

Keene State College

Hazardous Waste Management Procedures

February 2012



Contents

1. Overview	4
2. Introduction	6
2.1. Purpose	6
2.2. Applicability	6
2.3. Waste Minimization	6
2.4. Responsibilities	7
2.5. Training Plan	8
3. Identification of Hazardous Waste	11
4. Satellite Accumulation Areas and the Central Storage Area	13
5. Emergencies Involving Hazardous Waste	15
5.1. Minor Chemical Spill	15
5.2. Major Chemical Spill	16
6. Container Management	17
6.1. Container Compatibility	17
6.2. Labeling Hazardous Waste Containers	17
6.3. Empty Chemical Containers	18
7. Drain Disposal	19
7.1. Suitable for Drain Disposal	19
7.2. NOT Suitable for Drain Disposal	19
8. Waste Disposal Options	20
9. Specific Waste Streams	21
9.1. Acids and Bases	21
9.2. Acrylamide	21
9.3. Aerosol Cans	21
9.4. Batteries	21
9.5. Biological Waste (Biohazardous & Anatomical Wastes)	21
9.5.1. General Instructions	22
9.5.2. Infectious Waste	22
9.5.3. Biological Waste with Hazardous Chemicals	23
9.5.4. Animal Body Parts	23
9.6. Chemical Carcinogens and Mutagens	24
9.7. Chloroform/Phenol	24
9.8. Controlled Substances	24
9.9. Cyanides	24
9.10. Dioxane	24
9.11. Ether	24
9.12. Ethidium Bromide (EtBr) and Propidium Iodide	24

9.13. Formalin/Formaldehyde/Glutaraldehyde/Paraformaldehyde	25
9.14. Formamide	26
9.15. Gas Cylinders	26
9.16. Mercury	26
9.17. Oils	26
9.18. Organic Mercury (Alkyl and Aryl) Compounds	26
9.19. Osmium Tetroxide	26
9.20. Paint	27
9.21. Paint Thinners, Related Chemicals, Contaminated Rags.....	27
9.22. Perchloric Acid.....	27
9.23. Peroxide-Forming Compounds	27
9.24. Pesticides	28
9.25. Phenols/Chloroform	28
9.26. Photographic Solutions.....	28
9.27. Reactives.....	29
9.28. Sharps.....	29
9.29. Sodium Azide	30
9.30. Solvents	30
9.31. Staining Solutions.....	31
9.32. Scientific Equipment—Surplus, Repair or Disposal.....	31
9.33. Thinners	31
9.34. Universal Waste	31
9.35. Unknown	31
Appendix A—Spill Report Form	32
Appendix B—Chemicals Not Suitable For Drain Disposal	33
Appendix C—Hazardous Waste Codes	36
Table C-1 Compilation of P, U, D, and F Codes by Chemical	36
Table C-2 List of Generic Process Waste (F) Codes	52
Table C-3 New Hampshire Generic Process Wastes.....	54

1. OVERVIEW

Wastes are regulated by several state and federal agencies in New Hampshire:

- **Hazardous (Chemical) Waste:** The New Hampshire Department of Environmental Services' Hazardous Waste Rules (NHDES Env-Wm 110-1000) govern the management of chemical waste under the authorization of EPA.
- **Universal Waste:** Universal waste is a category of hazardous (chemical) waste that during accumulation and transport poses a low risk to health and environment. These wastes include batteries, lamps, antifreeze, cathode ray tubes, pesticides and mercury containing devices. The New Hampshire Department of Environmental Services' Universal Waste Rules (NHDES Env-Wm 1100) govern the management of universal waste.
- **Radioactive Waste:** The New Hampshire Radiological Health Section is authorized by the Nuclear Regulatory Commission to regulate handling and disposal of radioactive waste.
- **Biohazardous Waste:** Biohazardous waste is managed in accordance with NHDES Solid Waste Rules (Env-Sw 904 Infectious Waste).

Keene State College generates hazardous and universal waste only. Due to the large volume, Keene State College collects and recycles batteries and bulbs through the KSC ROCKS program. Please contact them at 358-2567 for more information on general recycling. If you have other types of hazardous waste, including mercury containing devices, pesticides, and antifreeze, please contact EHS at 358-2879. ***You may not bring personal wastes from home for disposal through Keene State College.***

Research involving the generation of radioactive waste and biohazardous waste are currently prohibited at Keene State College. If any faculty, staff, or researcher desires to change this designation, the Chemical and Biological Safety Committee must first be consulted to ensure that proper safety measures and disposal procedures are in place, prior to the start of experimental work or study.

