



# HAZARDOUS WASTE MANAGEMENT MANUAL

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Northeast State Community College

# Hazardous Waste Management Manual

## Introduction

Northeast State Community College is committed to excellence and leadership in protecting the environment. In keeping with this policy, employees must implement steps to reduce waste and emissions. Northeast State Community College strives to minimize any adverse impact on the air, water, and land through excellence in waste reduction. By successfully reducing waste at its source, Northeast State Community College can achieve cost savings, increase operational efficiencies, improve the quality of our products and services, and maintain a safe and healthy workplace for our employees and students. Secondly, Northeast State Community College promotes environmentally sound recycling, reuse, and management of all waste streams.

As both a responsible citizen and Northeast State employee, each individual is responsible for reducing waste, for fully complying with all waste reduction programs established as well as applicable Federal and State laws dealing with hazardous waste. Northeast State Community College's primary objectives are:

- Achieve a significant reduction in the generation of hazardous waste.
- Work towards developing reliable means to measure hazardous waste reduction efforts.
- Research and develop activities and programs with a focus on finding substitutes for hazardous waste used on campus.
- Maintain a safe and healthy work place for staff, faculty and students.

These objectives and goals cannot be reached without the cooperative effort of the staff and faculty through adherence to these guidelines.

## Purpose

The purpose of the Northeast State Community College Hazardous Waste Management Program is to protect the college and community environment and to ensure that all chemicals generated are collected, stored, and disposed of in a safe, proper, and cost effective manner.

## Regulatory Basis

The Northeast State Community College Waste Management Program is based on the 1976 Resource Conservation and Recovery Act (RCRA), the Tennessee Hazardous Waste Reduction Act of 1990, and the Tennessee Hazardous Waste Management Regulation (Tennessee Rule Chapter 1200-1-11).

## Hazardous Waste Definition

Waste is defined as hazardous if it meets **any** of the following four conditions:

**Ignitability** – Waste that can create fires under certain conditions, are spontaneously combustible, or have a flash point less than 60 degrees Celsius (140 degrees Fahrenheit)

**Corrosivity** – Corrosive wastes are acids or bases (pH less than or equal to 2, or greater than or equal to 12.5) that are capable of corroding metal containers, such as storage tanks, drums, and barrels.

**Reactivity** – A solid waste that exhibits any of the following properties:

- Normally unstable and readily undergoes violent changes without detonating.
- Reacts violently with water.
- Forms a potentially explosive mixture with water.
- Generates toxic gases, vapors, or fumes in a quantity sufficient to present a danger to public health or the environment when mixed with water.
- Contains cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors, or fumes in a quantity sufficient to present a danger to public health or the environment.
- Capable of detonating or exploding when subjected to a strong initiating source or heated under confinement.
- Readily capable of detonating, exploding, or reacting at standard temperature and pressure.

**Toxicity** – Toxic wastes are harmful or fatal when ingested or absorbed (e.g., containing one of the four characteristics-ignitability, corrosivity, reactivity, or toxicity).

**Other-** A waste is also hazardous if the Environmental Protection Administration (EPA) names it on one of the following three lists developed:

- Non-specific Source Wastes – These are generic wastes produced by manufacturing and industrial processes.
- Specific Source Wastes – These are wastes from specifically identified industries.
- Commercial Chemical Products – List consists of specific commercial chemical products or manufacturing chemical intermediates.
- Mixtures that contain both non hazardous and hazardous waste.

### Academic Institutions as Hazardous Waste Generators

Until 1984, most academic institutions that generated hazardous wastes were exempt from many of the RCRA requirements for generators because they generated less than 1,000 kg per month of hazardous waste. However, when the limit was lowered to 100 kg per month for conditionally exempt small quantity generators, almost all colleges and universities fell under the regulations established by the Resource Conservation and Recovery Act (RCRA).

