81 07 2	1,2 Benzisothiazol 3(2H) one,1,1 dioxide,

U028

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Hazardous Waste "U" List

HW No.	CAS No.	Substance
U091	119 90 4	[1,1' Biphenyl] 4,4' diamine, '3,3' dimethoxy
U095	119 93 7	[1,1' Biphenyl] 4,4' diamine, '3,3' dimethyl
U225	75 25 2	Bromoform
U030	101 55 3	4 Bromophenyl phenyl ether
U128	87 68 3	1,3 Butadiene,1,1,2,3,4,4 hexachloro
U172	924 16 3	1 Butanamine,N butyl N nitroso
U031	71 36 3	1 Butanol (l)
U159	78 93 3	2 Butanone (l,T)
U160	1338 23 4	2 Butanone peroxide (R,T)
U053	4170 30 3	2 Butenal
U074	764 41 0	2 Butene,1,4 dichloro (l,T)
U143	303 34 4	2 Butenoic acid,2 methyl ,7 [[2,3 dihydroxy 2 (1 methoxyethyl) 3 methyl 1 oxobutoxy]methyl] 2,3,5,7a tetrahydro 1H pyrrolizin 1 ylester,[1S [1alpha(Z),7(2S*,3R*),7aalpha]]
U031	71 36 3	n Butylalcohol (l)
U136	75 60 5	Cacodylic acid
U032	13765 19 0	Calcium chromate
U238	51 79 6	Carbamic acid,ethylester
U178	615 53 2	Carbamic acid,methylnitroso ,ethylester
U097	79 44 7	Carbamic chloride,dimethyl
U114	(1)111 54 6	Carbamodithioic acid,1,2 ethanedylbis ,saltsandesters
U062	2303 16 4	Carbamothioic acid,bis(1 methylethyl) ,S (2,3 dichloro 2 propenyl)ester
U215	6533 73 9	Carbonic acid,dithallium(1+)salt
U033	353 50 4	Carbonic difluoride
U156	79 22 1	Carbonochloridic acid,methylester (l,T)
U033	353 50 4	Carbonoxyfluoride (R,T)
U211	56 23 5	Carbon tetrachloride
U034	75 87 6	Chloral
U035	305 03 3	Chlorambucil
U036	57 74 9	Chlordane, 'alpha and gamma isomers
U026	494 03 1	Chlornaphazin
U037	108 90 7	Chlorobenzene
U03Inyl		8 1, 9 4 002 3 7 1 0 8
		U0318 159 51 78

Hazardous Waste "U" List

HW No.	CAS No.	Substance
U095	119 93 7	3,3' Dimethylbenzidine
U096	80 15 9	alpha,alpha Dimethylbenzylhydroperoxide (R)
U097	79 44 7	Dimethylcarbamoylchloride
U098	57 14 7	1,1 Dimethylhydrazine
U099	540 73 8	1,2 Dimethylhydrazine
U101	105 67 9	2,4 Dimethylphenol
U102	131 11 3	Dimethyl phthalate
U103	77 78 1	Dimethyl sulfate
U105	121 14 2	2,4 Dinitrotoluene
U106	606 20 2	2,6 Dinitrotoluene
U107	117 84 0	Di n octylphthalate
U108	123 91 1	1,4 Dioxane
U109	122 66 7	1,2 Diphenylhydrazine
U110	142 84 7	Dipropylamine (I)
U111	621 64 7	Di n propyl nitrosamine
U041	106 89 8	Epichlorohydrin
U001	75 07 0	Ethanal (I)
U174	55 18 5	Ethanamine,N ethyl N nitroso
U155	91 80 5	1,2 Ethanedi amine,N,N dimethyl N' 2 pyridinyl N' (2thienylmethyl)
U067	106 93 4	Ethane,1,2 dibromo
U076	75 34 3	Ethane,1,1 dichloro
U077	107 06 2	Ethane,1,2 dichloro
U131	67 72 1	Ethane,hexachloro
U024	111 91 1	Ethane,1,1' [methylenebis (oxy)]bis[2 chloro
U117	60 29 7	Ethane,1,1' oxybis (I)
U025	111 44 4	Ethane,1,1' oxybis[2 chloro
U184	76 01 7	Ethane,pentachloro
U208	630 20 6	Ethane,1,1,1,2 tetrachloro
U209	79 34 5	Ethane,1,1,2,2 tetrachloro
U218	62 55 5	Ethanethioamide
U226	71 55 6	Ethane,1,1,1 trichloro
U227	79 00 5	Ethane,1,1,2 trichloro
U359	110 80 5	Ethanol,2 ethoxy
U173	1116 54 7	Ethanol,2,2' (nitrosoimino)bis
U004	98 86 2	Ethanone,1 phenyl
U043	75 01 4	Ethene,chloro
U042	110 75 8	Ethene,(2 chloroethoxy)0 6

Hazardous Waste "U" List

HW No.	CAS No.	Substance
U114	(1)111 54 6	Ethylenebisdithiocarbamic acid,salts & esters
U067	106 93 4	Ethylene dibromide
U077	107 06 2	Ethylene dichloride
U359	110 80 5	Ethylene glycol monoethyl ether
U115	75 21 8	Ethylene oxide (I,T)
U116	96 45 7	Ethylene thiourea
U076	75 34 3	Ethylidene dichloride
U118	97 63 2	Ethylmethacrylate
U119	62 50 0	Ethylmethane sulfonate
U120	206 44 0	Fluoranthene
U122	50 00 0	Formaldehyde
U123	64 18 6	Formic acid (C,T)
U124	110 00 9	Furan (I)
U125	98 01 1	2 Furancarboxaldehyde (I)
U147	108 31 6	2,5 Furandione
U213	109 99 9	Furan,tetrahydro