The inappropriate disposal of potentially hazardous chemicals is illegal and can have serious repercussions. Keene State College is firmly committed to the safe and proper disposal of all its hazardous wastes. This document provides specific instructions for proper disposal of both hazardous and nonhazardous waste streams (acids/bases, chemicals, biological wastes, sharps, etc.). Under no circumstances should hazardous wastes be discharged into the environment in an effort to "save money", as a matter of "convenience", or due to carelessness in planning preparation, operations or design. Assistance in preventing or resolving such issues is always available from Environmental Health and Safety.

Please remember to label all of your containers regardless of size. Labeling of stock solutions is essential. All labels must include the commonly accepted name (NO CHEMICAL FORMULAS), special warnings, individual responsible and the date made. When scientists plan to leave the college, contact EHS to help you clean out the laboratory so that unknowns can be identified.

If you suspect or have knowledge of the inappropriate disposal of potentially hazardous materials or deviations from the following guidance, you should immediately report these concerns to the Environmental Health and Safety Manager. No employee of Keene State College shall be discriminated against or be subject to any reprisal for reporting suspected violations of the College's policies on the disposal of potentially hazardous materials. Anyone who handles chemicals should:

- Attend training when required;
- Read this document carefully and refer to it when questions arise. Help is always available from EHS;
- Never store more than 10 gallons of hazardous waste in your lab;
- Properly label all stock containers and hazardous waste containers;
- Keep waste containers closed except when adding waste;
- Never mix incompatible wastes (See Section 6);
- Use sturdy, chemically resistant containers to store your wastes;
- Segregate incompatible chemicals at all times—including incompatible wastes—Never store flammables with oxidizers or acids with caustics. Detailed procedures regarding general chemical safety are provided in the KSC *“Chemical and Biological Safety for the Sciences and Social Sciences”*.
- Use secondary containment bins for all hazardous liquids and liquid wastes;
- DO NOT dispose of hazardous wastes by evaporation, sewer or in the regular trash. **Evaporation is not an acceptable waste disposal method.** Only insignificant, residual amounts of liquid associated with labware or containers can be treated in this way;
- Notify EHS at 358-2879 in the event of a significant exposure or spill. -- Hazardous waste spills may activate the Keene State College Integrated Contingency Plan (ICP). See Section 5 for the abbreviated version of the ICP; and,
- Reduce, Reuse, Recycle!

2. INTRODUCTION

2.1. PURPOSE

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

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, and disposal of hazardous wastes. States can implement their own rules as long as they are at least as stringent as the Federal regulations. New Hampshire has its own specific hazardous waste rules (EMV- Wm 100 through 1000).

2.2. APPLICABILITY

Keene State College must comply with the hazardous waste regulations because we generate small quantities of hazardous waste from the chemistry/biology processes, printmaking shop/art studio work, and various other activities. Examples of potential hazardous wastes include spent acids, used solvents, used flammable liquids, discarded paints, and spill cleanup residues and materials. Personnel who generate hazardous wastes that are accumulated in our Satellite Accumulation Areas (see Section 4) are referred to as "generators".

2.3. WASTE MINIMIZATION

One of the goals of RCRA is to reduce or eliminate waste. The three R's of waste minimization are:

- **Rethinking** means thinking about 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 the generation of hazardous waste in the process solves the problem of disposal.
- **Reducing** means ordering only what you need and using what you order. Do not order drum quantities when one liter will do, and try to order only what you can reasonably use in six months. 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.
- **Recycling** is part of the solution to the solid waste problem. Participate in Keene State College's recycling program.

Consider participating in Keene State College's Sustainability Council to find more ways to reduce both solid and hazardous waste.

Waste minimization is any action that decreases the amount of hazardous waste generated or reduces the toxicity of the waste generated. Researchers are encouraged to limit the amount of chemicals purchased. It is easier to order additional chemicals than to dispose of unwanted or unused surplus chemicals. **Remember—on average, the cost of disposal is at least 10 times higher than the cost of the chemical.** In some cases there are no acceptable waste disposal options.

Controlling the increasing costs of proper chemical waste disposal and the inherent hazards of storing and working with hazardous chemicals requires re-thinking many of the ways that we purchase, handle, and store laboratory chemicals. Waste minimization benefits you, the college, and the environment by lowering costs, reducing potential health hazards, reducing potential long-term liabilities for disposal, promoting environmental ethics, and preventing pollution.