### RCRA Enforcement

Generators share in the responsibilities for the safe management and ultimate disposal of all wastes. If the transporter or disposal facility fails to take proper care of the waste or does not prevent the wastes from being released into the environment, the generator can and have been held responsible. EPA is authorized to seek civil and criminal penalties for RCRA violations. Educational institutions have not been excluded. Several universities and colleges have been found guilty of RCRA violations and have had to pay substantial penalties. Individuals guilty of RCRA violations can be personally brought to court and face mandatory penalties, as well as possible imprisonment. One substantial penalty for violation of EPA Regulations is that the institution may not receive Federal funds.

Due to these developments, universities and colleges must ensure that staff, faculty, and students are

properly trained concerning waste management practices.

## Hazardous Waste Minimization

Northeast State Community College is committed to the protection of human health and the environment. To meet these commitments, the College encourages everyone to utilize chemical waste minimization techniques to reduce both the volume and toxicity of chemical wastes they produce. The following are some of the common waste minimization techniques:

**Purchasing** – Purchase only the quantity of chemicals required for specific projects. Find the minimum amount required for an experiment and order accordingly. Do not stockpile chemicals unnecessarily.

**Product Substitution** – Substitute non-hazardous or less toxic materials in chemical processes and experiments. Some examples are:

- Using water-based inks instead of solvent-based inks in printing operations.
- Substituting detergents and enzymatic cleaners for sulfuric acid/potassium dichromate (chromerge) cleaning solutions and ethanol/potassium hydroxide cleaning solutions.
- Avoid using known carcinogens, mutagens, or extremely hazardous chemicals where possible.

**Process Modification** – Laboratories are encouraged to modify experimental or standard processes to decrease the quantity of hazardous chemicals used and generated. Micro and semi-micro techniques should be used to reduce the amount of waste generated.

## Segregation and Characterization

- Do not mix hazardous waste with non-hazardous waste..
- Completely fill out all hazardous waste labels that are placed on containers.

**Chemical Redistribution.** Unopened or unused portions of chemicals may be redistributed within the Northeast State Community College campus. If you have a chemical you no longer need, contact the director of Police and Safety.

**Recycling.** Northeast State Community College collects some precious metals and valuable chemicals for recycling by outside contractors to reduce waste treatment costs. Some examples include:

- Photo fixer is processed to reclaim silver.
- Mercury is collected for redistillation.
- Fuel grade solvents are reclaimed for use as an energy source or recycled.
- Used motor or pump oil is collected and recycled.

**Management.** Audits need to be conducted with regard to chemical supplies on hand and use inventory control procedures aimed at purchasing and maintaining the minimum amount of hazardous waste possible. Managers need to substitute non-hazardous chemicals for hazardous chemicals whenever possible.

**Training.** Train employees in waste minimization concepts. Training should include an explanation of the concepts described above and a discussion of how each department can implement specific waste minimization measures.

## Generator Guidelines

The President, director of Police and Safety, administrators, staff and faculty share the responsibility for implementing the procedures in this manual jointly.

The director of Police and Safety is responsible for the overall management of all chemical waste (hazardous and non-hazardous) generated by Northeast State. The director of Police and Safety will manage the collection, transportation and off-campus disposal of hazardous waste generated in day to day operations, academic teaching, and research. Department supervisors, where hazardous waste is generated, are responsible for the implementation of the hazardous waste program and must insure all staff under their supervision are properly trained in the proper labeling, handling, collection and disposal of hazardous waste. Assistance is required from the staff and faculty during both the generation and disposal phase of this process. RCRA regulations require specific methods of collecting and storing the waste at the point of generation. The Chemical Waste Handling Guidelines listed below states guidelines which need to be followed to bring Northeast State in compliance with applicable federal and state law as well as assisting the director of Police and Safety in the safe handling and proper disposal of hazardous waste.