Hazardous Waste "U" List

HW No.	CAS No.	Substance
U145	7446 27 7	Lead phosphate
U146	1335 32 6	Lead subacetate
U129	58 89 9	Lindane
U163	70 25 7	MNNG
U147	108 31 6	Maleicanhydride
U148	123 33 1	Maleichydrazide
U149	109 77 3	Malononitrile
U150	148 82 3	Melphalan
U151	7439 97 6	Mercury
U152	126 98 7	Methacrylonitrile (I,T)
U092	124 40 3	Methanamine,N methyl (I)
U029	74 83 9	Methane,bromo
U045	74 87 3	Methane,chloro (I,T)
U046	107 30 2	Methane,chloromethoxy
U068	74 95 3	Methane,dibromo
U080	75 09 2	Methane,dichloro
U075	75 71 8	Methane,dichlorodifluoro
U138	74 88 4	Methane,iodo
U119	62 50 0	Methane sulfonic acid, ethyl ester
U211	56 23 5	Methane,tetrachloro
U153	74 93 1	Methanethiol (I,T)
U225	75 25 2	Methane,tribromo
U044	67 66 3	Methane,trichloro
U121	75 69 4	Methane,trichlorofluoro
U036	57 74 9	4,7 Methano 1H indene,1,2,4,5,6,7,8,8 octachloro 2,3,3a,4,7,7a hexahydro
U154	67 56 1	Methanol (I)
U155	91 80 5	Methapyrilene
U142	143 50 0	1,3,4 Metheno 2H cyclobuta[cd]pentalen 2 one,1,1a,3,3a,4,5,5a,5b,6 decachlorooctahydro
U247	72 43 5	Methoxychlor
U154	67 56 1	Methyl alcohol (I)
U029	74 83 9	Methyl bromide
U186	504 60 9	1 Methyl butadiene (I)
U045	74 87 3	Methyl chloride (I,T)
U156	79 22 1	Methylchlorocarbonate (I,T)
U226	71 55 6	Methylchloroform
U157	56 49 5	3 Methyl cholanthrene
U158	101 14 4	4,4 Methylene bis(2 chloroaniline)
U068	74 95 3	Methylene bromide
U080	75 09 2	Methylene chloride
U159	78 93 3	Methyl ethyl ketone (MEK) (I,T)
U160	1338 23 4	Methyl ethyl ketone peroxide (R,T)
U138	74 88 4	Methyl iodide
U161	108 10 1	Methyl isobutyl ketone (I)

| HW No. | CAS No. |

Hazardous Waste "U" List
Substance

Hazardous Waste "U" List

HW No.	CAS No.	Substance
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U048 95 57

Hazardous Waste "U" List

HW No.	CAS No.	Substance
U191	109 06 8	Pyridine,2 methyl
U237	66 75 1	2,4 (1H,3H) Pyrimidinedione,5 [bis(2 chloroethyl)amino]
U164	56 04 2	4(1H) Pyrimidinone, 2,3 dihydro 6 methyl 2 thioxo
U180	930 55 2	Pyrrolidine,1 nitroso
U200	50 55 5	Reserpine
U201	108 46 3	Resorcinol
U202	(1)81 07 2	Saccharin, and salts
U203	94 59 7	Safrole
U204	7783 00 8	Selenious acid
U204	7783 00 8	Selenium dioxide
U205	7488 56 4	Selenium sulfide
U015	115 02 6	L Serine,diazoacetate (ester) See93 72 1Silvex(2,4,5 TP)F027
U206	18883 66 4	Streptozotocin
U103	77 78 1	Sulfuric acid, dimethyl ester
U189	1314 80 3	Sulfurphosphide (R) See93 76 52,4,5 TF027
U207	95 94 3	1,2,4,5 Tetrachlorobenzene
U208	630 20 6	1,1,1,2 Tetrachloroethane
U209	79 34 5	1,1,2,2 Tetrachloroethane
U210	127 18 4	Tetrachloroethylene (see58 90 22,3,4,6 Tetrachlorophenol F027)
U213	109 99 9	Tetrahydrofuran (I)
U214	563 68 8	Thallium (I) acetate
U215	6533 73 9	Thallium (I) carbonate
U216	7791 12 0	Thallium (I) chloride
U216	7791 12 0	Thallium chlorideTlCl
U217	10102 45 1	Thallium (I) nitrate
U218	62 55 5	Thioacetamide
U153	74 93 1	Thiomethanol (I,T)
U244	137 26 8	Thioperoxydicarbonicdiamide [(H(2)N)C(S)](2)S(2)tetramethyl
U219	62 56 6	Thiourea
U244	137 26 8	Thiram
U220	108 88 3	Toluene
U221	25376 45 8	Toluene diamine
U223	26471 62 5	Toluene diisocyanate (R,T)
U328	95 53 4	o Toluidine
U353	106 49 0	p Toluidine
U222	636 21 5	o Toluidine hydrochloride
U011	61 82 5	1H 1,2,4 Triazol 3 amine
U227	79 00 5	1,1,2 Trichloroethane
U228	79 01 6	Trichloroethylene
U121	75 69 4	Trichloromonofluoromethane See 95 95 42,4,5 Trichlorophenol F027 See 88 06 22,4,6 Trichlorophenol F027
U234	99 35 4	1,3,5 Trinitrobenzene (R,T)
U182	123 63 7	1,3,5 Trioxane,2,4,6 trimethyl
U235	126 72 7	Tris(2,3 dibromopropyl) phosphate
U236	72 57 1	Trypan blue