Here are some tips to reduce waste:

- Maintain good housekeeping in your laboratory or work location;
- Clearly mark the contents of all chemical containers;
- Keep an up-to-date inventory of all hazardous materials used in your lab or work location;
- Examine all wastes generated and ask if they could be minimized and how;
- Substitute less hazardous chemicals whenever possible;
- Ask others in your department if they could use your unwanted chemicals;
- Reduce the scale of processes so that less waste is generated;
- Treat or destroy hazardous by-products as the last step in experiments; and,
- Include waste minimization when planning experiments or demonstrations.

2.4. RESPONSIBILITIES

- The Manager of Environmental Health and Safety (EHS) is the primary hazardous waste coordinator for Keene State College (certified by the State of New Hampshire). The EHS Manager is responsible for the following:
- Ensuring that the required information is contained in this procedure;
- Coordinating hazardous waste pickups and signing the external waste manifest;
- Inspecting satellite accumulation areas and the central storage area;
- Providing hazardous waste/RCRA training and technical assistance to all employees who work with hazardous chemicals;
- Notifying outside agencies in the event of a hazardous waste incident;
- Maintain copies of all hazardous waste documentation, including manifests, training materials, and documentation of training; and,

- Maintaining and updating the Integrated Contingency Plan.

The Recycling Coordinator is responsible for the management and disposal of universal waste.

Faculty and staff who have the need to handle or use hazardous materials are responsible for:

- attending required trainings;
- following this procedure and knowing how to appropriately label, containerize, and manage hazardous waste in their work areas;
- keeping hazardous wastes appropriately segregated and labeled at all times;
- knowing the appropriate action, with respect to their training level, to be taken in the event of a leak or discharge of hazardous waste; and,
- reporting all incidents, accidents, potential chemical exposures and near miss situations to department supervisors and the EHS manager (358-2879).

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

2.5. TRAINING PLAN

Keene State College is a full quantity hazardous waste generator and therefore must comply with the requirements of OSHA 1910.120, New Hampshire ENV-WM 509.02, and EPA 40 CFR 265.16 which specify the standards for personnel training as described in this section. All people (faculty, staff, and students) who have the need to handle or use hazardous materials are required to have hazardous material and safety training. There are different training requirements depending on the individual's specific responsibilities as specified in the following table:

Job Title	Job Description	Employees	Training Requirements
Hazardous Waste Coordinator	• Coordinates the collection and disposal of hazardous waste throughout Campus • Works with other departments to insure their compliance with hazardous waste regulations • Maintains hazardous waste records and Integrated Contingency Plan • Responsible for periodic inspections of hazardous waste accumulation areas.	Manager, Environmental Health and Safety	• Annual 8 hour certification (State of New Hampshire) • Hazwoper (40 hour and annual 8 hour training) • DOT training
Recycling Coordinator	• Coordinates all campus related recycling tasks • Responsible for universal waste management	Recycling Coordinator	Annual 8 hour certification

SAA Operators	• Art faculty who work with chemicals (painting, printmaking, photography, ceramics, sculpture) • Science Faculty who work with chemicals (biology, chemistry, environmental science, geology, physics) • Technology, Design, and Safety faculty who work with chemicals (SPDI lab, woodworking, industrial hygiene) • Nursing faculty who work with chemicals • Automotive mechanics	Any faculty and/or staff that work with hazardous chemicals	Initial RCRA Training, Refresher Training every three years
Spill Response	Physical Plant/Grounds Campus Safety	Heating Plant Plumbers Grounds Crew Recycling Crew Campus Safety	Spill Response
Emergency Evacuation	All staff	All staff	Emergency Evacuation

Initial RCRA training must be completed within six months of hire or job assignment by all satellite accumulation area (SAA) operators, with refresher training at least once every three years. RCRA training for SAA operators shall cover the following topics:

- Hazard Communication
- Regulatory Requirements
 - RCRA
 - Hazardous waste determinations
 - Container labeling, management and hazardous waste storage requirements
 - Inspections
 - Waste minimization
 - Department of Transportation
- Emergency Response Procedures/Contingency Plan¹
 - Fires/Explosions
 - Spills
 - Reporting requirements

Campus personnel involved in the direct handling of oil will receive training on the following topics:

- Proper operation and maintenance of equipment to prevent discharges
- Emergency procedures in the event of a spill or leak
- Applicable pollution control laws and regulations

¹ Keene State College does not have a trained emergency response team. In the event of a hazardous materials or oil spill, the Emergency Coordinator (EHS Manager) would assess the extent of the hazard and contact the Keene Fire Department and the contracted emergency response vendor. Depending on the size and nature of the incident, the Coordinator would also contact outside local, state, and Federal agencies as required by the applicable regulations.