Department supervisors, staff and faculty who deal with hazardous waste must be familiar with the college's overall hazardous waste management program contained in this manual. Their duties include the following:

- Give instruction on the safe methods and use of all items.
- Implement the procedures contained in this manual for the well-being of the staff, faculty and students at Northeast State.
- Make systematic checks of the equipment and supplies to be sure they are in safe operational order and to correct immediately any deficiencies noted.
- Motivate students and peers to make safety a priority by implementing safe practices and encouraging individuals to report any safety concerns.
- Immediately correct, if possible, and report any issues relating to unsafe handling or storage of hazardous waste to the director of Police and Safety. Students should be instructed that all rules and procedures are for their well-being and should carry these practices not only in school but at their future job site. The students' responsibilities under Northeast State's program include the following:
  - Obeying all rules and observing all safety practices listed in this manual at all times.
  - Notifying the staff/faculty of any unsafe condition so corrective action can be taken.

## Chemical Waste Handling Guidelines

All chemical waste must be in an appropriate sealed container, i.e., glass or plastic bottles with screw on caps. No corks or ground glass stoppers should be used. The chemical waste must be stored in an appropriate container that will not react with the waste.

Do not add experimental material to a waste container until it has gone through its complete reaction.

Waste containers must be kept closed except when waste is being added. This prevents hazardous vapors from being released and reduces the amount of exposure to humans.

Proper labeling aids in the correct determination of the type of hazardous waste present, as well as the final disposal method. Proper labels also provide vital information to emergency response personnel. Labels must be typed or clearly printed using indelible ink (no pencils, markers, or cursive writing). Labels must be securely attached to each container. Each label must contain a specific list of the chemical constituents and approximate percentage of each (no generalizations i.e. acids, organics, or trade names, i.e., Clorox for sodium hypo chlorite).

Verify that correct spelling has been used on the labels. All wastes should be stored in a clearly designated, appropriate, safe area in each lab.

Questions concerning the proper labeling, handling, or storage of chemical waste, should be addressed to the Director of Police and Safety at (423)279-7655 or extension 3355.

### Chromic Acid

The use of sodium or potassium dichromate dissolved in concentrated sulfuric acid as a cleaning solution presents special handling and disposal problems. Chromic acid is a powerful oxidizing agent, and as such, has the potential to explode on contact with certain oxidizable organic materials. In addition, it is both toxic and corrosive. Instances of burns to both skin and clothing due to spillage of chromic acid cleaning solutions have occurred. Department managers who work with hazardous waste should consider the following lists of alternate cleaning agents that have been proven to be satisfactory as cleaners and significantly less toxic and hazardous.

- Alconox (powder)
- S/P Contract 70 (concentrated liquid)
- S/P Laboratory Detergent Concentrate (powder)
- Fisher brand Sparkleen (powder)
- FL-70 Concentrate (concentrated liquid)
- Liquinox Liquid Detergent
- NoChromix
- Isoclean (concentrated liquid)
- Count-Off (concentrated liquid)
- Lift Away Concentrated Decontaminant (liquid)
- RBS 35 Concentrate (concentrated liquid)

### Separation of Halogenated and Non-halogenated Wastes

Separated and well-defined wastes are easier and less expensive to dispose of than mixed and unknown wastes. Since high volume of halogens (Chlorine, Bromine, Iodine, and Fluoride) in the organic solvents cannot be properly destroyed in most incinerators, several disposal agencies are not approved by EPA to handle these wastes. Therefore, it is essential to indicate the composition of all waste liquids and, if a mixture, the approximate percentage by volume of each constituent. The percentage composition must be clearly indicated on the "Hazardous Waste Tag." Departments should attempt to keep the halogen content of their organic solvents below 1.0% by volume.