Hazardous Waste "U" List

HW No.	CAS No.	Substance
U237	66 75 1	Uracil mustard
U176	759 73 9	Urea,N ethyl N nitroso
U177	684 93 5	Urea,N methyl N nitroso
U043	75 01 4	Vinyl chloride
U248	(1)81 81 2	Warfarin,when present at concentrations of 0.3% or less
U239	1330 20 7	Xylene (1)
U200	50 55 5	Yohimban 16 carboxylicacid,11,17 dimethoxy 18 [(3,4,5 tri methoxybenzoyl)oxy] ,methy lester,(3 beta,16 beta,17 alpha,18 beta,20 alpha)
U249	1314 84 7	Zinc phosphide,Zn(3)P(2),when present at concentrations of 10% or less.

APPENDIX 8:
USED OIL PROGRAM

USED OIL PROGRAM

I. INTRODUCTION

The Environmental Protection Agency's regulatory definition of used oil is as follows: Used oil is any oil that has been refined from crude oil or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. Simply put, used oil is exactly what its name implies-- any petroleum-based or synthetic oil that has been used. During normal use, impurities such as dirt, metal scrapings, water or chemicals can get mixed in with the oil, so that in time the oil no longer performs well. Eventually, this used oil must be replaced with virgin or re-refined oil to do the job at hand. EPA's used oil management standards include a three-pronged approach to determine if a substance meets the definition of used oil. To meet EPA's definition of used oil, a substance must meet each of the following three criteria:

Origin — the first criterion for identifying used oil is based on the origin of the oil. Used oil must have been refined from crude oil or made from synthetic materials. Animal and vegetable oils are excluded from EPA's definition of used oil.

Use — the second criterion is based on whether and how the oil is used. Oils used as lubricants, hydraulic fluids, heat transfer fluids, buoyants and for other similar purposes are considered used oil. Unused oil such as bottom clean-out waste from virgin fuel oil storage tanks or virgin fuel oil recovered from a spill; do not meet EPA's definition of used oil because these oils have never been "used." EPA's definition also excludes products used as cleaning agents or solely for their solvent properties, as well as certain petroleum-derived products like antifreeze and kerosene.

Contaminants — the third criterion is based on whether or not the oil is contaminated with either physical or chemical impurities. In other words, to meet EPA's definition, used oil must become contaminated as a result of being used. This aspect of EPA's definition includes residues and contaminants generated from handling, storing and processing used oil. Physical

hazardous waste through careless mixing. The following are acceptable materials that can be recycled through US Filter and Recovery:

- Motor Oil
- Automatic Transmission Fluid
- Power Steering Fluid
- Diesel Fuel
- Gear Oil
- Turbine Engine Oil
- Hydraulic Oil
- Fuel Oil
- Kerosene (#2, #4, & #6)

VI. MIXTURES OF USED OIL AND HAZARDOUS WASTE

Used oil containing greater than one thousand parts per million (1,000 ppm) total halogens is presumed to be a hazardous waste and must be managed as hazardous waste and not used oil. The city of Evansville presumes that used oils removed from refrigeration units contains greater than 1,000 ppm and must be managed in accordance with the hazardous waste requirements. Any used oil contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units or used oil mixed with contaminated oil must be managed according to the city of Evansville's (Vanderburgh County?) hazardous waste regulations. This includes oil mixed with characteristic and listed hazardous wastes. A brief summary of USI's hazardous waste management requirements is in Section VIII of this program. Some examples of halogenated hydrocarbons are polychlorinated biphenyl (PCB) oils, FREON (Refrigerant oils or solvents), perchloroethylene (Solvent), trichloroethylene (Solvent), trichloroethane (Solvent), trichlorotrifluoroethane (Solvent), chloroform and carbon tetrachloride.

USI may rebut the above presumption for metalworking oils/fluids no matter what their composition or how they are recycled or disposed. In order to rebut the presumption, analytical methods from SW-846, Edition umes to thwsumes g to the

VIII. HAZARDOUS WASTE MANAGEMENT

1. Used oils that are identified as a hazardous waste and cannot be recycled in accordance with this program will be managed in accordance with hazardous waste management requirements
2. Hazardous waste should be placed in the designated drum in the lamp storage area.
3. Label the container as "Hazardous Waste". Refer to **APPENDIX C**.
4. Store hazardous waste for no longer than 90 days from the date waste is first placed in a container. *Contact Risk Management before the 90-day expiration date to ensure that waste is off-site by the 90th day. Anything stored over 90 days places USI into a different and more stringent regulatory classification.*
5. Ensure the container is "closed" except when adding waste.
6. Storage area must be identified with an easily readable sign stating "**DANGER -HAZARDOUS WASTE STORAGE AREA UNAUTHORIZED PERSONNEL KEEP OUT**". Refer to **APPENDIX D**.
7. Inspect hazardous waste container storage area at least weekly and maintain a log of all inspections.
8. Ensure communication equipment and emergency equipment are available where hazardous wastes are managed.

IX. PICK-UP/COLLECTION REQUESTS

When pick-up/collection service is needed, contact the Office of Risk Management (465-7003) or via e-mail at jhunt@usi.edu to submit a request.

X. EMERGENCY RESPONSE FOR USED OIL SPILLS

Upon detection of a release of used oil to the environment, USI personnel will conduct the following:

- Stop the release;
- Contain the released used oil;
- Contact the Energy and Environmental Management Office;
- Clean up and manage properly the released used oil and other materials; and
- If necessary, repair or replace any leaking used oil storage containers before returning them to service.

