

## ENVIRONMENTAL HEALTH AND SAFETY PROCEDURE

### HAZARDOUS WASTE

#### I. APPLICATION:

Keene State College

#### II. PURPOSE:

The purpose of this procedure is to explain the relevant sections of New Hampshire's Hazardous Waste Rules and how these rules apply to Keene State College's operations. The procedure also discusses the Federal RCRA (Resource Conservation and Recovery Act) upon which New Hampshire's system of hazardous waste management is based. This procedure provides direction to Keene State College employees in the proper handling of hazardous waste.

#### III. INTRODUCTION:

The Resource Conservation and Recovery Act (RCRA) of 1976 is the primary statute governing the regulation of solid and hazardous waste. The Principal Objectives of RCRA are to:

- \*Promote the protection of human health and the environment from potential adverse effects of improper solid and hazardous waste management.
- \*Conserve material and energy resources through waste recycling and recovery.
- \*Reduce or eliminate the generation of hazardous waste as expeditiously as possible

RCRA authorizes the United States Environmental Protection Agency (EPA) to regulate the generation, treatment, storage, transportation, disposal of hazardous wastes. A State agency can implement its own rules as long as they are at least as stringent than the Federal. The State of New Hampshire has its own specific hazardous waste rules and there are codified at Env – Wm 100 through 1000.

#### IV. DEFINITIONS/REFERENCES:

References: 40 CFR 260 to 265. NH Env – Wm 100 to 1000. RSA 149-M:7 and RSA 147- A:3

Discharge – the release of a hazardous waste or CERCLA listed hazardous substance into the land, water, or air

Hazardous Material – any material designated as such by the DOT and listed on the Hazardous Materials Table at 49 CFR 172.101.

RCRA- Resource Conservation and Recovery Act

CERCLA – Comprehensive Environmental Response Compensation and Liability Act (referred to commonly as Superfund).

Hazardous Waste – discarded hazardous material that meets the criteria specified at Env – Wm 400 (summarized in this procedure).

**V. PROCEDURE / PROGRAM:**

**A. Applicability:**

The Keene State College site must comply with the hazardous waste regulations due to generation of small quantities of hazardous waste from chemistry/biology lab processes, printmaking shop/art studio work, and various other activities occurring on site. Examples of potential hazardous wastes include spent acids, used solvents, used flammable liquids, discarded solvent paints, and spill cleanup residues and materials. There are 5 Satellite Accumulation Areas at Keene State College: Science Lab #221, Science Lab #215, Science Lab #309, Hazardous Waste Storage Shed, and Redfern Arts Center (Printmaking Shop). Personnel who generate hazardous wastes at these Satellite Accumulation Areas will thereafter be referred to as 'generators'.

**B. Identification of Hazardous Waste:**

Waste must be first designated for disposal. The generator makes a determination that the material is no longer useful, cannot be recovered or recycled, and possesses a hazardous characteristic. The generator then applies the following protocol:

- 1 Is the material a listed waste? See Appendix A for Listed Wastes. (Acutely Hazardous Waste (P codes), Toxic Hazardous Wastes (U codes), EPA Generic Industrial Process Waste (F code), NH Generic Industrial Process Waste (NH code), or EPA Specific Industrial Process Wastes (K code).
- 2 Does the material exhibit one or more of the following hazardous characteristics:

- Ignitability:

- Liquids with a flash point less than 140° F (60 °C)
- Solids that can ignite under standard conditions
- Ignitable compressed gases or oxidizers

-Corrosivity:

- Liquids that have a pH less than or equal to 2.0 or greater than or equal to 12.5
- Liquids that corrode steel at a rate greater than 0.25 inches per year at a test temperature

-Reactivity:

- 1 Contains Cyanides or Sulfides which can generate toxic fumes if exposed to pH conditions between 2.0 and 12.5
- 2 React violently to form potentially explosive mixtures or can generate toxic gases if mixed with water
- 3 Are normally unstable and readily undergo violent change without detonating
- 4 Can detonate or explode if heated or exposed to a strong igniting source
- 5 Can detonate or explode under standard conditions
- 6 Are classified by the Federal Department of Transportation as explosives

