Kutztown University Policy A&F-005

Hazardous Waste Management And Disposal

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APPENDICES

THIS POLICY, IN ITS ENTIRETY, IS ON FILE IN THE OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY

1.0 PURPOSE

The Federal Resource Conservation and Recovery Act (RCRA) established the framework for hazardous waste regulation in 1976. RCRA was enacted by Congress to protect human

health and the environment from improper management of hazardous waste. RCRA introduced the concept that the generator of a waste is responsible for proper waste

management from "cradle-to-grave" (i.e. from laboratory to complete destruction). RCRA regulations are found in 40 CFR Parts 260-279.

The purpose of this hazardous waste management policy document is to:

- protect the health and safety of faculty, staff and students through the environmentally sound management of hazardous wastes;
- ensure University compliance with state and federal regulations;
- establish a policy and procedures for the management, handling, transportation and disposal of hazardous wastes

There are specific regulatory requirements for individuals who generate and accumulate chemical waste: minimize and recycle, properly label and identify, and properly contain and dispose of chemical waste. When improperly stored, disposed, transported or treated, hazardous wastes cause severe illness or death or pose substantial environmental risk. This document will assist labs, studios and shops with regulatory compliance. Every lab, studio and shop on campus is subject to unannounced inspections by both the United States Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (DEP). Lack of compliance can result in citations and fines or, in extreme circumstances, personal civil and criminal liability.

2.0 APPLICABILITY

This policy and the subsequent procedures apply to any unit or individual responsible for generation and handling of hazardous wastes on any property owned by Kutztown University.

3.0 POLICY

The Kutztown University of Pennsylvania Administration establishes and approves of the information contained within this document, which in its entirety forms the policy and associated procedures for Hazardous Waste management. The basis for this policy and the associated procedures shall be all applicable federal, state and local regulatory requirements governing hazardous wastes.

The University, through the President, has delegated the responsibility and authority to manage and coordinate disposal of hazardous wastes to the Environmental Health and Safety Specialist. However, each unit, which generates hazardous waste, shall be responsible for implementing and enforcing the established policy and procedures, as applicable.

The custody and disposition of waste materials obtained or produced by, for and/or resulting from experiments, research or purchase is the responsibility of the University employee and

his/her organizational unit so preoccupied. This responsibility includes routine lab cleanouts and disposal of unknown substances. The organizational unit budget, under which such material is obtained or produced, may be required to fund the analysis of unknown materials which can not be identified by proper or generic name for safe disposal.

No chemical waste shall be disposed of down drains, in the trash, by evaporation or through any other wastestream. It is the responsibility of the generator to insure that waste accumulation areas are maintained in accordance with applicable rules and regulations. Waste, accumulated in areas classified as Satellite or Central Accumulation Points, must be identified with the appropriate, properly completed, hazardous waste label and logged.

The generator, without approval from the Environmental Health and Safety Specialist, shall not reclaim any chemical or mixture that has been determined waste and which has been moved to the central waste accumulation area.

Biannual "clean-outs" of all chemical stock storage areas will be performed to ensure that excessive chemical substances, that an environmental enforcement agency considers unmanaged, will not be accumulated.

Laboratory, studio and stockroom personnel will ensure that chemicals are segregated so that incompatible substances do not accidentally come in contact with one another when collecting hazardous waste for disposal.

A spill or discharge of any hazardous waste material, or other serious incident within a laboratory or other area of the university may be reportable to the government under specific sections of the regulations. Specific procedures for reporting spills or discharges are found in Appendix B.

Employees who generate or otherwise handle hazardous wastes shall be required to complete a training program that complies with the regulations. Employees shall participate, annually, in a review and evaluation of the components of the initial training program. Records of training must be retained until closure of the university. Training records for former employees shall be retained for the operating life of the university. Training program content and requirements are found in Appendix E.

4.0 REGULATORY CITATION

The United States Environmental Protection Agency (EPA) and the Pennsylvania Department of Environmental Protection (PaDEP) have promulgated regulations, U.S. Title 40, Chapter I, Parts 262 and 265 and PA Title 25, Chapter 260-270, respectively, regarding the generation, identification and listing, transportation, storage, treatment and disposal of hazardous waste.

Nothing in the current EPA or PaDEP regulations shall relieve or limit a person, municipality or others, who generate, transport, store, treat or dispose of hazardous waste from complying with the requirements set forth.

5.0 ENFORCEMENT

Failure to comply with the regulatory requirements can result in notices of violations (NOVs), fines and potential administrative, civil or criminal actions from scheduled or unscheduled regulatory inspections.

The PaDEP or EPA can levy enforcement actions per the RCRA regulation. Typically, PaDEP and EPA will pursue "administrative actions" for noncompliance issues. However, criminal enforcement may be pursued for "knowing" or "willful" violations by a company or individual employee. PaDEP or the EPA may impose criminal penalties against individual employees for severe violations of environmental laws if the individual employee is implicated during an investigation. Criminal penalties can include seizure of property and/or imprisonment.

Appendix A contains two (2) tables detailing civil and criminal penalties under RCRA.

6.0 WASTE MINIMIZATION

In order to reduce the volume of hazardous waste generated at the Kutztown University of Pennsylvania, a Waste Minimization Plan has been developed and is contained in Appendix D.

7.0 PROCEDURES

Procedures have been developed utilizing the applicable state and federal standards as presented in US 40 CFR 262 and 265 and, PA Code Title 25, Chapter 262. Details of these procedures, which must be followed to comply with the regulations, are listed in Appendix B.

8.0 REFERENCES

Pennsylvania Department of Environmental Protection-Hazardous Waste Management (25 PA Code Chapters 260-270-August 15, 1998)

Environmental Protection Agency (40 CFR Parts 260 through 268, 270, 273 and 279)

Resource Conservation and Recovery Act of 1976 (42 U.S.C.A. Sec 6901 et. seq.)

Toxic Substances Control Act (15 U.S.C.A. 2601 et. seq.)

The PPC Plan conforms to the specifications presented in PA Code Title 25, Chapter 265, Subchapters C and D and the federal specifications presented in 40 CFR 265, Subparts C and D.

United States Department of Transportation (49 CFR Parts 100 to 199)

Since the Commonwealth of Pennsylvania has received authorization from EPA for its hazardous waste regulatory program, most of the state requirements apply in lieu of the federal requirements.