XI. TRAINING

The USI Office of Risk Management will provide training for the management of used oil to all employees who generate, store and dispose of used oil upon initial employment and when changes in regulations occur. This training is documented and maintained in the Office of Risk Management. Only employees that have attended the training session will be permitted to manage used oil. Please contact the Office of Risk Management to schedule a training date. **APPENDIX E** will be used to track training attendance.

XII. CONTRACTOR'S RESPONSIBILITIES

Third-Party Building Management

Third-party building management companies must present to the Office of Risk Management a copy of

APPENDIX A
Used Oil Storage Area Sign



APPENDIX B
Used Oil Stickers



**APPENDIX C
Hazardous Waste Label**

The image shows a hazardous waste label form with a yellow header and a pink background. The form contains the following fields and sections:

- GENERATOR INFORMATION:** Includes fields for NAME, ADDRESS, CITY, STATE, ZIP, PHONE, and CONTACT PERSON.
- GENERAL INFORMATION:** Includes fields for BUILDING / ROOM, WASTE NUMBER, and DATE.
- HAZARD CLASSIFICATION:** Includes checkboxes for Oxidizer, Corrosive, and Toxic.
- DESCRIPTION:** A large text area for describing the waste.
- REGULATORY INFORMATION:** Includes fields for RCRA CODE, CERCLA CODE, and other regulatory codes.

The form is partially obscured by a yellow bar at the top and a pink bar at the bottom. The text is mostly illegible due to the low resolution and color distortion.

**APPENDIX D
Hazardous Waste Storage Area Sign**



**HAZARDOUS WASTE
STORAGE AREA**

UNAUTHORIZED PERSONNEL KEEP OUT

To dispose of hazardous waste submit Removal Request to
<http://www.usi.edu/RiskMgt/HazMaterials.asp>
In case of emergency call Security (7777 or 812 464-1845) and
Risk Management (812 461-5366)

APPENDIX E
Training Attendance Sheet
Used Oil Recycling and Disposal Training

Name (Please Print)	Department	Job Title	Job Description

APPENDIX 9:
MERCURY-CONTAINING LAMP
PROGRAM

1. Place all mercury-containing lamps in the designated storage areas.

- a.
- b.
-

1. Storage area must be identified with an easily readable sign stating “**WASTE MERCURY-CONTAINING LAMP STORAGE.**” Refer to **APPENDIX A.**

2. Label each box as “**Waste Mercury-Containing Lamps.**” Labels can be obtained from the Office of Risk Management (812 465-7003). Refer to **APPENDIX B.**

3. Label each box with the accumulation start date (the date the first waste lamp is placed into the box). Refer to **APPENDIX B.**

4. Store for no longer than one year from the accumulation start date.

5. At any given time, universal wastes (i.e., batteries, pesticides, thermostats, or mercury-containing lamps, calculated collectively) will not exceed the 1000-kilogram (kg) storage limit established by the City of Evansville

6. Contain any lamp that shows evidence of leakage, spillage or damage. The container must be closed, structurally sound and compatible with the contents of the lamps.

7. Stack boxes of lamps five feet in height or less.

9. Conduct a weekly inspection of the lamp storage area and document on the inspection log (**APPENDIX C**). The inspection log should contain check marks by the items listed, inspector’s name, date, and time of inspection.

8. Please submit a copy of the inspection log every 16 weeks to the Office of Risk Management (Support Services Building, ATTN: John Hunt). Maintain the storage location copies of the inspection logs for a minimum of two years to document weekly inspections. These copies should remain at the storage location.

9. Shipments of unbroken lamps must be accompanied by a Bill of Lading. Please send a copy of the Bill of Lading to the Office of Risk Management.

VI. HAZARDOUS WASTE MANAGEMENT

In the event that a mercury-containing lamp breaks, the material must be managed as hazardous waste.

1 Hazardous waste should be placed in the designated drum in the lamp storage area.

2 Label the container as “Hazardous Waste.” Refer to **APPENDIX D.**

3 Store hazardous waste for no longer than 90 days from the date waste is first placed in a container.

4 Ensure the container is “closed” except when adding waste.

5 Storage area must be identified with an easily readable sign stating “**DANGER -HAZARDOUS WASTE STORAGE AREA UNAUTHORIZED PERSONNEL KEEP OUT.**” Refer to **APPENDIX E.**

6 Inspect hazardous waste container storage area at least weekly and maintain a log of all inspections.

Ensure communication equipment and emergency equipment is available where hazardous wastes are managed.

IX. CONTRACTOR'S RESPONSIBILITIES

A. Renovation / Demolition Projects

All designated project areas that include mercury-containing lamps that have been removed from service must be managed under USI's Mercury-Containing Lamp program. Once lamps are removed from service, the contract Supervisor (or designated representative) will contact Supervisor, Material, Equipment and Storeroom at 465-7098 and request for lamp removal. FM will take the tubes to USI's designated Waste Mercury-Containing Lamp storage area.

Lamps should not remain on project sites for greater than one day. If lamps remain on project site for greater than one day, the site must be managed in accordance to Section M(take .J/one day, the)-6.5UPS

VII. ORDERING SUPPLIES AND SCHEDULING PICKUPS

These boxes come in three sizes, 2 feet by 3 feet long (2'X3'), 4 feet long (4'), and 8 feet long (8'). Departments must order the appropriate size for the used lamps they are managing. High-intensity-discharge lamps and other odd sizes may be placed in any of the above-mentioned boxes. However, U-shaped lamps should be placed in a separate box from the regular tubes and lamps. Used lamps should remain unbroken in order to contain the hazardous mercury found in these lamps.