- General campus operation, and,
- General contents of oil spill prevention and control countermeasures (SPCC) regulations

At least one individual listed as the contact for the central hazardous waste storage area shall undergo the Hazardous Waste Coordinator Certification (HWCC) annual training provided by the State of New Hampshire. Some of the topics covered in the HWCC training include:

- Hazardous waste determinations and storage requirements
- Generator status
- Inspections
- Contingency plans and training
- Reporting requirements
- Waste minimization

Copies of all training materials and documentation of training shall be kept for at least three years from the date the employee last worked at the facility. Training records on current personnel must be kept until closure of the facility.

3. IDENTIFICATION OF HAZARDOUS WASTE

Hazardous wastes include non-radioactive chemicals and solid waste contaminated with hazardous chemicals, such as:

- Waste and opened surplus chemicals;
- Expired or off-specification chemicals;
- Carcinogens;
- Prescription drugs and controlled substances;
- Empty drums and other containers with a capacity of 10 gallons and greater;
- Thermometers and other items containing mercury;
- Non-returnable gas cylinders and lecture bottles or pressure containing vessels;
- Spill residuals and clean-up materials (contaminated rags and absorbents);
- Photographic film processing solutions;
- Used oil – motor, vacuum pump, lubricating oils;
- Pesticides;
- Used solvents;
- Batteries;
- Paint, paint thinners, brush cleaners, linseed oil, thinner-contaminated rags; and
- Heavy metal containing waste or products (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver).

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 waste?** A waste is anything that is SPENT, DISCARDED, or ABANDONED. It can be a solid, liquid, semi-solid, or gas.
2. **Is the material exempt from the regulations?** Some materials are exempt from the regulations such as used oil filters that are drained, household hazardous wastes, scrap metal, used CFC refrigerants, and empty containers.
3. **Is the material a listed waste?** See Appendix C for lists of the following New Hampshire waste codes. Table B-1 contains acutely hazardous waste (P codes), toxic hazardous wastes (U codes), and listed characteristic wastes (D codes), Table B-2 has the EPA Generic Industrial Process Waste (F code), and Table B-3 lists the NH Generic Industrial Process Waste (NH code). Keene State College does not produce industrial process wastes (K code). However, if needed this information can be accessed at: http://des.nh.gov/organization/commissioner/legal/rules/documents/env-hw_400.pdf;
4. **Does the material exhibit one or more of the following hazardous characteristics?**
 - Ignitability (D001):
 - Liquids with a flash point less than 140° F (60 °C);
 - Solids that can ignite under standard conditions; or

- Ignitable compressed gases or oxidizers.
- -Corrosivity (D002):
 - Liquids that have a pH less than or equal to 2.0 or greater than or equal to 12.5; or
 - Liquids that corrode steel at a rate greater than 0.25 inches per year at a test temperature.
- -Reactivity (D003):
 - Contains cyanides or sulfides which can generate toxic fumes if exposed to pH conditions between 2.0 and 12.5;
 - React violently to form potentially explosive mixtures or can generate toxic gases if mixed with water;
 - Are normally unstable and readily undergo violent change without detonating;
 - Can detonate or explode if heated or exposed to a strong igniting source;
 - Can detonate or explode under standard conditions; or
 - Are classified by the Federal Department of Transportation as explosives.
- -Toxicity (all other D codes):
 - 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 listed substances (25 organic compounds, eight metals, four pesticides and two herbicides) in concentrations equal to or greater than the specified limits (see Table B-1).

If the material meets any of the above criteria in 3 or 4, it must be managed as a hazardous waste.

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.

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.

Residues left in containers may be considered hazardous waste. Call the EHS Manager at 358-2879 for guidance.

Contact EHS if the waste needs to be moved to the central storage area or if it needs an immediate pickup by an outside vendor. Hazardous waste pickups are usually scheduled at the end of each semester, and once during the summer.

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 358-2879.

Information on the proper disposal of other waste streams can be found in Section 9.

4. SATELLITE ACCUMULATION AREAS AND THE CENTRAL STORAGE AREA

Any location where small amounts of hazardous waste are temporarily stored prior to pick up by EHS is called a "Satellite Accumulation Area" or SAA. SAA's at Keene State College are listed in Table 1. The central storage area (CSA), which is located next to the northwest entrance of the Putnam Science Center, is a steel shed with locked doors.