Copies of the references used in this policy are on file in the Office of University Safety.

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APPENDIX A

Both tables courtesy of STV Architects, Douglassville, Pennsylvania.

TABLE 1
CIVIL PENALTIES

Potential for Harm (EPA) Degree of Willfulness (PaDEP)	**EXTENT OF DEVIATION FROM COMPLIANCE (EPA) DEGREE OF SEVERITY (PaDEP)**		
	Major	**Moderate**	**Minor**
Major (EPA) Willfulness (PaDEP)	$20,000-$25,000 $25,000	$15,000-$19,000 $17,500-$25,000	$11,000-$14,000 $13,500-$25,000
Moderate (EPA) Reckless (PaDEP)	$8,000-$10,999 $17,500-$25,000	$5,000-$7,999 $10,000-$25,000	$3,000-$4,999 $6,000-$17,500
Minor (EPA) Negligent (PaDEP)	$1,500-$2,999 $13,000-$25,000	$500-$1,499 $5,500-$17,500	$100-$499 $1,500-$10,000
Accidental (PaDEP)	$12,500-$25,000	$5,000-$12,000	$1,000-$5,000

Please note: The statutory maximum penalty per violation is $25,000.
However, both PaDEP and EPA can treat each non-compliance issue as a single violation.

TABLE 2
CRIMINAL PENALTIES

Violation	**Maximum Penalties**
Knowingly transporting waste to an unpermitted facility	$50,000 and 5 years imprisonment
Knowingly treating, storing or disposing of waste without a permit or in violation of a permit	$50,000 and 5 years imprisonment
Knowingly falsifying manifests, labels or the documents required by RCRA	$50,000 and 2 years imprisonment
Concealing or destroying any documents required to be	$50,000 and 2 years imprisonment

retained or filed under RCRA	
Knowingly transporting waste without a manifest	$50,000 and 2 years imprisonment
Knowingly exporting waste without the consent of the receiving country	$50,000 and 2 years imprisonment
Knowingly committing any of the above violations and knowingly placing other persons in imminent danger of death or serious injury	$250,000 and 15 years imprisonment

APPENDIX B
PROCEDURES

B-1 ACCUMULATION AND LABELING

A. Since Kutztown University of Pennsylvania is considered a small quantity generator, a monthly generation limit of 1,000 kilograms (kg) applies to the facility. Hazardous waste may be stored on site, in the Central Accumulation area, for a maximum of 90 days.

Hazardous waste may be accumulated for up to 180 days without a permit provided adherence to PA Code Title 262.34(e) and 40 CFR 262.34(d), which are highlighted below:

- The quantity of waste accumulated on-site never exceeds 6,000 kg.
- The appropriate container management is employed. This is detailed in Section B-3.
- Each container is clearly labeled with the start date for each accumulation period.
- Each container or package must meet the United States Department of Transportation (DOT) requirements; must be marked or labeled in accordance with DOT regulations; and must be permanently marked (if less than 110 gallons) with a hazard warning as shown in PA Code Title 25, Chapter 262, Subchapter C 262.30(3).
- Personnel must have appropriate training.
- If the waste is transported over a distance of 200 miles or more for off-site treatment, storage or disposal, the hazardous waste may be accumulated on-site for 270 days or less without a permit provided adherence to the items denoted above.

B. In addition to the requirements highlighted above, for longer accumulation times (180 or 270 days), 40 CFR 262.34(d), requires compliance with the following:

- At all times there must be at least one (1) employee (the Emergency Coordinator or designee) either on the premises or on call (i.e., able to respond to an emergency by reaching the facility in a short period of time). This person will be responsible for coordinating all emergency response measures as specified below.

  The Emergency Coordinator for Kutztown University is the Environmental Health and Safety Specialist. Contact with EH&S can be made by:

  1) Dialing Extension 34050 on any campus telephone, or

2) Dialing the Department of Public Safety at 610-683-4001, who have appropriate telephone numbers for after-hours or emergency contact of the Emergency Coordinator or the designee.

- The following information must be posted next to the telephone.

  1) The name and telephone number of the emergency coordinator.

  2) The location of fire extinguishers, spill control equipment and, if present, the fire alarm.

  3) The telephone number of the fire company unless the facility has a direct alarm.

- All employees must be thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies.

- The emergency coordinator or designee must respond to any emergency that arises. The applicable responses follow:

  1) In the event of a fire: Call the fire department or attempt to extinguish it using a fire extinguisher.

  2) In the event of a spill: Contain the flow of hazardous waste to the extent possible. As soon as practicable, clean up the hazardous waste and any contaminated materials or soil.

  3) In the event of a fire, explosion or other release which could threaten human health outside the facility or a spill which is known to have reached groundwater, the National Response Center must be notified immediately. Their 24-hour toll free number is 800-424-8802. The report must include the following:

     a) Name, address and U.S. EPA Identification Number

     b) Date, time and type of incident (i.e., spill, fire)

     c) Quantity and type of hazardous waste involved in the incident

     d) Extent of injuries (if any)

     e) Estimated quantity and disposition of recovered materials, if any.

C. All hazardous waste containers within the University, both in central and satellite accumulation areas, shall have tags affixed to them, which contain the following information:

1) Contents (Chemical name no abbreviations or formulas)
2) Approximate concentration (% by volume)
3) Start date of accumulation

A DOT Hazardous Waste Label with the University name and address will also be affixed to each container. A manifest document number must be added to this label at shipping.

In addition, an accumulation record shall be kept for each container used to accumulate hazardous waste. The accumulation record will contain the following information:

1) Date of Deposit
2) Name of Chemical (no abbreviations or formulas)
3) % By Volume (i.e. Hydrochloric Acid-10%; Water-90%)
4) Name of person adding waste to the container

An accumulation record shall be maintained in a location away from the collection container, in the event the tag on the collection container is accidentally destroyed or yielded unreadable. This separate record will be used when waste quantities are consolidated and quotations are sought for disposal.

D. The Environmental Health and Safety Specialist shall be available to assist with safe transportation or temporary storage of hazardous waste.

All containers must be clearly identified and labeled as to their contents. Unknown materials or improperly labeled waste containers will not be picked up.

Empty containers that once contained a P-listed waste must be triple rinsed and the rinsate must be handled as a hazardous waste. An alternative would be to dispose of the empty containers along with other chemical wastes.