To order supplies or schedule a pick up, contact the Supervisor, Material, Equipment and Storeroom in Support Services Services Building at 812 465-7098. The Custodial Service Supervisor and employees will fill the recycle containers in the (10) designated buildings and then transport them to Distribution Services for storage and then palletize for shipment to Veolia.

VIII. TRAINING

USI's Office of Risk Management must provide mercury-containing lamp and hazardous waste management training annually to all employees who handle lamps. This training is documented and maintained in the Office of Risk Management. Only employees that have attended the training session will be permitted to handle mercury-containing lamps. All new employees that will be handling these tubes must attend this training within 30 days of their initial employment date. Please contact the Office of Risk Management to schedule a training date. Refer to **APPENDIX F** for the Mercury-Containing Lamp Training Program. **APPENDIX G** will be used to track training attendance.

APPENDIX A Mercury-Containing Lamp
Storage Area Sign



**APPENDIX B Waste Mercury-Containing
Lamp Stickers**

**Waste
Mercury-Containing
Lamps**

Accumulation Start Date: _____

APPENDIX D Hazardous Waste Label

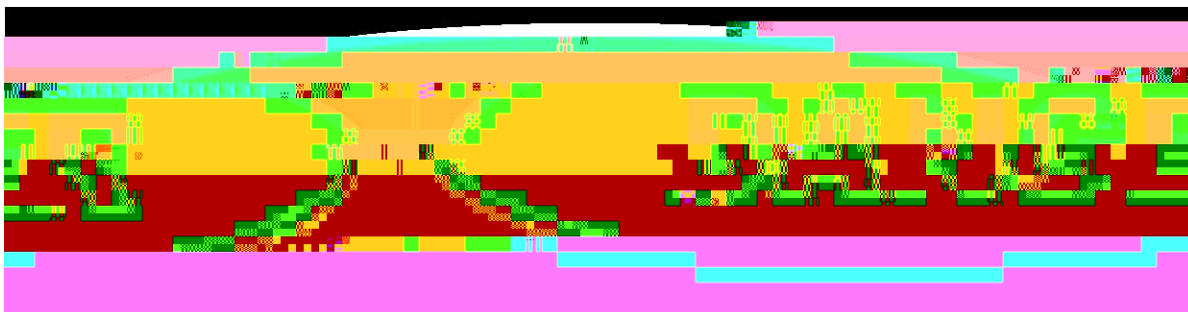
The image shows a hazardous waste label form with several sections and fields:

- Top Section:** A yellow highlight covers the top portion of the form, including the title area.
- GENERATOR INFORMATION:**
 - CONTACT PERSON: _____
 - DEPARTMENT: _____
- LOCATION:**
 - BUILDING / ROOM: _____
 - FRY: _____
- START DATE:** _____
- END DATE:** _____
- Hazardous Waste Characteristics:**
 - Oxidizer
 - Corrosive
 - Toxic
 - Carcinogen
- Bottom Section:** A red highlight covers the bottom portion of the form, containing contact information and a disclaimer.

At the bottom, there is a disclaimer: "Please visit the hazardous waste website at www.epa.gov/hazwaste for more information on hazardous waste management." Below this, there are two contact boxes:

- Left Box:** Hazardous Waste Management, 2150 North 28th Street, Phoenix, AZ 85016, Phone: (602) 964-6000
- Right Box:** Environmental Health and Safety, 2150 North 28th Street, Phoenix, AZ 85016, Phone: (602) 964-6000

**APPENDIX E Hazardous Waste
Storage Area Sign**



HAZARDOUS WASTE STORAGE AREA

UNAUTHORIZED PERSONNEL KEEP OUT

To dispose of hazardous waste submit Removal Request to
<http://www.usi.edu/Riskmgt/HazMaterials.asp>

In case of emergency call Security (7777 or 812 464-1845) and
Risk Management (812 465-7003)