-Toxicity:

- 1 A waste exhibits the characteristics of TCLP Toxicity if its extract [ from a precise extraction procedure called the Toxicity Characteristic Leaching Procedure (TCLP) ] contains any of 25 listed organic compounds, 8 metals, 4 pesticides and 2 herbicides in concentrations equal to or greater than the specified limits

- 3 If the material meets any of the above criteria, it must be managed as a hazardous waste.
- 4 If a material (such as water or spill cleanup materials [soil, sand, cloths, kitty litter]) is mixed with a listed waste, the mixture must be treated as a hazardous waste.
- 5 If the material (such as water or spill cleanup materials [soil, sand, cloths, kitty litter]) is mixed with a characteristic waste, if the resultant mixture exhibits one or more of the hazardous characteristics, then it is a hazardous waste.
- 6 Residues left in containers may be considered hazardous waste. Call

the EHS Coordinator at ext. 2879 for guidance.

- 7 Contact EHS if the waste needs an immediate pickup by an outside vendor. Generally hazardous waste pickups are made at the end of each semester, and once during the summer.
- 8 Asbestos containing materials or PCB materials are not considered hazardous waste but must be managed via special federal and state procedures. Contact EHS for guidance at ext. 2879.

C. Satellite Accumulation Area (SAA)/Small Quantity Generator:  
A small quantity generator may “accumulate” hazardous waste up to 1000 kgs of nonacutely hazardous waste (no U or P codes) for an indefinite period without a special permit per NH Env – Wm 508.03. Acutely hazardous waste exceeding 2.2 lbs must be disposed of within 90 days. In order to meet 508.03, certain special requirements must be met including weekly inspections, spill control materials located in SAA, the SAA stays under the control of the ‘process operator’ (person responsible for the area), and posting of emergency information. This Satellite Accumulation Area provision requires that an Emergency Contact (the ‘process operator’ or someone familiar with the daily operation of the area) must be designated and the Emergency Contact phone number posted in the SAA.

D. Container Management:  
Containers must be in good condition and compatible with hazardous waste to be placed inside. For example, acids and bases must be stored separately and in plastic or glass containers.  
Containers must be kept closed except during filling.  
Satellite containers must be marked with the accumulation start date once waste is so designated.  
Containers must be clearly marked, “Hazardous Waste” . The label must be unobscured.

- 1 Do not store any other material (such as new chemical reagents) in the satellite accumulation area

E. Labeling Hazardous Waste Containers:

- 1 Use the Red & White “Hazardous Waste” label. Call EHS at ext. 2879 if you need more labels.
- 2 Segregate wastes into containers based on chemical families and DOT classifications: corrosives, flammables, compressed gases, carcinogens, toxics (metals such as lead or chromium). When hazardous waste is shipped offsite, it must be designated with its proper DOT shipping name, in addition to the applicable EPA/NH waste codes. Therefore, it is critical to segregate hazardous

wastes initially based on their DOT hazard classification. Within that, additional segregations should be made. For example, flammable liquids such as acetone should be segregated from flammable chlorinated liquids such as chloroform.

- 3 List the top three most hazardous constituents in the container in order of concentration. If it is in a solution of water, write the top three hazardous constituents "in water". Remember, to consider the need to accurately 'name' the chemicals for the protection of emergency response workers that would respond in the event of a transportation spill. Therefore, do not use chemical formulas.
- 4 Write this appropriate chemical information on the Hazardous Waste Label. If you are not sure, or need help with this process, contact the EHS Coordinator.
- 5 Remember that your initial labeling information will be the basis of assigning a proper DOT shipping name, and EPA code. This information is carried through on the hazardous waste manifest, which tracks the hazardous waste through the transportation to the final disposal process (tracking from cradle to grave). The manifest is what is used as the main decision making tool by emergency response personnel in the event of an transportation emergency. This information is also used in determining the appropriate waste management technology to neutralize the waste (i.e., incineration). It all starts with YOU accurately labeling the material!