Properly labeled containers will be picked up within five (5) days after notifying either the Environmental Health and Safety Specialist or the Science Stock Clerk. All containers of hazardous wastes will be safely stored at the Central Accumulation Point or a designated Satellite Accumulation Point until disposal by an approved waste disposal company.

B-2 MANIFESTS

A. Both the state and federal regulations require hazardous waste generators, to prepare a manifest. Each section, applicable to the shipment of the hazardous wastes, must be completed. A sample of the manifest is provided on the next page. Manifests are available from the PaDEP or environmental compliance product vendors.

B. GENERATOR'S WRITTEN CERTIFICATION - The University's designee (in this case, the Environmental Health and Safety Specialist) attests to the following, when signing the manifest:

I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable

international and national governmental regulations, and all applicable state laws and regulations.

C. The following distribution of the manifest copies shall occur:

- If waste is disposed of in the Commonwealth of Pennsylvania, a manifest is completed, signed by the generator's and transporter's authorized representatives. The generator retains copies 3, 4 and 8. The generator keeps copies 4 and 8. The transporter retains the remainder. Copy 3 must be forwarded to the PaDEP within seven (7) days of shipment.

- If waste is disposed of outside the Commonwealth of Pennsylvania, a manifest from the destination state will be completed and a copy forwarded to the PaDEP. If the destination state does not have a manifest, a PaDEP manifest will be completed as previously stated, however, copy 4 of the manifest is to be forwarded to the destination state within seven (7) days of shipment.

B-3 CONTAINER AND STORAGE MANAGEMENT

All containers holding hazardous waste shall be in good condition. If the container begins to leak, the generator shall transfer the waste to a good container. The cleanup of spilled waste shall conform to the PPC Plan.

Containers shall be made of or lined with a material that does not react with or is otherwise compatible with the waste to be stored in the container. If the waste is placed in an inappropriate container, the container might disintegrate or rupture. The following chemical wastes must be placed in glass containers:

Amyl chloride	Diethyl benzene
Aniline	Diethyl ether
Benzyl alcohol	Ether
Bromine	Ethyl chloride, liquid
Bromobenzene	Hydrogen peroxide, >10%
Bromoform	Nitrobenzene
Butadiene	Perchloroethylene
Butyric acid	Phenol / Chloroform mixtures
Carbon disulfide	Nitric acid
Cedarwood oil	Thionyl chloride

Chlorinated solvents	Toluene
Concentrated acids	Trichloroethene
Cinnamon oil	Trichloroethylene
Cresol	Vinylidene chloride
Cyclohexane	Xylene
o-dichlorobenzene	Brominated & Fluorinated solvents
p-dichlorobenzene	

All containers will conform to the United States DOT requirements in 49 CFR Parts 173, 178 and 179.

Containers holding hazardous waste shall be kept closed at all times, except when adding or removing waste. A funnel cannot be left in the container.

Containers shall be leak-proof and vapor-tight. At least one-inch space from the top is required to prevent overfilling of the containers. This allows for expansion due to the containers being transferred between temperature variations. The exterior of the container must be free of chemical contamination. Leaking containers must be repackaged before they are transferred to the Central Accumulation area.

Containers will not be moved or handled in any manner, which may cause them to rupture or leak.

All containers will be labeled to accurately identify contents as specified in Section B-1.C

Containers shall be placed in storage areas, which are capable of collecting and holding spills, leaks and precipitation. The storage area containment system must be capable of holding the entire volume of the largest container, or ten percent (10%) of the total volume of all the containers, whichever is greater.

Spilled or leaked waste and accumulated precipitation will be removed from the containment system with sufficient frequency to prevent overflow.

Incompatible wastes may not be placed in the same container or in an unwashed container, which previously held an incompatible material.

Incompatible wastes will be separated by means of a physical barrier (impermeable dike, berm, wall or other device) to prevent mixing in all storage areas. Due to the methods and contracts Kutztown University currently uses for disposal of chemical waste, the following waste streams should be kept separate when possible:

Flammable Liquids	Water Reactive Materials
Acids	Mercury & Mercury Compounds

Bases	Ethidium Bromide
Oxidizers	Formalin / Formaldehyde
Halogenated Organic Compounds	Chromerge (if still being used)
Non-halogenated Organic Compounds	Photographic Waste
Oils	High Performance Liquid
Air Reactive Materials	Chromatography (HPCL) Waste

Satellite and central container storage areas will be inspected weekly for leaks or spills.

Per PA Code Title 25, 262.34(c), hazardous wastes may be accumulated in a container at or near the point of generation if the following applies:

- The container must be under the control of the operator of the process generating the waste.
- No more than 55 gallons of hazardous waste or one (1) quart of acutely hazardous waste may accumulate at the satellite storage area. Satellite storage areas should be cleaned out weekly.
- The satellite storage area must comply with PA Code Title 25 265.171-265.173 as discussed previously in this section.
- The container is marked either with the words "hazardous waste" or with other words, which identify the contents of the container.

B-4 RECORDKEEPING AND REPORTING

The University shall retain a copy of each signed manifest for three (3) years or until receipt of a signed copy of the manifest from the designated facility, which received the waste. This signed copy must be retained for at least three (3) years from the date on which the waste was accepted by the initial transporter.

The University shall retain a copy of each biennial report and Exception Report for at least three (3) years from the due date of the report.

The University shall retain records of any test results, waste analysis or other determinations (made in accordance with the hazardous waste determination section of this Chapter), for at least twenty (20) years from the date of the waste was last sent for onsite or offsite treatment, storage or disposal.

Should the University fail to receive a signed copy of the manifest from the designated facility within seven (7) days of the estimated date of arrival or thirty-five (35) days from the date of shipment, whichever is less, they shall contact the facility to determine the status of the shipment. The University shall also notify the PaDEP, by phone, within twenty-four (24) hours of the shipment's status.

If a signed copy of the manifest is not received within fourteen (14) days of estimated time of arrival or forty-five (45) days from the date of shipment, a copy of the manifest

and a cover letter (Exception Report) must be sent to the PaDEP explaining efforts made to locate the shipment and the results of these efforts.

B-5 HAZARDOUS WASTE DISCHARGES OR SPILLS

Spills and discharges which are in amounts less than the reportable quantities, which do not result in discharges into surface or groundwater, and which are managed according to a Preparedness, Prevention and Contingency (PPC) Plan need not be reported. The PPC must the requirements presented in PA Code Title 25, Chapter 265 Subchapter D.