Certain special requirements must be met including: periodic 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 must be posted in the SAA.

The SAA must be inspected monthly if the volume is greater than 10 gallons. The CSA must be inspected weekly. Inspection forms for the CSA and SAAs are on file in the EHS office.

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

Table 1. SAAs and CSA

Building	Room	Description	Faculty/staff Contact	Office
Science Center	235	Environmental Prep Lab (inactive)	Tim Allen	358 2571
Science Center	203	General Chemistry Lab	Renate Gebauer	358 2577
Science Center	205	Organic Prep	Jeudi Davis	358 2557
Science Center	208	Organic Prep	Denise Junge	358 2907
Science Center	228	Research Lab - Organic Chemistry	Jeudi Davis	358 2557
Science Center	233	Research Lab Chemistry	Denise Junge	358 2907
Science Center	307	Biology Prep Room	Jeudi Davis	358 2557
Science Center	336	Organismal Research	Jim Kraly	358-2849
Redfern Arts	303	Printmaking Shop	Katie Featherston	358 2060
Redfern Arts	317	Paint Room	Kara McKeton	358 2598
Redfern Arts	305	Photography Dark Room	Katie Featherston	358 2060
Elliot Hall	60	EHS office	Kara McKeton	358 2598
Whitcomb Building		Vehicle Maintenance	John Roberts	358 2195
Hazardous Waste Shed		Science Center (next to north entrance)	Peter Roos	358 2194
			John Roberts	358 2195
			Jonathon Gitelson	358-2110
			John Roberts	358 2195
			Sylvie Rice	358 2879
			Frank Mazzola	358 2243
			Mike Fuller	358 2701
			Sylvie Rice	358 2879
			Sylvie Rice	358 2879
			Frank Mazzola	358 2243
			Jay Kahn	358 2114
			Sylvie Rice	358 2879
			Frank Mazzola	358 2243
			Jay Kahn	358 2114
Additional Emergency Contacts - in event of chemical emergency call:				
Science Center/Chemical Emergency			Gordon Leversee	358 2545
			Sylvie Rice	358 2879
			Jay Kahn	358 2114
All other locations on campus (chemical emergency)			Sylvie Rice	358 2879
			Frank Mazzola	358 2243
			Jay Kahn	358 2114

5. EMERGENCIES INVOLVING HAZARDOUS WASTE

The *Keene State College Integrated Contingency Plan* contains detailed response actions necessary to protect human health and the environment during a hazardous substance discharge at Keene State College and should be referred to in the event of an emergency involving hazardous waste.

In the event of an emergency, 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, or if there is any risk of fire, dial 911 or Campus Safety (358-2228) immediately!**
5. Initiate mitigation actions, if safe to do so, and if it is within your education and experience/training (i.e., a chemistry professor performing a small spill cleanup).
6. Do not assume that gases or vapors are harmless due to lack of smell.

5.1. MINOR CHEMICAL SPILL

A minor chemical spill is considered one that staff or faculty are capable of handling safely without assistance and where there is no injury or threat of imminent injury. Typically, a minor spill would be considered less than 0.5 liter (as a rule of thumb) of a material that is not highly toxic. Spill kits are available at each SAA and should only be used by those qualified staff or faculty with knowledge of the properties and hazards posed by the chemical, and any potential dangers posed by the location of the spill. Spill cleanup materials should be segregated for hazardous waste disposal. EHS should be contacted for advice and assistance at 358 2879.

The basic procedure is as follows:

- Only qualified persons knowledgeable of the material(s) spilled should perform the cleanup;
- Alert all persons nearby spill area;
- Use eyewash or safety shower if needed to decontaminate;
- Use spill kit to clean up and segregate clean up materials for hazardous waste disposal.
- Use proper personal protective equipment, which at a minimum will include chemical resistant gloves and safety glasses;
- Decontaminate spill area with water or soap/water mixture if a non-reactive chemical;
- Wash hands thoroughly and seek medical attention if necessary; and,
- Notify EHS 358-2879, complete the Spill Report Form (Appendix A) and return it to EHS (mailstop 2502).

5.2. MAJOR CHEMICAL SPILL

All other spills not described above are considered major spills. Keene State College does not have an on-site emergency response team; therefore, our primary response is to evacuate, call 358 –2228 or 911, and protect human health.