APPENDIX F

The University of Southern Indiana Hazard Assessment & PPE Selection Form

**APPENDIX G Mercury-Containing
Lamp Training**

**Contact The Office of Risk Management
to schedule Mercury-Containing Lamp
Training.**

812 465-7003

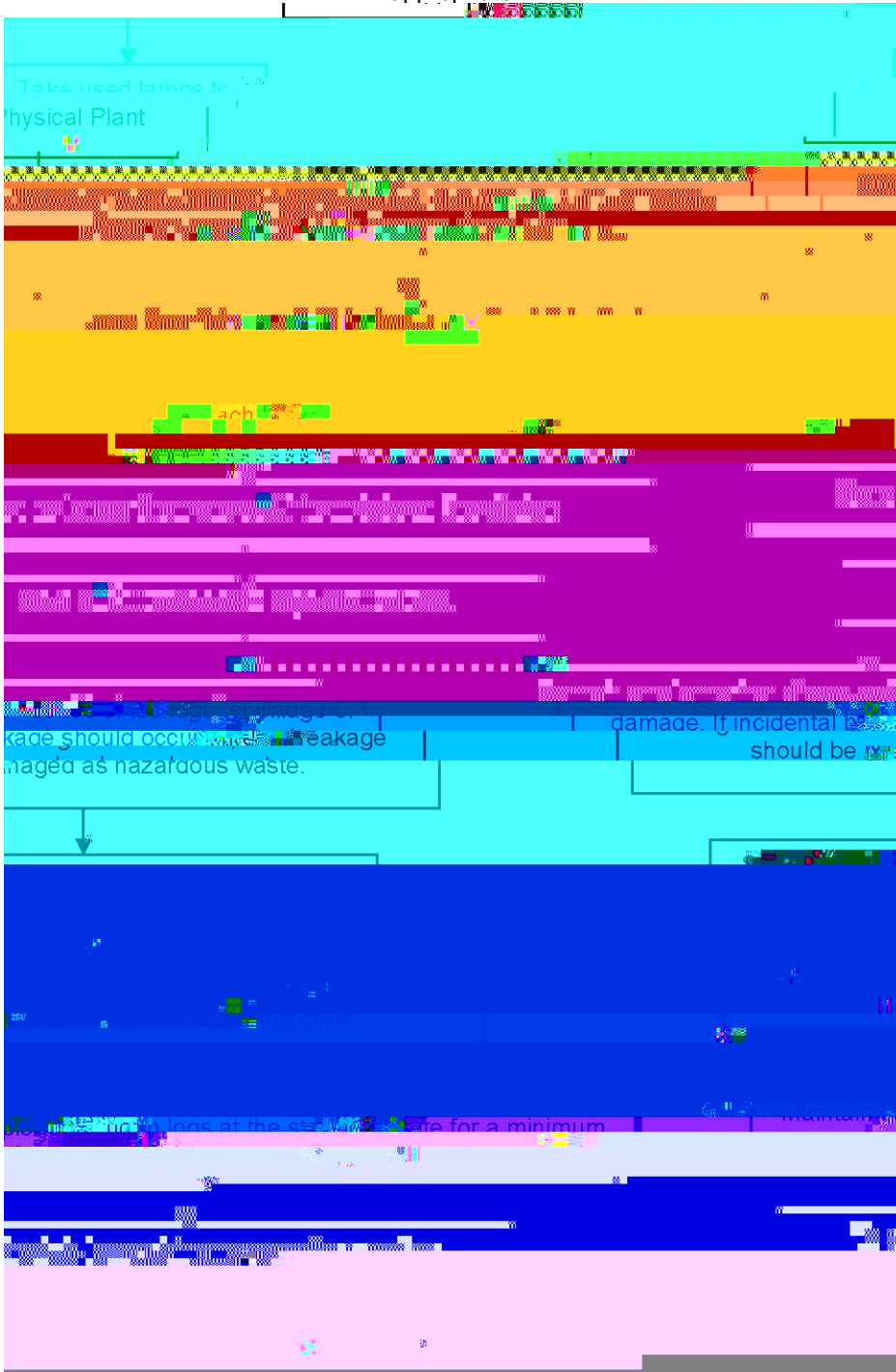
APPENDIX H Training Attendance Sheet

Mercury-Containing Lamp / RCRA Training

Name (Please Print)	Department	Job Title	Job Description
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APPENDIX I USI Flowchart for Mercury-Containing Lamps

Mercury-containing lamp taken out of service. Use appropriate PPE.



APPENDIX 10:
BATTERY RECYCLING AND DISPOSAL
PROGRAM

**The University of Southern Indiana
BATTERY RECYCLING AND DISPOSAL PROGRAM**

I. INTRODUCTION

The University of Southern Indiana uses many different kinds of batteries on campus. Determining how to dispose of dead or unwanted batteries can be tricky. This program lists the common types of batteries used and proper disposal methods for each. If you have unwanted batteries not listed in this program, please contact Environmental Health and Safety at 812 461-5393 for disposal instructions.

II. SCOPE

This program covers the all buildings on the campus. Universal waste and hazardous waste items will not be transported from one campus to another.

III. PERSONAL PROTECTIVE EQUIPMENT REQUIRED

A. USI Employees

Environmental Health and Safety performs annual hazard assessments for determination of hazardous conditions. A written assessment is generated, which certifies workplace evaluation; the person certifying that the evaluation has been performed; and the date(s) of the hazard assessment. If a hazardous condition exists, which cannot be avoided or engineered out by engineering controls, proper PPE will be selected. It is a departmental responsibility to provide a safe working environment, including the necessary PPE.

Based on the hazard assessment for handling used batteries containing hazardous material (i.e., mercury, cadmium, lead, silver and zinc), the following PPE is required to perform the task. Refer to **APPENDIX F** for the hazard assessment.

Leather Gloves (29 CFR 1910.138 – “Hand Protection”)
Safety Goggles (29 CFR 1910.133 – “Eye and Face Protection”)

B. Contractors, Sub-Contractors or any employee of such contracted companies performing work on The University of Southern Indiana campus

The contractor shall provide their employees with personal protective equipment in accordance with all federal and local safety and health regulations.

IV. REGULATIONS REGARDING UNIVERSAL WASTE

Used batteries containing hazardous material (i.e., mercury, cadmium, lead, silver and zinc) are classified as *universal waste* rather than hazardous waste. This allows The University of Southern Indiana to recycle the batteries, while continuing to ensure that the batteries are handled in an environmentally sound manner.

V. TYPES OF BATTERIES AND DISPOSAL PROCEDURES

A. Alkaline Batteries:

Alkaline batteries are commonly referred to as disposable or non-rechargeable batteries. They are often used in flashlights and some electronic equipment. They usually come in sizes such as AAA, AA, C, D and 9-volt. Alkaline batteries are non-hazardous and can be placed in the regular trash; however, in an effort to become **environmentally friendly** you may choose to

collect these batteries in a 1-gallon container for recycling purposes. The container can be obtained by contacting Environmental Health and Safety at 812 461-5393. Once the container is full, contact Environmental Health and Safety to schedule a pick up.