The following provide guidelines for placing waste in the differing waste solvent containers:

- Acceptable as non-halogenated waste solvents
  - Non-halogenated organic solvents
  - Solutes containing small amounts of halogens
- Halogenated solvents that should be in separate containers
  - Halogenated organic solvents
  - Solvent mixtures with more than 1% halogenated solvent by volume
  - Organic solvents with large amounts of halogenated solute

- Substances that should not be put in containers with organic solvents
  - Solutions of acids or bases
  - Aqueous solutions of toxic organic chemicals
  - Metallic compounds containing Ag, As, Ba, Cd, Cr, Hg, Ni, Pb, Sb.
  - Sulfides or inorganic cyanides
  - Strong oxidizers or reducers
  - Water reactive substances
  - Large amounts of water

#### Hazardous Waste Manifesting and Turn-in

Each container of hazardous waste must have a hazardous waste tag completely filled out and securely attached to the container. When the waste is ready to be picked up, contact the director of Police and Safety in writing or through the campus e-mail system. The request must list the hazardous waste to be picked up by chemical name and the estimated amount in pounds.

#### "Empty" Waste Containers

A container or an inner liner removed from a container that has held any hazardous wastes, except a compressed gas or an acute hazardous waste, is empty if all wastes have been removed that can be removed using the practices commonly used to remove materials from that type of container (i.e., pouring or pumping) and the following conditions are met:

- No more than 1" of residue remains on the bottom of the container.
- No more than 3% by weight of the total capacity of the container remains in the container if the container is less than or equal to 110 gallons in size.
- No more than 0.3 % by weight of the total capacity of the container remains in the container if the container is greater than 110 gallons in size.

A container that has held a hazardous compressed gas is empty when the pressure in the container approaches atmospheric conditions.

A container or inner liner that has held an acute hazardous waste is empty if the container or inner liner has been triple-rinsed using a solvent capable of removing the chemical product or if the container has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equal removal.

#### Disposal of Chemicals in the Sanitary Sewer System

Some chemical wastes, less than 100 grams at a time, can be safely disposed of into the sanitary sewer system if they are water soluble, degradable, and properly diluted. Chemicals in solid form should first be dissolved in water. All chemicals put into the sanitary sewer system should be followed by a 20 to 50-fold dilution of water. Disposal of more than one pound of any of these chemicals requires the director of Police and Safety to be notified prior to disposal.

#### Non-hazardous Waste Disposal

The following list comprises water-soluble compounds of low-toxic hazard cautions and low-toxic hazard anions. Compounds of any of these ions that are strongly acidic or basic should be neutralized before

disposal down the drain.

Examples of non-hazardous waste are listed below. These chemicals were selected because they have oral-rat LD50 toxicity values higher than 500 mg/kg, and have no positive determination for carcinogenicity according to the National Institute of Occupational Safety and Health (NIOSH) 1979 Registry of Toxic Effects of Chemical Substances.

List of Solid Non-hazardous Waste

Acid, Ascorbic	Calcium Sulphate
Acid, Benzoic	Cobalt Oxide
Acid, Boric	Copper Oxide
Acid, Casamino	Crystal Violet
Acid, Citric	Dextrose
Acid, Oleic	Drierite
Acid, Lactic	Extract, Malt
Acid, Phosphotungstic	Extract, Yeast
Acid, Phthalic	Ferrous Ammonium Sulphate
Acid, Salicylic	Galactose
Acid, Silicic	Gelatin
Acid, Stearic	Graphite
Acid, Succinic	Gum, Arabic
Acid, Tartaric	Gum, Guaiac
Agar	Hematoxylin
Albumen	Iron Oxide
Aluminum Hydroxide	Kaolin
Aluminum Metal	Lactose
Aluminum Oxide	Lithium Carbonate
Amino Acids (naturally occurring)	Lithium Chloride
Ammonium Bicarbonate	Lithium Sulphate
Ammonium Carbonate	Magnesium Borate
Ammonium Chloride	Magnesium Carbonate
Ammonium Citrate	Magnesium Chloride
Ammonium Lactate	Magnesium Phosphate
Ammonium Phosphate	Magnesium Oxide
Ammonium Sulfate	Magnesium Sulphate
Ammonium Sulphamate	Maltose
Barium Carbonate	Manganese
Barium Sulphate	Manganese Acetate
Brain Heart Infusion	Manganese Chloride
Brom Phenol Blue	Manganese Dioxide
Magnesium Citrate	Manganese Oxide
Magnesium Lactate	Methyl Red
Magnesium Oxide	Methyl Salicylate
Broth, Nutrient	Methylene Blue
Calcium Borate	Paraffin
Calcium Carbonate	Pepsin
Calcium Chloride	Peptone
Calcium Citrate	Petroleum Jelly
Calcium Lactate	Potassium Acetate
Calcium Phosphate	Potassium Bicarbonate
Potassium Bisulphate	Tryptone
Potassium Bitartrate	Urea
Potassium Borate	Wax, Bee's
Potassium Bromate	Zinc Oxide