The basic procedure is as follows:

- Avoid breathing vapors of spilled material;
- If possible and safe to do so, turn off any ignition source or gas emergency shutoff valve;
- Remove any contaminated persons from spill area and decontaminate via eyewash or safety shower. The use of a safety shower is never a mistake – do not be reluctant to use the shower in the event of personal chemical contamination;
- Evacuate the area and close the door to the lab;
- Post a sign stating “Hazard – Do Not Enter” on the exterior surface of the door once all personnel are evacuated, if safe to do so;
- Call 358 –2228 or 911 and notify the operator of the location, nature and volume of the spill;
- Contact Campus Safety to initiate internal notifications, including EHS. EHS/Campus Safety or Keene HazMat should be directed to contact Clean Harbors for spill clean up and disposal;
- **If there is a threat to human health or the environment or when there can be off-site impact, any incident involving hazardous waste or material must be reported immediately to the NHDES (603-271-3899 or 603-223-4381, and the NRC (800-424-8802).** 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. A courtesy call should also be made to the Environmental Protection Agency (EPA) Region I Spill Response (617-918-1279); and,
- If a spill discharges to the sanitary sewer, the spill must be reported immediately to the Keene Industrial Pretreatment Coordinator (357-9836, ext.6504) or Mutual Aid (911) if after hours.
- Notify EHS 358-2879, complete the Spill Report Form (Appendix A) and return it to EHS (mailstop 2502).

6. 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;
- Containers must be clearly marked, "Hazardous Waste" that includes the contents (chemical name, not abbreviation), percent of contents, and date container filled. The label must be unobscured; and,
- The waste containers must be kept in secondary containment bins (for liquids) and separated from incompatibles.

6.1. CONTAINER COMPATIBILITY

The container used for hazardous waste collection must be compatible with the waste and must not contain residues of incompatible materials. The following table shows general chemical categories and compatible container types:

Chemical Category	Container Type
Mineral Acids	Plastic
Bases	Plastic
Oxidizers	Glass
Organics, including acetic acid	Glass

Take special care in choosing containers for the following wastes:

- **Nitric Acid:** reacts with organics (including acetic acid) to produce heat and gas. If product containers for organics are used to collect nitric acid, be sure to rinse thoroughly to avoid potential over-pressurization and subsequent burst of the container.
- **Perchloric Acid and Organic Peroxides:** highly reactive with organics and organic material, such as wood. May also react with metals.
- **Hydrofluoric Acid:** Dissolves glass containers.

The following web site (<http://www.coleparmer.com/techinfo/chemcomp.asp>) has useful information about container compatibility:

6.2. LABELING HAZARDOUS WASTE CONTAINERS

- Use the Red & White "Hazardous Waste" label. Call EHS at ext. 8 23579 if you need more labels;
- Segregate wastes into containers based on chemical families and DOT classifications: corrosives, flammables, compressed gases, carcinogens, or 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;

- **List the top three most hazardous constituents in the container in order of concentration first, then list all other chemical constituents.** If it is in a solution of water, write the top three hazardous constituents “in water”. Also list any other hazardous chemicals. 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. **DO NOT USE CHEMICAL FORMULAS!**
- List the appropriate EPA waste code (see Appendix C or go to the following website: <http://www.des.state.nh.us/rules/hwrules.pdf>). Write this appropriate chemical information on the Hazardous Waste Label. If you are not sure, or need help with this process, contact the EHS Manager; and,
- 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 a 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!

6.3. EMPTY CHEMICAL CONTAINERS

- Only de minimus amounts of the chemical may remain. Thoroughly empty all contents before rinsing. If solids or sludge remain, dispose of as hazardous waste;
- All chemical containers must be thoroughly rinsed and air dried. Collect first rinse as hazardous waste if material is defined as highly toxic (P waste) or has an $LD_{50} < 50$ mg/kg, or put a hazardous waste label on the empty container and put it in the SAA for proper waste disposal.
- Labels must be obliterated, removed or thoroughly defaced before disposal as solid waste; and,
- Rinsed and dried glass bottles must be placed in the containers designated for glass disposal.

7. DRAIN DISPOSAL

The range of substances that can be potentially hazardous is enormous. Almost any substance can be a hazardous waste if it is disposed of in large quantities or in high concentrations.

In general, a solution or suspension that contains a substance that is not soluble should not be poured down the drain. However, if the water insoluble material comprises less than about 2% of the mixture, drain disposal is usually acceptable because the small quantity of water insoluble material will be well dispersed in the aqueous effluent.