The reportable quantities are set forth in Table B-5.1. For any waste with more than one hazard code, the most stringent reportable quantity applies. Any discharge or spill into surface or groundwater shall be reported regardless of quantity spilled or discharged.

Any spill or discharge will be deemed waste and shall be appropriately labeled (see Section B-1.C) and transported to the appropriate hazardous waste accumulation point for future off-site transport and disposal.

Public Safety personnel will report to the site of the incident and assist with evacuation of the facility, protecting the site from unauthorized entry and providing necessary contacts for spill response. The Environmental Health and Safety Specialist shall arrange for proper disposal of the hazardous waste. The Preparedness, Prevention and Contingency (PPC) Plan, which details emergency procedures, is attached in Appendix C.

In any case, the incident must be reported, as soon as possible to the Department of Public Safety at 610-683-4001 (on campus dial extension 34001) or the Environmental Health and Safety Specialist at 610-683-4050 (on campus dial extension 34050).

TABLE B-5.1
HAZARD CODES**

Physical Form	Unit	H	T	I, C, R and E
Liquids*	Gal	5	5	10
Solid	lbs.	10	100	1,000

*Liquids are flowable substances, which contain less than 20% solids by dry weight. Flowable refers to flow in the sense of pourable as a liquid.

**Hazardous Codes:	H-Acute Hazardous Waste	C-Corrosive Waste
	T-Toxic Waste	R-Reactive Waste
	I-Ignitable Waste	E-EP Toxic Waste

If the spill or discharge is equal to or greater than the reportable quantity of hazardous waste, the generator shall take the appropriate immediate actions to protect public health,

safety and the environment. The University shall immediately notify the PaDEP by telephone at (717) 787-4343 (see PA Code Title 25, Chapter 262, Section 262.46(a)).

In addition, a Hazardous Waste Spill Report shall be filed with the PaDEP within fifteen (15) days after the incident (see PA Code Title 25, Chapter 262, Section 262.46(d)).

APPENDIX D

WASTE MINIMIZATION PLAN

PREFACE

Waste Minimization is a national policy specifically mandated by the United States Congress in a 1984 amendment to the National Hazardous Waste Law, the *Resource Conservation and Recovery Act* (RCRA). Waste minimization is the responsibility of each hazardous waste generator, which may include (but is not limited to) University sources such as the arts, sciences, and facilities maintenance activities.

Reducing generation of hazardous wastes at the source and/or recycling will benefit the University by:

- reducing disposal costs
- reducing environmental, health and safety liability, and
- minimizing the potential for monetary fines levied by the United States Environmental Protection Agency (EPA) or PA Department of Environmental Protection (PADEP), associated with improper hazardous waste management.

The University, through the President, has delegated the responsibility and authority to manage and coordinate disposal of hazardous wastes to the Environmental Health and Safety Specialist. Procedures have been established by EH&S in accordance with the various overriding federal/state rules and regulations. If the generator (the Colleges or other University Departments) does not properly follow those procedures, the institution and each individual responsible for the offending areas, can be (and have been) found liable by the governing bodies (the EPA or DEP). Therefore, the Waste Minimization effort is a University responsibility, not merely one assigned to the Environmental Health and Safety Specialist.

This Plan is a "living" document.

- Changes will be made to this plan as waste minimization processes are modified or added and when other procedures, related to the plan, are revised.
- Copies of affected pages will be sent to plan holders. Plan holders will be responsible to remove outdated plan pages and insert updates.
- Changes made to the plan shall be listed in the "record of change" log, located in the front of the plan.

Table of Contents

1.0 Introduction

1.1 Regulatory Basis

Many state and federal regulations provide the driving force for Kutztown University's waste minimization plan. The following paragraphs provide a brief discussion of each of the relevant major pieces of legislation.

- The Clean Air Act (CAA) establishes the National Ambient Air Quality Standards and National Emissions Standards for Hazardous Air Pollutants. The CAA Amendments of 1990 establish early air emissions reduction programs and emphasize air pollution prevention through source reduction.

- The Clean Water Act (CWA) requires the elimination of toxic pollutant discharges into U.S. waters and establishes the National Pollutant Discharge Elimination System and Spill Prevention Control and Countermeasures Plans.

- The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) addresses the cleanup of inactive hazardous waste sites and accidental spills/releases; establishes the Superfund and National Priorities List for use in cleanups; and creates joint and several liability for hazardous waste generators contributing wastes to a Superfund site.

- The Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) was enacted as Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and is frequently referred to as SARA Title III. EPCRA requires owners and operators of applicable facilities to submit annual toxic chemical-release inventories to the Environmental Protection Agency (EPA). Since the enactment of EPCRA in 1986 the EPA has provided for the optional reporting of waste minimization efforts by owners and operators in their annual submissions of toxic chemical release inventories.

- The Occupational Safety and Health Act (OSHA) provides for worker protection from chemical hazards.

- The Pollution Prevention Act of 1990 (PPA) provides that each owner or operator, who is required to file an annual toxic chemical release form under EPCRA, is to include a toxic chemical service and recycling report for the preceding calendar year. Congress made clear, in the Pollution Prevention Act, that the national policy of the United States is that pollution be prevented or reduced at the source, whenever feasible; pollution that cannot be prevented should be recycled in an environmentally safe manner, whenever feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner, whenever feasible; and, disposal or other release into the environment should be employed only as a last resort and should be conducted in an environmentally safe manner.

- The Resource Conservation and Recovery Act (RCRA) establishes a cradle-to-grave regulatory system for solid waste. It emphasizes control of waste after generation. The 1984 Hazardous and Solid Waste Amendments to RCRA recognizes the need to increase waste management efforts and to restrict land disposal. It establishes a national policy toward minimizing waste generation; requires the certification of efforts that are undertaken to reduce volume and toxicity of waste; requires the certification of waste minimization programs on manifests; and requires the certification of minimization by a treatment facility, a storage facility, or a disposal facility.

- Commonwealth and local legislation also provides an impetus for Kutztown University's Waste Minimization Plan. For example, local legislation has banned the following materials from disposal at the municipal waste landfills: lead-acid batteries, oil, yard waste, household appliances, tires, mercury-containing fluorescent lamps and unregulated hazardous waste. Many other types of waste require the issuance of a special waste permit to allow for disposal at the landfill or wastewater treatment facility.