B. Nickel-Cadmium (ni-cad) Batteries:

Ni-cad batteries are the most common type of rechargeable battery. These are often found in cellular phones and some equipment. They also come in standard sizes such as AA, but often come in widely assorted sizes and shapes. Most equipment that comes with a recharger probably uses ni-cad batteries. Some rechargeable batteries are **lead-gel batteries**. Handle these batteries the same as ni-cad batteries.

Ni-cad batteries are composed of nickel oxide, cadmium compounds and use potassium hydroxide as

If used batteries remain in your area for greater than a 24-hour period, then this area must be managed in accordance to the applicable universal waste regulations. Refer to Section VI for the universal waste management procedures.

E. Damaged or Leaking Batteries:

If used batteries containing hazardous material (i.e., mercury, cadmium, lead, silver and zinc) show evidence of leakage, spillage or damage that could cause leakage under reasonable foreseeable conditions, then the battery must be managed in accordance to the hazardous waste regulations. Once the battery leak has been contained, contact Environmental Health and Safety for clean-up and proper disposal. Refer to Section VII, Hazardous Waste Management.

VI. UNIVERSAL WASTE REQUIREMENTS FOR USED BATTERIES CONTAINING HAZARDOUS MATERIALS

According to **the city of Evansville's Universal Waste regulations**, incorporating by reference 40 CFR 273.2 (c), used and unused batteries become waste on the date the handler decides to discard it. USI will manage universal waste batteries in a way that prevents releases of any universal waste or component of universal waste to the environment. The following items describe how used batteries will be managed:

1. Place all used batteries containing hazardous material (i.e., mercury, cadmium, lead, silver and zinc) in the designated storage areas.
 - a.
 - b.
 - c.
2. Used battery storage areas must be identified with an easily readable sign stating "**WASTE BATTERY STORAGE**". Refer to **APPENDIX A**.
3. Label each battery or container in which the batteries are contained as "**USED BATTERY.**" **Labels can be obtained from Environmental Health and Safety.** Refer to **APPENDIX B**.
4. Label each battery or container in which the batteries are placed with the accumulation start date.
 - Individual battery - the date the handler decided to discard the battery.
 - Containers of batteries -the date the first battery is placed into the box. Refer to **APPENDIX B**
5. Store for no longer than one year from the accumulation start date.
6. At any given time, universal wastes (i.e., batteries, pesticides, thermostats or mercury-containing lamps, calculated collectively) will not exceed the 1000-kilogram (kg) storage limit established by the **city of Evansville (20 DCMR 4801.2 (c)).**
7. Contain any battery that shows evidence of leakage, spillage or damage. The container must be closed, structurally sound and compatible with the contents of the battery(ies). Do not package damaged batteries with undamaged batteries.
8. Conduct a weekly inspection of the lead-acid battery storage area and document on the inspection log (**APPENDIX C**). The inspection log should contain check marks by the items listed, inspector's name, date and time of inspection.
9. Please submit a copy of the inspection log every 16 weeks to Environmental Health and Safety Administrative Services Annex North, ATTN: Bryan Morrison). Maintain the storage location copies of the inspection logs for a minimum of two years to document weekly inspections. These copies should remain at the storage location.
10. Shipments of intact batteries must be accompanied by a bill of lading. Please send a copy of the bill of lading to Environmental Health and Safety.

VII. HAZARDOUS WASTE MANAGEMENT

In the event that a universal waste battery shows evidence of leakage, spillage or damage, the material

XI. REFERENCES

- A. 20 DCMR Part 48 (incorporated by reference 40 CFR Part 273), Standards for Universal Waste Management
- B. 20 DCMR Parts 40 through 54 (incorporated by reference 40 CFR Parts 262 – 264, 266), Solid Wastes.
- C. 29 CFR 1910.133, Eye and Face Protection.
- D. 29 CFR 1910.138, Hand Protection.

APPENDIX A

APPENDIX B
Used Battery Sticker

USED BATTERY

Accumulation Start Date:

**APPENDIX C
Weekly Inspection Checklist**

LEAD-ACID BATTERY STORAGE AREA INSPECTION CHECKLIST

Each week inspect the used battery storage area, checking off the inspection items. Completed checklists should be sent to Environmental Health and Safety (Administrative Services Annex North). Copies of checklist should be retained in the plastic sleeve.

INSPECTION ITEMS	WEEKLY INSPECTION CHECK														
	WEEK 1	WEEK 2	WEEK 3	WEEK 4	233K 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12	WEEK 13	WEEK 14	WEEK 15
All containers marked as "USED BATTERY"															
Accumulation start date recorded on label															
Batteries are free from leakage, spillage or damage															
All labels visible and legible															
Inspector's Name															
Date of Inspection															
Time of Inspection															

Anyone completing this form and all employees occupationally exposed to used batteries containing hazardous materials are required to attend training offered through USI's Environmental Health and Safety. To inquire about this course, please call 461-5393.

APPENDIX E
Hazardous Waste Storage Area Sign



**HAZARDOUS WASTE
STORAGE AREA**

UNAUTHORIZED PERSONNEL KEEP OUT

To dispose of hazardous waste submit Removal Request to
<http://www.usi.edu/Riskmgmt/HazMaterials.asp>

In case of emergency call Security (7777 or 812 464-1845) and
Environmental Health and Safety (812 461-5393)

APPENDIX F
The University of Southern Indiana
Hazard Assessment & PPE Selection Form

Job Task Evaluated: Handling Lead-Acid Batteries Date: October 15, 2005
Evaluator: John Hunt

Eye and Face Protection (29 CFR 1910.133)

Eye/Face Hazard	Yes/No	Task/Source	Assessment of Hazard	Personal Protective Equipment
	No	N/A	N/A	N/A
Heat	No	N/A	N/A	N/A

APPENDIX G
Used Battery Training

**Contact Environmental Health and Safety to
schedule Used Battery Training.**

461-5393

APPENDIX H
Training Attendance Sheet

Battery Recycling and Disposal Training

Name (Please Print)	Department	Job Title	Job Description

**APPENDIX 12:
WASTE STORAGE AREA LOCATIONS**

APPENDIX 13:
WEEKLY INSPECTION SHEET

Building: _____

Semester / Year: _____

Room #: _____

CHEMICAL WASTE AREA INSPECTION CHECKLIST

Each week inspect waste storage area, checking off the inspection items. Completed checklists should be sent to Environmental Health and Safety, Administrative Services Annex North.
Copies of checklist should be retained in the area.