7.1. SUITABLE FOR DRAIN DISPOSAL

- Chemicals of little or no hazard in dilute aqueous solution are suitable for drain disposal. This includes most normal biological metabolites and non-toxic cellular constituents (proteins, nucleic acids, carbohydrates, soluble fats, and their precursors and catabolites). The pH must always be between 5.5 and 12;
- Common sugars, amino acids and non-toxic common salts (NaCl, MgCl₂, etc.);
- Some dilute acids and bases (pH between 5.5 and 12). Contact EHS for assistance; and,
- Biological buffers with pH between 5.5 and 12 (phosphate buffers, saline, Tris, etc.).

7.2. NOT SUITABLE FOR DRAIN DISPOSAL

- Inherently toxic, malodorous, or lachrymatory chemicals;
- Solutions containing heavy metals;
- Organic solvents—methanol, acetone, hexane, chloroform;
- Poisons, carcinogens, teratogens, or embryotoxins;
- Strong acids and bases (either in pH extremes/concentrations);
- Chromic/sulfuric acid cleaning solutions;
- Photographic fixer;
- Motor oil, gasoline, degreasing solutions, antifreeze or other automotive fluid;
- Paint and paint thinner;
- Pesticides;
- Dyes and stains;
- Sodium azide; and,
- Flammable liquids (flash point < 140°F) of any type, including solutions of ethanol (example – 10% ethanol has a flash point of <140 °F) or solvents.

See Appendix B for a partial listing of other chemicals not suitable for drain disposal.

8. WASTE DISPOSAL OPTIONS

There are several options for preparing specific wastes for disposal, including:

- **Original Container (Option A):** If a chemical is to be discarded in the original container, print "WASTE:" on the label in large, easily recognized letters. If you have small containers of the same product, you can place them in a reclosable plastic bag. Attach a completed Hazardous Waste Label.
- **Container Other Than Original Container (Option B):** If a chemical is placed in something other than the original container, mark "XXX" through the label. Attach a completed Hazardous Waste Label.
- **Chemically Contaminated Solid Waste (Option C):** Obtain a plastic pail with lid (available from the recycling area). Label the outside of the pail with a completed EHS Hazardous Waste Label. Line the pail with a clear plastic bag. The lid must be on the pail except when adding contents to the bag. Never use black plastic or biohazard bags to collect chemical wastes.
- **Solvents (Option D):** Solvents must be collected in containers identical to the original. Complete and attach a hazardous waste label to the container. Each time you add waste to the container, note this on the waste tag. Please use pencil as ink will smudge. Fill the container no further than the shoulder. DO NOT OVERFILL. Absolutely no mercury or other heavy metals are to be mixed with solvent waste. Store waste solvents away from heat and other potential sources of ignition.

9. SPECIFIC WASTE STREAMS

9.1. ACIDS AND BASES

Collect concentrated acids and bases in original containers whenever possible. This includes nitric, hydrofluoric, sulfuric, glacial acetic, hydrochloric, sodium hydroxide, and ammonium hydroxide. Label with a completed hazardous waste label. Hydrofluoric acid etches glass and must be collected in plastic containers.²

Dilute acid and base solutions may be disposed of down a lab sink, with copious amounts of water **provided that they are less than 10% (V/V) concentrations with a pH between 5.5 and 12**. No solvent or metal contamination is permitted for drain disposal.

Note: The use of chromic acid or Chromerge® is strongly discouraged. Contact EHS for recommendations on possible alternatives. If used, these cleaning solutions must be collected through the third rinse.

9.2. ACRYLAMIDE

Unused/unwanted acrylamide powder or opened liquid must be disposed of in accordance with Option A (label with a completed hazardous waste label).

Use Option B to dispose of large amounts of liquid unpolymerized acrylamide.

Acrylamide gels that contain ethidium bromide must be placed in a lined plastic bucket with lid (Option C).

9.3. AEROSOL CANS

Aerosol cans may be disposed of as non-hazardous waste if they are completely empty. If contents or pressure remains, contact EHS for proper disposal.

9.4. BATTERIES

Dispose of all types of batteries (automotive, lead-acid, mercury, lithium-containing, ordinary household, and rechargeable) through R.O.C.K.S or EHS. There is no charge for disposal of batteries.