Potassium Bromide  
Potassium Carbonate  
Potassium Citrate  
Potassium Chloride  
Potassium Iodide  
Potassium Lactate  
Potassium Phosphate  
Potassium Sodium Tartrate  
Potassium Sulphate  
Potassium Sulphite  
Potassium Sulphocyanate  
Pumice  
Sodium Acetate  
Sodium Ammonium Phosphate  
Sodium Benzoate  
Sodium Bicarbonate  
Sodium Bisulphate  
Sodium Bisulphite  
Sodium Borate  
Sodium Bromide  
Sodium Carbonate  
Sodium Chloride  
Sodium Citrate  
SDS (Sodium DodecylSulfate)  
Sodium Formate  
Sodium Iodide  
Sodium Lactate  
Sodium Phosphate  
Sodium Salicylate  
Sodium Silicate  
Sodium Succinate  
Sodium Sulphate  
Sodium Thioglycollate  
Sodium Thiosulphate  
Sodium Tungstate  
Starch  
Strontium Carbonate  
Strontium Phosphate  
Strontium Sulfate  
Sulphur  
Sugars  
Sucrose  
Talcum Powder  
Thymol  
Tin Metal  
Tin Oxide  
Trypticase

#### Disposal of Infectious Waste

Contaminated or used sharps must be separated into a separate category. The packaging of infectious waste must be puncture resistant, tear-resistant and distinctively red/orange colored containers with a universal biohazard label. This type of waste should not be compacted prior to treatment. Users of sharps should insure the container is emptied prior to becoming full. Contact the Division Chair, Health Related Professions or the director of Police and Safety for disposal.

## Storage

- Only store sharps in an authorized container.
- Minimize storage time.
- Limit access to the storage area.
- Universal biological hazard signs should be posted on storage area doors, containers, etc.

## Planning For Chemical Spill Emergencies

1. Two people in lab or service areas will act as on-site emergency coordinators and back-up emergency coordinators. These people should know what hazards exist in your area and how to implement this spill response plan (contingency plan) for the area. They will act as advisors to police, fire department, and safety personnel.
2. Train employees in chemical spill procedures when they are first hired and yearly thereafter. Document the training and have employee and supervisor sign the documentation form to certify that the training was given.
3. Purchase spill cleanup material and personal protective equipment, if needed (respirators, chemical resistant suits and gloves, safety goggles, etc. **Note:** Make sure all personnel protective equipment meets the standards established by OSHA. Know what the limitations of the personal protective equipment are. If you have any questions about the personal protective equipment, contact the director of Police and Safety.

## Hazardous Chemical Spill Cleanup Guidelines

Chemical spill or hazardous materials emergency situations should be handled as a fire emergency. Initial response in a fire situation can be summarized as RESCUE, CONFINE, REPORT, SECURE, and CLEANUP (FIGHT FIRE). These principals can also be applied to a hazardous materials spill situation.

## Rescue

Just as you are not to re-enter a burning building, do NOT go back into an area where a chemical spill has occurred unless you have the proper equipment and training. In many documented cases, rescuers not wearing proper protective equipment have been overcome by toxic or asphyxiating gases trying to rescue other victims and died as a result. Do not make this mistake.

As you leave an area involved in a chemical spill, assist people exiting the area.

- Evacuate personnel from the spill area.
- Direct personnel to nearest fire exit.
- Alert neighbors.
- Attend to the victims.