INSPECTION ITEMS	WEEKLY INSPECTION CHECK															
	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12	WEEK 13	WEEK 14	WEEK 15	WEEK 16
Containers marked as "HAZARDOUS WASTE"																

Accumulation start date recorded on all containers

APPENDIX 14:
HAZARDOUS WASTE HANDLER
NAMES AND JOB TITLES

APPENDIX 15:
JOB DESCRIPTIONS FOR
HAZARDOUS WASTE HANDLERS

Foreman, Trouble Service, Physical Plant

To supervise, plan and assign routine and emergency duties of tradesman on the Trouble Service Crew.

Graduate Research Assistant

To arrange and conduct research laboratory activities.

Graduate Teaching Assistant

To arrange, supervise and conduct undergraduate laboratory activities handling and generating hazardous chemicals.

Groundsperson, Physical Plant

To perform semi-skilled work of a routine nature in the maintenance of University and Medical Center grounds.

Junior Maintenance Mechanic, Physical Plant

To assist in the general repair and maintenance of building operating equipment.

Landscape Gardener / Equipment Operator, Physical Plant

Performs a variety of landscape and turf maintenance duties requiring the use of specialized equipment.

Lead Expeditor, Building Maintenance, Facilities Management

To continuously receive, document and arrange for emergency and minor building maintenance service, and provides functional supervision over other Expeditor positions.

Linen Service Worker, Linen Service

To perform routine, moderately heavy work in sorting and loading clothing and linen supplies before and after laundering.

Locksmith, Physical Plant

To install, maintain and repair physical security hardware.

Maintenance Coordinator, Plant Operations

To inspect, award, and coordinate HVAC maintenance and repair work by outside contractors and to receive, schedule and assign all work tickets.

Maintenance Mechanic, Physical Plant

To perform general repair and maintenance of building operating equipment.

Manager, Facilities Maintenance Program, Physical Plant

To develop facilities inspections and maintenance programs (PM and FIMP) that support the recurring and preventative maintenance to University Facilities and Operating Systems, and to manage the Physical Plant Facilities Maintenance Management Group (FMMG).

Painter, Physical Plant

To prepare surfaces for painting and apply paint.

Plasterer, Physical Plant

To perform maintenance and repair work to walls and other areas by plastering.

Plumber, Physical Plant

To perform installation, maintenance and repair work related to plumbing fixtures, equipment and facilities.

Professor

To teach undergraduate and graduate laboratory courses and to perform research laboratory activities

Senior Carpenter, Physical Plant

To perform rough and finished carpentry work in making and repairing items and structures and to supervise, assign, and assist in carpentry duties on large jobs as directed.

Special Police Corporal, UPD, University Security

To provide, and assist in the immediate supervision of the security and protective services over persons and various University buildings and/or property within the University of Southern Indiana Community, by enforcing the laws of the City of Evansville and USI administrative ordinances.

Trades Helper, Physical Plant

To perform under supervision minor maintenance and repair work on buildings and equipment in a variety of semi-skilled tasks.

Water Treatment Technician (One Apprentice Engineer), Plant Operations

To assist in the operation and to perform preventive maintenance on heating and air conditioning equipment.

APPENDIX 16: DEFINITIONS

Appendix 15: Definitions
Hazardous Waste Management Plan

Acute Hazardous Waste

Hazardous wastes that are considered exceptionally toxic as listed under 40 CFR Part 261.33 (listed wastes having codes beginning with "P").

Chemical Waste Removal Request Form

This form must be completed and submitted before each pick up. It may be accessed via the Internet at <http://www.usi.edu/RiskMgt/HazMaterials.asp>.

Hazardous Waste

Hazardous wastes are regulated by the Environmental Protection Agency (EPA) through the Resource Conservation and Recovery Act (RCRA), 40 CFR 260-70. Hazardous waste is defined as any waste or combination of waste which because of its quantity, quality, concentration, physical, chemical or infectious characteristics could cause or significantly contribute to adverse effects in the health and safety of humans or the environment if improperly managed. Specific definitions of the general characteristics of hazardous waste are found in 40 CFR 261.2. They include any wastes exhibiting a general characteristic of ignitability 40 CFR 261.21, corrosivity 40 CFR 261.22, reactivity 40 CFR 261.23 or toxicity 40 CFR 261.24 (according to Toxicity Characteristic Leaching Procedure (TCLP) testing). Also included are all wastes specifically listed by the Environmental Protection Agency (EPA) in 40 CFR Part 261, Subpart D as a toxic or acutely toxic hazardous waste or wastes derived from specific or non-specific sources.

Hazardous Waste Label

A specified label that must be attached to each container of hazardous waste. The label has the words "**Hazardous Waste**" displayed and requires the date in which it was determined a hazardous waste in standard English nomenclature.

LD50 (Lethal Dose 50)

The dose that has been determined to be lethal to 50% of the test population.