In response to these legislative acts Kutztown University of Pennsylvania adopted an Environmental Policy Statement that would facilitate compliance with these laws and regulations by crafting the framework for a waste minimization plan and program.

1.2 Kutztown University's Environmental Policy Statement

Kutztown University (KU), recognizing that teaching, research and service activities conducted in pursuit of the institution's mission may result in environmental impacts,

is committed to protection of the environment. In keeping with this overriding policy, our goal is to reduce waste and emissions, and ensure compliance with all relevant environmental regulations. We strive to minimize adverse impacts on the air, water, and land through pollution prevention and energy conservation. By successfully preventing pollution at its source, we can achieve cost savings, increase operational efficiencies, improve the quality of our teaching, research and services, maintain a safe and healthy workplace for our employees and students, and improve the environment. Kutztown University's environmental policy is based on the following guiding principles:

- Preventing pollution by reducing and eliminating the generation of waste and emissions at the source is a prime consideration in all University activities. KU is committed to identifying and implementing waste minimization and pollution prevention opportunities.

- Environmental protection is everyone's responsibility. KU communicates their environmental policy to all employees and makes this policy available to the general public. All employees are encouraged to identify and implement feasible pollution prevention and waste minimization opportunities.

- Technologies and methods, which substitute non-hazardous materials and utilize other source reduction approaches, shall be given top priority in addressing all environmental issues. Where source reduction is not possible or feasible, KU makes every effort to investigate recycling as a waste management option in lieu of treatment and disposal, which shall be the least preferred waste management options.

- KU strives to continually improve their environmental performance by developing and implementing tools to measure performance and provide the information necessary to establish realistic objectives for continued reductions in waste generation and energy consumption. Progress in attaining these objectives will be communicated to all employees and made available to the general public.

- KU seeks to demonstrate its leadership role to the citizens of the Commonwealth by adhering to all applicable environmental legislation and regulations and ensuring that the generation of wastes and emission of pollutants are minimized to

the extent feasible. We promote cooperation and coordination between industry, government, and the public toward the shared goal of preventing pollution at its source by seeking new ideas for pollution prevention/waste minimization and sharing our experiences with the people of the Commonwealth of Pennsylvania.

The responsibility for implementation of this policy is assigned to the Vice President for Administration and Finance or his/her designee, and shall be accomplished through the development of a formal written waste minimization plan and other associated mechanisms as deemed necessary.

David E. McFarland, President

1.3 Scope and Applicability

The Waste Minimization Program described herein is applicable to all University units and employees. The primary focus of the program is chemical wastes, but other types of solid wastes (such as paper, aluminum cans, etc.) and energy consuming activities may be addressed through cooperative efforts with other campus units. For example, solid waste reduction and recycling efforts will be conducted in coordination with the campus recycling office. Reductions in energy consumption will be accomplished in coordination with Facilities Management. While solid waste reductions and energy consumption are outside the scope of this particular plan, units are nevertheless expected to address these issues in accordance with KU's Environmental Policy Statement. The authority and responsibility, for providing guidance and support for these efforts, has been delegated to the Environmental Health & Safety (EH&S) Specialist.

1.4 Overview of KU's Waste Minimization Plan

Implementation of this Plan at Kutztown University represents an important component in fulfilling the overall mission of EH&S, which is to minimize occupational exposure and achieve minimal adverse impact on the air, water, and land through diligence in waste minimization and pollution prevention. This Plan embodies the University's Environmental Policy Statement, which incorporates the hierarchy of waste management strategies codified in the Pollution Prevention Act of 1990- prevention at the source, followed by recycling, followed by treatment, and lastly land disposal.

KU's Waste Minimization Plan is composed of the following basic elements:

- Employee training and recognition.
- Periodic individual workplace-specific waste characterization studies.
- Setting performance goals and objectives.

- Evaluating past performance and ensuring continued improvement in environmental performance.

- Technology transfer.

KU's Waste Minimization Plan strives to involve every unit and employee. It assumes the stance that great strides can be made by focusing not only on those processes that produce the greatest quantity of wastes, but also on numerous small processes that produce small volumes of waste. It is this philosophy that creates accountability in each and every unit and employee and ensures that the institution meets or exceeds the goals and objectives identified in this plan.

1.5 Goals of the Waste Minimization Plan

Performance goals and objectives at Kutztown University are set on a variety of levels with varying degrees of detail. For example, the President has set broad environmental performance goals in the University's Environmental Policy Statement (Section 1.2), which include the following:

- Reduce waste and emissions.

- Minimize adverse impacts on the air, water, and land.

- Achieve cost savings.

- Increase operational efficiencies.

- Improve the quality of our teaching, research and services.

- Maintain a safe and healthy workplace for our employees and students.

- Improve the environment.

- Reduce and eliminate the generation of waste and emissions at the source.

- Encourage all employees to identify and implement feasible pollution prevention and waste minimization opportunities.

- Implement technologies and methods that substitute nonhazardous materials and utilize other source reduction approaches.

- Continually improve environmental performance.

Within the broad framework provided by the President, Environmental Health & Safety sets specific qualitative and quantitative performance objectives in accordance with the processes described in Section 3 of this plan. Objectives are set for individual units as well as the University community in general. The goals and objectives of this plan are accomplished through various waste management methods and techniques.

1.6 Waste Management Methods and Techniques

Consistent with Kutztown University's Environmental Policy Statement and the National Policy of the United States, as established in the Pollution Prevention Act of 1990, the university strives to first minimize pollution at its source. Pollution that cannot be prevented will be recycled in an environmentally safe manner, whenever feasible. Pollution that cannot be prevented or recycled will be treated in an environmentally safe manner, whenever feasible. Disposal or other release into the environment will be employed only as a last resort and will be conducted in an environmentally safe manner.

Waste minimization is a term used to collectively describe source reduction and recycling activities, each of which is briefly discussed below.

- *Source Reduction*

  Source reduction is defined as any practice that reduces the amount or toxicity of hazardous substances and pollutants entering any waste stream or being released into the environment and thus reduces hazards to public health and the environment. Source reduction is generally achieved through one of the following techniques:

  - Equipment/technology modification.
  - Process/procedure modification.
  - Redesign or reformulation of products.
  - Substitution of materials.
  - Improvements in housekeeping, maintenance, training or inventory control.