## First Aid

### General

- Remove victim from spill area to fresh air (but do not endanger your own life by entering areas with toxic gases).
- Immediately remove contaminated clothing.
- Wash skin with soap and water.
- Flush skin and/or eyes with water for at least 15 minutes (You may not feel any immediate effect from chemical spills, but it is very important to wash quickly and thoroughly as many chemicals can cause severe tissue damage which is not apparent until hours later).
- Get medical attention for victims.

### Chemical spills over large body area

- Remove contaminated clothing while under the shower.
- Flood affected body area in cool water for at least fifteen minutes.
- Resume wash water if pain returns.
- Wash off chemicals with mild detergent and water; do not use neutralizing chemicals, unguents, creams, lotions or salves.
- Get medical attention for the victim.
- Notify medical personnel exactly what chemicals are involved.

### Victims of Bromine spills

- Flush with cold water; apply compress saturated with dilute sodium or potassium thiosulfate.
- Get immediate medical help.
- Victims of Hydrogen Fluoride (HF) spills
- Flush with cool water until any whitening of tissue disappears.
- Swath injured areas with soaking wet, iced cloths.
- Get immediate medical help.

### **Confine**

- Close fire doors.
- Isolate area.
- Establish exhaust ventilation, if possible.

- Vent fumes or vapors only to outside of the building.
- Open windows, if possible, without exposing yourself to fumes or vapors.
- If fumes or vapors are in room, which is not vented to outside of building, close off room.

### **Report**

Call 911 and the office of Police and Safety (extension 3255) for the following:

- Spills that involve injury requiring medical treatment.
- Spills that involve fire or explosion hazards.
- Spills that are potentially life threatening.

Call the office of Police and Safety for

- Chemical spill situations that do not require emergency medical assistance.
- Spills of one gallon of a chemical or more, or any quantity of a highly reactive or toxic material.
- Spills of an unknown chemical.
- Spills for which you have any questions or doubts about your ability to clean up the spill.

### **Secure**

- Until Emergency Responders arrive on the scene, you and your staff will have to block off entrances to the spill site and prevent people from entering the contaminated area.
- Lock doors leading to the chemical spill and post signs on doors warning of the spill.
- Tape or rope off stairwells and elevators leading to the spill and hang signs on the tape.
- When chemical fumes are being spread through a building's air handling system, call the Physical Plant to have the ventilation system shut off.
- Post staff by commonly used entrances to the spill site so they can warn people to use other routes.
- For large outdoor spills, keep people upwind from the site.

### Cleanup

Based on the chemical spill situations, decide who will do the cleanup. If you are going to do the cleanup, follow the procedures listed in the "What to Do When You Clean up a Chemical Spill" section below.

### Who Cleans Up A Chemical Spill

The following guidelines are offered to help you decide if you should clean up a chemical spill.

### You Clean Up The Spill

For chemical spills that do not involve injury, do not represent a fire hazard, are less than one gallon, and for which you have the proper training and proper protective equipment to do the cleanup, you clean up the spill.

### Emergency Responders Clean Up The Spill

For all other chemical spill situations, including those for which you have any questions or doubts about your ability to clean up the spill, call the office of Police and Safety at extension 3255. Report all injuries, fires, explosions, and potentially life threatening situations first to 911 and then the office of Police and Safety.

### What to Do When You Clean Up a Chemical Spill

If you have the proper training, proper personal protective equipment and the proper material to absorb and clean up your chemical spill, and no one has been injured, the spill is contained, and the spill is not life threatening or a fire or explosion hazard, then follow these procedures:

- Locate the spill kit.
- Choose appropriate personal protection.
- Remove ignition sources
  - Turn off hot plates, stirring motors, flame sources.
  - Shut down all equipment.
  - If unable to shut off sources of ignition, notify 9-1-1.
- Confine or contain the spill.
  - Cover with an absorbent mixture.
  - Clean up minor spills with paper towels or sponge if they won't react.
  - Sweep solid materials into a dustpan, place in sealed container.
  - If acid base, first add a neutralizing agent; sodium bicarbonate for acids, sodium bisulfate for bases.
- For small amounts of inorganic acids/bases, use neutralizing agent and absorbent material.
- For small amounts of other materials, absorb with non-reactive material (e.g. vermiculite, sand, towels, Floor-Dri).
- For large amounts of inorganic acids/bases, neutralize and call 9-1-1.
- For large amounts of other materials, make a judgment call: depending on the amount, toxicity or what the substance can run into or react with, you may handle it yourself or call for help.
- The following spills require special handling:

#### Acid Chlorides

Use Oil-Dri, Zorb-all or dry sand  
Avoid water, avoid sodium bicarbonate

#### Mercury

Small spills – open window, if possible, and ventilate area while cleaning  
Use aspirator bulb or suction device (available from Edmund Scientific and Markson Scientific)

Alkali Metal (e.g. Sodium or Potassium Metals)

Smother with dry sand

Put in hood

If possible, dispose of by reaction with isopropyl alcohol

White (Yellow) Phosphorus

Blanket with wet sand or wet absorbent

- Remove absorbent material with a broom and dustpan.

Place in plastic bag or other appropriate container.

If the spilled chemical is a volatile solvent, transfer plastic bag to fume hood for evaporation of solvent.

After evaporation, discard with other non-hazardous solid wastes.

If spilled material is a non-volatile, hazardous chemical, dispose as a hazardous chemical waste.

## Appendix A

### Waste Streams

Northeast State Community College has the following active Waste Streams:

#### **Waste Stream 3**

Labpack Chemicals

How generated: Chemicals used in various chemistry, biology and physic lab experiments.

Waste reduction measures: Neutralize chemicals if possible. Substitute non-hazardous chemicals for hazardous chemicals whenever feasible.

#### **Waste Stream 5**

Paints and Thinners

How generated: Paints and Thinners used primarily by Plant Operations.

Waste reduction measures: Substitute paints and thinners, which contain non-hazardous waste.

### **Waste Stream 6**

Monoethanolamine

How generated: Cleaning automotive parts.

Waste reduction measures: Implement teaching methods to reduce the amount generated.

### **Waste Stream 7**

Aqueous Brake Solution

How generated: Cleaning automotive parts.

Waste reduction methods: Implement teaching methods to reduce the amount of waste generated.

## Appendix B

### Glossary

**Container** – Any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

**Department** – The Tennessee Department of Environment and Conservation (formerly the Tennessee Department of Health and Environment).

**Designated Facility** – A hazardous waste treatment, storage, or disposal facility, which has been designated on the manifest by the generator. The facility must have interim status or have received a permit from the Environmental Protection Agency (EPA) or be similarly authorized/regulated under the laws and regulations of the State of Tennessee.

**Discharge/Hazardous Waste Discharge** – The accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water.

**Disposal** – The discharge, deposit, injection, dumping, spilling, leaking, or placing of any hazardous waste into or on any land, water, or air so that such hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters including ground waters.

**Disposal facility** – A facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure.

**Environmental Protection Agency** – The federal agency responsible for enforcement of policies and procedures governing the generation, handling, and disposal of hazardous waste.

**Generation** – The act or process of producing hazardous waste.

**Generator** – Any person, by site, whose act or process produces a hazardous waste or whose act first causes a hazardous waste to become subject to regulation.

**Hazardous Waste** – A hazardous waste as defined by the definition of beginning on page 1 of this manual.

**Manifest** – The shipping document originated and signed by the generator, which contains the information required.

**Conditionally Exempt Small Quantity Generator** – Generates less than 220 pounds in any month or does not accumulate more than 2,200 pounds of hazardous waste onsite before shipping offsite.

**Small Quantity Generator** – Generates more than 220 pounds but less than 2,200 pounds in any given month.

**Large Quantity Generator** – Generates more than 2,200 pounds of hazardous waste in any given month.