#### F. Emergencies involving Hazardous Waste:

In the event of an emergency involving Hazardous Waste, the following steps should be initiated:

- 1 Assess the safety of the situation
- 2 Assess the source and extent of the spill or fire
- 3 Tell people to leave the area
- 4 If the spill is large, if there is any injury, if there is any risk of fire, dial 911 immediately!
- 5 Initiate mitigation actions, if safe to do so, and it is within your education and experience/ training i.e., a Chemistry professor performing small spill cleanup.
- 6 Wear gloves and safety glasses at the minimum.
- 7 Make the necessary notifications (EHS x 2879 or Campus Safety x 2228). Again, if medical attention is needed in the event of injuries or there is a risk of fire or imminent injury, call 911 immediately!

When Faced with a Small Spill of a Hazardous Waste, remember:

- Do not assume that gases or vapors are harmless due to lack of

smell

- Call Extension 2228 as a notification; explain the situation.
- Prevent spread of spilled material by absorbent “socks” or pads. Spill cleanup materials are located in each Satellite Accumulation Area.

G. Regulatory Notifications:

- Any hazardous waste incident that can result in waste discharged into state land, water or air must be reported to the proper authorities. For Keene State College, this requires calling 911, and then calling the New Hampshire Department of Environmental Protection at 603 271 3899 (night 800 346 4009). If you are not sure if you should call, be guided by the following: any spill that results in injuries or can impact the community off site must be reported. Notification must take place within 15 minutes. This is so trained response units can determine if mobilization is necessary. Calling 911 alone will not meet Keene State College’s reporting obligation.
- A discharge does not have to be reported if the hazardous materials did not go into State waters, was immediately stopped, contained, and cleaned up with 24 hours; AND does not trigger any other reporting requirement. Contact EHS Coordinator for guidance.

H. Waste Minimization:

- 1 While often considered only a hazardous waste regulation, one of the goals of RCRA is to reduce or eliminate waste.
- 2 The three “R”s of waste minimization are: rethinking, reducing, and recycling.
- 3 Rethinking means thinking why this waste is generated in the first place. Can a safer material be used instead? Can the process be redesigned to eliminate the material? Eliminating hazardous waste in the process solves the problem of disposal.
- 4 Reducing means ordering only what you need and use what you order. Do not order drum quantities when 1 liter will do. Stay on top of expiration dates of materials. Maintain control of hazardous material inventory. Consider using one ‘point person’ to order chemicals, and thereby reduce duplication of effort.
- 5 Recycling is part of the solution to the solid waste problem. Participate in Keene State College’s recycling program.
- 6 Consider participating in Keene State College’s Sustainability Council for more ways to reduce both solid and hazardous waste.

**VI. RESPONSIBILITIES:**

A. Employee:

1. Employees who have received Hazardous Waste/RCRA training are responsible for following this procedure and knowing how to appropriately label, containerize, and manage hazardous waste in their work areas.
2. Employees must keep hazardous wastes appropriately segregated and labeled at all times.
3. Employees are responsible for knowing the appropriate action, with respect to their training level, to be taken in the event of a leak or discharge of a hazardous waste.

B. Campus Safety:

1. Campus Safety is responsible for knowing when to contact outside agencies in the event of a hazardous waste spill.

C. Line Management:

1. Line management must implement those parts of the procedure applicable to their area. Satellite Accumulation Areas must post the name of the responsible person (or 'process operator') who knows the origin of the waste in the area, and maintains the SAA on a daily basis.
2. Line management is responsible for ensuring PPE is available in the SAA.
3. Line management must ensure direct reports receive appropriate training. All new employees whose responsibilities involve hazardous waste must receive Hazardous Waste RCRA Training.
4. Line management is responsible for communicating to the EHS Coordinator any major changes to the SAA or facility that could impact this procedure.

D. Environmental Health and Safety (EHS):

1. The EHS Office is responsible for ensuring that the required information is contained in this procedure.
2. EHS coordinates hazardous waste pickups and signs the external manifest.
3. EHS conducts weekly Satellite Accumulation Area inspections.
4. EHS provides appropriate hazardous waste/RCRA training and technical assistance to answer hazardous waste questions.
5. EHS assists in making notifications to outside agencies in the event of a hazardous waste incident.