- *Recycling* is defined as the use, reuse, or reclamation of a material that would otherwise be disposed.
  These two components of waste minimization, source reduction and recycling, form the foundation for the overall objectives established by the University as discussed in section 3 of this document.

2.0 Responsibilities

2.1 Upper Level Management

Kutztown University's President is responsible to:

- Formulate and revise, as necessary, the Environmental Policy for Kutztown University.

Kutztown University's Vice President for Administration and Finance is responsible to:

- Direct implementation of KU's Environmental Policy.

Other Upper Level Management, including Deans, Directors, Department Chairs, etc.:

- Provide adequate funding to ensure that feasible waste minimization measures are implemented within their reporting units.

- Facilitate and enforce waste minimization efforts within their reporting units.

2.2 Supervisory Personnel

Supervisory personnel are responsible to:

- Ensure that employees within their reporting units are trained to perform their tasks in an efficient and competent fashion and are provided instruction regarding the impact their activities can have on the environment if performed incorrectly.

- Motivate employees to offer waste minimization ideas for implementation in their workplaces consistent with the University's Environmental Policy.

- Recognize employee efforts to meet or exceed environmental objectives and targets. Supervisors are encouraged to include waste minimization efforts in annual employee performance evaluations.

- Cooperate with EH&S to implement feasible waste minimization options identified through the periodic workplace evaluation process and employee suggestions.

2.3 Employees

All University employees are responsible to:

- Read and understand the University's Environmental Policy Statement.

- Actively participate in the University's waste minimization program by conducting their work in a competent and efficient fashion to minimize potential adverse environmental impacts resulting from their work; and suggesting practices or procedures to enhance waste minimization efforts in their work areas.

2.4 Environmental Health and Safety

EH&S is responsible to:

- Conduct institutional waste characterization assessments and periodic workplace-specific waste characterization assessments for the purpose of identifying waste minimization opportunities, setting and refining goals and objectives, tracking progress, and ensuring continued improvement.

- Publicize and recognize individual and unit success stories to encourage continued improvement and the exchange of ideas.

- Offer waste minimization training for University employees as requested.

3.0 Program Elements

3.1 Annual Institutional Waste Characterization Studies

An annual institutional waste characterization process is valuable to the development of many waste minimization objectives at KU. These objectives, which include both source reduction and recycling options, are discussed in the following paragraphs.

- *Minimize excess buying of chemical stocks*

The University maintains prime vendor contracts for the supply of laboratory chemicals to remove incentives that contribute to over-stocking of chemicals. The selection of appropriate prime vendor contracts can contribute significantly to source reduction efforts by incorporating the following contract terms:

  - Quick Delivery: Promised next-day delivery encourages users to order only the amount of reagent chemicals that are needed. Since the users do not need to be concerned with delay-times between placing and receiving their orders, they are less inclined to over-purchase. The quick-delivery system also eliminates the need for blanket orders.
  - Quantity-Needed-Only Orders: The availability of small quantities of research and teaching chemicals is a prime consideration in vendor selection. Selection of vendors that offer chemicals in small quantities discourages excess purchase of chemicals.
  - Special Pricing: Selected vendors typically offer deeply discounted prices to discourage the purchase of chemicals from vendors who have not

contracted with the University and who may not offer quick delivery and small quantity deliveries.

- Exchanges: Prime vendors for compressed gases can agree, as a contract term, to accept full, partially full, and empty cylinders for exchange.

- *Avoid chemical expiration and over-stocking*

The University requires all work locations to maintain a chemical inventory for each work location. The inventory process encourages units to monitor shelf-life and rotate chemical stocks to ensure that older chemicals are consumed before they become non-functional. The chemical inventory also serves as a means to avoid the purchase of duplicate stock chemicals.

- *Segregate waste streams to avoid mixing hazardous wastes with non-hazardous wastes*

Employees are instructed to avoid co-mingling waste streams from different processes. This avoids contaminating non-hazardous wastes with hazardous wastes and maximizes the management options for each waste stream. For example, by avoiding the co-mingling of halogenated solvents and non-halogenated solvents the University may be able to fuel blend over 50% of the waste organic solvents

generated at the Institution. If halogenated and non-halogenated solvents were mixed, the waste stream would require incineration and any residual fuel value would be lost.

- *Recycle used oils to recover energy values*

Used lubricating oils from engines, machinery, pumps, and other equipment are collected and recycled. The energy value from these materials is recovered when the oil is blended and ultimately marketed to burners.

- *Recycle metallic mercury and avoid generating mercury wastes*

Encouraging the replacement of mercury thermometers with digital or alcohol thermometers can drastically reduce the number of mercury thermometers at KU. Metallic mercury collected from barometers, switches, and other equipment is recycled via an authorized recycling firm.

- *Substitute safer products for hazardous chemicals*

Certain high volume, or widely-generated wastes have been eliminated through product substitution.

- Parts cleaner: Low flash point and toxic (i.e., chlorinated) solvents have been replaced with high-flash stoddard solvent and, in some cases water-soluble substances, for parts cleaning in Facilities Management areas.

- Non-ignitable liquid scintillation cocktail: Research faculty that may use these materials should consider high-flash, biodegradable scintillation cocktails. This change can avoid the generation of a significant amount of mixed wastes.

- Chromic acid glassware cleaning solutions: Laboratory personnel have discontinued the use of chromic acid glassware cleaning baths. Replacement products consist of less toxic, safer alternatives such as special glassware detergents.

- Paints and strippers: Units are encouraged to substitute latex paints and stains for oil-based products where possible. Waste latex paints are sold to a latex paint recycler. When oil-based products must be used for the purpose of durability, the thinners used to clean equipment is allowed to settle so that recoverable product can be reused. Units are also encouraged to substitute less toxic stripping materials and methods (e.g., corrosive strippers rather than methylene chloride-based strippers or mechanical stripping as opposed to chemical stripping).

- Formaldehyde preservatives: Most units have switched from formaldehyde to ethanol or other less toxic materials (i.e., glycerine) for the preservation of tissues and other specimens.

- *Recycle solid wastes*

The University employs a Recycling Coordinator for the purpose of encouraging the recycling of many types of solid wastes including paper, cardboard, plastic, glass and aluminum metal. Collection receptacles for many types of recyclable materials are placed in individual work locations to encourage participation.

- *Recover silver from spent photographic fixer*

The Photography program collects all spent photographic fixer for the purpose of recovering the silver from the solution. This activity reduces the toxicity of the material and reclaims a precious metal that would otherwise be disposed and lost.

- *Recycle scrap metal*

The recycling office offers scrap metal recycling assistance. Turnings and other metal bits and pieces generated from building refurbishment, metal fabrication, and

other activities are collected and sold to a local scrap dealer. Scrap metal recovered from disassembling used oil filters is also recycled as is lead foil and pipe.

- *Recycle Batteries*

All types of batteries, other than alkaline, are recycled. This includes carbon-zinc, nickel-cadmium, lead-acid, mercuric oxide, lithium, silver oxide, and zinc-air.

- *Recycle Fluorescent light tubes*

All fluorescent lamps and high intensity discharge lamps generated at Kutztown University are recycled. Toxic metals such as lead and mercury are recovered from this waste stream by the recycling facility.

- *Recycle PCB ballasts*

An off-site contractor recycles fluorescent light ballasts that contain PCB potting materials. The ballasts are dismantled and metallic parts are recycled as scrap metal while PCB components are incinerated.

Waste minimization objectives for the institution in general are added each year based on program suggestions by employees and/or students who have an unwavering interest in protecting our environment.

3.2 Periodic Individual Workplace-Specific Waste Characterization Studies

EH&S periodically conducts workplace evaluations to accomplish the following:

- Identify hazards.
- Assess compliance with relevant health, safety, and environmental regulations.
- Plan and implement corrective actions needed to meet regulatory requirements.
- Prioritize program development and training needs.
- Identify human resources needed to support necessary EH&S programs.
- View various campus processes to identify opportunities to prevent pollution, reduce waste and consumption of resources, and promote recycling as opposed to disposal where waste generation cannot be avoided.

Through the evaluation process, EH&S obtains a copy of the chemical inventory for each work location and a description of the processes occurring in that area. In

addition, EH&S gathers information concerning types of waste reduction activities already implemented in the work area and data concerning the most toxic and highest volume chemicals used in the area. This data allows EH&S to formulate specific waste minimization objectives for a given work location with a primary emphasis on source reduction measures. This process ensures that all units and employees contribute to and participate in the University's Environmental Policy by increasing the staff's awareness of the environmental aspects and impacts of their work. Worksheets used to conduct the individual workplace-specific waste characterization studies can be found in the appendix of this Waste Minimization Program document.

3.3 Employee Training and Recognition

Foremost to the overall success of Kutztown University's Waste Minimization Plan is active participation by all University employees which is achieved through awareness training, and recognition of individuals and units implementing successful waste minimization measures. The core components of the employee-training facet of this Plan are:

- Semi-annual RCRA training sessions.
- Periodic workplace evaluations.
- Dissemination of KU's Environmental Policy and Waste minimization Plan.

EH&S offers semi-annual training classes focusing on the Resource Conservation and Recovery Act. The class syllabus includes discussion regarding pollution prevention/waste minimization and the content of this Plan. Employees are provided instruction regarding their obligation to actively identify and pursue waste minimization opportunities pursuant to KU's Environmental Policy.

Furthermore, EH&S is available to conduct periodic workplace evaluations, one component of which is a waste minimization assessment of processes and practices unique to that workplace. EH&S uses the periodic workplace evaluation process as a one-on-one training opportunity to discuss measures that individual units and employees can take to minimize the amount of wastes generated in their respective areas. KU's Environmental Policy and Waste minimization Plan are available electronically on the EH&S web page (http://www.kutztown.edu/admin/EH&S). Paper copies of each are available upon request from the EH&S office (Old Main 7, Kutztown PA 19530; Phone (610) 683-4050) or Fax (610) 683-1324.

Recognition of personal and departmental pollution prevention/waste minimization success stories will be publicized in the Headliner, the campus Public Relations publication, and on the EH&S web page. In addition, letters may be written to deans or directors to tout successes within their reporting units. All managers/supervisors

are encouraged to include waste minimization considerations in employee evaluations.

3.4 Evaluating Past Performance and Ensuring Continued Improvement in Environmental Performance

Since the methods for identifying waste minimization opportunities are conducted on an annual or periodic basis, there is a built-in feedback loop in the system for evaluating past performance and ensuring continued improvements. EH&S has begun to track the number of dollars spent on the waste management program including actual disposal costs for each particular type of waste stream, as well as total program costs including staff costs and capital expenses. Actual waste disposal costs can be further associated with particular departments and even individual unit managers. This association helps to facilitate awareness throughout the University and promotes individual responsibility.

Each year EH&S sets budget objectives for waste disposal costs that are lower than the previous year. This action forces efficient waste management by providing an impetus to decrease the volume and toxicity of wastes generated requiring off-site treatment and disposal.

Program costs associated with waste disposal are also shared with the campus community to heighten awareness and encourage participation in the waste minimization program. At times, Environmental Health & Safety may also collate waste generation data and disposal costs associated with a particular department or individual as a means of increasing awareness and encouraging participation.

3.5 Technology Transfer

EH&S encourages and participates in the exchange of ideas for successful waste minimization efforts both within the Institution and in the community at large. Publicizing successful and innovative ideas in campus publications and on the EH&S web page accomplishes this. EH&S also makes it a practice to suggest waste minimization efforts that have been successful in one unit to other units where similar work is conducted. Through active participation in local and national organizations and education-based symposiums, EH&S seeks and shares waste minimization ideas.

APPENDIX E

HAZARDOUS WASTE MANAGEMENT TRAINING PROGRAM

The following Training requirements must be met:

- Facility personnel shall successfully complete a program of classroom instruction or on-the-job training. The instruction or training shall teach personnel to perform their duties in a manner, which ensures the facility's compliance with the regulations.

- The training program shall be directed by a person trained in hazardous waste management procedures, and shall include instruction, which teaches facility personnel hazardous waste management procedures, including contingency plan implementation, relevant to the positions in which they are employed.

- The training program shall be designed to ensure that, at a minimum, facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures and emergency equipment systems, including, when applicable:

    1) Procedures for using, inspecting, repairing and replacing facility emergency and monitoring equipment.

    2) Communications or alarm systems.

    3) Response to fire or explosion.

    4) Response to groundwater contamination incidents.

    5) Shutdown of operations.

- Facility personnel shall successfully complete the training program within six (6) months of their date of employment or assignment to a facility, or to a new position at a facility. Newly hired employees may not work in unsupervised positions until they have completed the training requirements.

- Facility personnel shall participate in an annual review and evaluation of the components of the initial training program.

The facility owner must keep the following records at the facility, which must be available to the PADEP upon request:

1) The job title of each position at the facility related to hazardous waste management and the name of the employee holding each position.

2) A written job description for each position listed under 1). The description must include the requisite skill, education or other qualifications and duties of facility personnel assigned to each position.

3) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under 1).

4) Records that document that the training or job experience required and described in the above sections has been given to, and completed by, facility personnel.

Training records for current personnel must be retained until closure of the university. Training records for former employees must be retained for the operating life of the university. The training program outline shall be as follows:

HAZARDOUS WASTE MANAGEMENT TRAINING PROGRAM

SECTION I - INTRODUCTION

The first portion of the training course is designed to provide a very brief introduction and overview of hazardous waste management under the Resource Conservation and Recovery Act (RCRA) (40 CFR 262 and 265), the goals of its various Subtitles, the regulations that implement the Act, and the provisions that provide for States to operate and enforce their own hazardous waste management regulations after receiving authorization from EPA (RCRA Section 3006). A discussion on the University's hazardous waste policy completes the discussion on regulatory requirements.

The section also includes a comparison between *solid and hazardous* wastes, the characteristics of a hazardous waste, the definition of listed wastes, and a review of non-hazardous and hazardous wastes generated at the University.

1. The Resource Conservation and Recovery Act

    - Purpose (Cradle to Grave control of Hazardous Waste)
    - Federal Regulation that Implement the Act
    - State Regulations that Implement the Act
    - Other Hazardous Waste Management Laws

2. Kutztown University's Hazardous Waste Management Policy

    - An Introduction and Review

3. What is Hazardous Waste?

- Definition of solid Waste
- Materials Excluded From Classification as a Solid Waste
- Definition of Hazardous Waste
- Characteristics of a Hazardous Waste
    - Toxicity
    - Ignitability
    - Corrosity
    - Reactivity
- Listed Wastes (F-List, K-List, P- List, U-List)
- Hazardous Waste Exclusions

4. Hazardous and Non-Hazardous Wastes Generated at Kutztown University
    - Typical Wastes Generated at Kutztown University

5. Personnel Responsible for Hazardous Waste Management Program at Kutztown University
    - Waste Inventories
    - Internal Audits
    - Waste Transport and Disposal
    - Enforcement

SECTION II - HAZARDOUS WASTE ACCUMULATION REQUIREMENTS

This section will describe state, federal, and University requirements for the temporary on-site accumulation of hazardous waste at central and satellite accumulation points throughout the University campus. Accumulation requirements for SQGs will be distinguished from those large quantity generators (LQG). Recordkeeping and pretransport requirements will also be discussed.

1. Accumulation of Hazardous Waste On-Site
    - Advantages of Kutztown University's Small Quantity Generator Status (Brief Discussion)
        - Accumulation up to 180 days without a RCRA Permit
        - Can extend accumulation time to 270 days
    - Definitions of Satellite and Central Accumulation Points
        - Identification of accumulation points throughout the University campus (as indicated on campus mapping)
    - Container Management at Accumulation Points
        - Types of container (DOT approved)
        - Containers kept closed
        - Waste compatible with container

- Containers handled to avoid releases
- Separating incompatibles
- Container storage area requirements
- Unidentified wastes (hazardous waste determinations)
- Container inspection requirements

- Marketing Requirements During Accumulation
  - Accumulation start dates
  - "Hazardous Waste" Labels

- Preparedness and Prevention

2. Recordkeeping Requirements
   (Note: In accordance with Subchapter D; 262.40, the generator (University) is responsible for maintaining efficient and compliant hazardous waste management records.)

   - Required Records / Reports and Time Frames
     - Inspection Reports
     - Manifests
     - Exceptions Reports
     - Waste Analyses Reports (Test Reports)
     - Training Records
     - Hazardous Waste Disposal Plan
     - Waste Minimization Plan
     - Hazardous Waste Discharge / Spill Reports
     - Waste Inventories
     - Material Safety Data Sheets (MSDS)

3. Pretransport Requirements

   - Packing, Labeling, and Marking
     - Containers to meet DOT requirements
     - Label each container accordance with DOT requirements

SECTION III - HEALTH AND SAFETY

This section will detail requirements for maintaining and operating the University in a way that is protective of human health and that minimizes the possibility of fire, explosion, or release of hazardous waste into the environment. Discussions will include the identification of personnel responsible for emergency response plan (contingency plan) implementation, the locations of emergency response equipment, and how to utilize the equipment in the event of an emergency.

1. Emergency Response contacts (Internal and External) and Responsibilities

- Emergency Coordinator
    - Assigned, and those selected to act as Emergency Coordinator
- Local Police Department
- Local Fire Department
- Hospitals
- State and Local emergency Response Teams

2. Required Equipment

    - Internal communication system
    - Outside Communication System
    - Fire Extinguishers
    - Other Fire Suppression Systems (water spray systems, automatic sprinklers, foam producing equipment)
    - Decontamination Equipment
    - Spill Response Equipment

3. Maintenance and Operation of the University

    - Methods and Means by which the University is Complying with the Regulatory Requirements
        - Testing and maintenance of equipment
        - Access to communication equipment
        - Required aisle space
        - Arrangements with local authorities

Section 4 my be added to each of the training courses at the discretion of the course instructor, depending on whether those individuals would be expected to respond to an emergency situation.

SECTION IV - REGULATORY ENFORCEMENT

If hazardous waste is not managed in accordance with the regulatory requirements, the state and EPA have several options available to enforce compliance. These include administrative, civil, and criminal actions. This section included discussions on hazardous waste regulatory enforcement options available to EPA and PADEP. Many of the provisions found in the University's Hazardous Waste Management Policy are directly impacted by enforcement options available to the state and EPA.

1. Common Noncompliance Events

    - Container Management
    - Container Labeling
    - Accumulation Point Management
    - Inspections
    - Recordkeeping
    - Packing, Labeling and Marking

2. Administrative and Civil Actions

    - Origin of EPA and PADEP Enforcement Authority
    - RCRA Civil Penalty Policy
        - Assesses administrative and civil penalties
        - Schedule for assessing civil penalties

3. Criminal Actions

    - "Willful" or "Knowing" violations

LAST REVIEW

August, 2010
August, 2011
August, 2012
August, 2013