9.5. BIOLOGICAL WASTE (BIOHAZARDOUS & ANATOMICAL WASTES)

Biological wastes include biological or biomedical wastes including bacteriology, cell culture, recombinant DNA, pathology, anatomy or animal sciences where potentially infectious agents MAY or MAY NOT be present. The School of Sciences and Social Sciences at Keene State **College does not typically generate infectious waste, and therefore does not meet the definition of needing biohazardous waste handling procedures**. However, bacteria contaminated materials, while not considered infectious or biohazardous waste by regulatory

² The use of hydrofluoric acid is strongly discouraged at KSC. The KSC Chemical and Biological Safety Committee must first be consulted to ensure proper safety measures are in place, prior to start of experimental work or study.

definitions, can still cause harm to human health, such as cleaning and janitorial staff. Therefore biological materials must be disinfected prior to disposal.

Biological wastes fall into two categories: sharps and other waste. While not considered infectious, used sharps (i.e., pipette tips) should be segregated and placed in a solid, rigid plastic container labeled “**Non infectious Sharps**” and “**Not for Recycling**”. Care should be taken to place all needles and syringes and other sharps in puncture proof containers. All biological waste must be decontaminated by autoclaving, or chemical disinfection. Once this material has been properly decontaminated by autoclaving or chemical disinfection, it may be disposed as regular trash.

DO NOT USE RED BIOHAZARDOUS LABELS or LABELED BAGS FOR DISPOSAL OF BIOLOGICAL LAB WASTE. It is acceptable to use a red colored bag (WITHOUT THE LABEL) to collect waste. HOWEVER THIS BAG MUST THEN BE PLACED INTO A DARK BAG AFTER AUTOCLAVING FOR TRASH DISPOSAL. **NEVER THROW A RED BAG INTO THE SOLID WASTE RECEPTACLE – THIS IMPLIES BIOHAZARDOUS WASTE.**

Important: Any existing biohazard label should be removed from decontaminated material before disposal with regular trash.

9.5.1. GENERAL INSTRUCTIONS

- Never place items such as soda cans, paper, cardboard, bottles, etc. in biohazard bags. Remember, once combined they cannot be separated;
- Hazardous waste must never go into a biohazard bag. This includes labware associated with microfuge amounts of hazardous chemicals. When in doubt, please call EHS first;
- Do not leave unattended biohazardous waste in hallways, equipment rooms, or areas with public access;
- Never place autoclave bags directly on the floor. Place bags in secondary container/tray before and after autoclaving;
- Clean spills from leaking autoclave bags immediately with a suitable disinfectant (a fresh 1:10 dilution of bleach and water works well for most). Chemically decontaminate liquids with bleach or Wescodyne® for 30 minutes before pouring the solution down the drain. A final concentration of 5-10% disinfectant to liquid is usually sufficient for most situations; and,
- Do not autoclave blood or other body fluids as they tend to congeal and make a mess—chemically decontaminate instead.

Using appropriate collection (autoclave bags in plastic pails) and decontamination methods (chemical disinfection, autoclaving), labs can render most biological waste (biohazardous waste) non-hazardous before collection and removal.

9.5.2. INFECTIOUS WASTE

Infectious waste includes, but is not limited to, cultures and stocks of infectious agents, pathological wastes, waste human blood and blood products, sharps used in patient and animal

care, laboratory wastes, and dialysis waste. The following questions will help you to determine whether your biological waste is infectious waste:

- Does the waste contain medical sharps (e.g., hypodermic needles, syringe with needle, Pasteur pipettes, or scalpel blades)?
- Does the waste contain non-medical sharps that have been in contact with infectious material (e.g. plastic pipette tips contaminated with human blood)?
- Does the waste contain infectious human material (e.g. human blood, human blood products, human tissues, or human cell lines)?
- Does the waste contain animal carcasses, tissues or organs that have been contaminated with infectious organisms, used in the production of biological, or used in the testing of pharmaceuticals?
- Does the waste contain cultures of infectious organisms, genetically altered living organisms, live or attenuated vaccines, or recombinant DNA organism?
- Does the waste contain infectious or potentially infectious organisms, devices contaminated with infectious organisms, or equipment contaminated with infectious organisms?

If the answers to the above questions are no, you may dispose of the waste in the trash. If not, be sure to label the waste with a biohazard label or bag and contact EHS for proper disposal. Alternatively, the following procedures can be followed for proper treatment and disposal:

1. Collect the infectious waste in a clear, unlabeled, high strength polymer autoclave bag (imprinted with a process indicator if possible);
2. Remove all biohazard labels. Ensure that words like “pathogenic,” “infectious” or “biohazardous” have been removed from all materials and equipment;
3. Autoclave the waste in a spore-tested autoclave at the approved temperature for the appropriate time;
4. Allow the waste to cool;
5. Place the autoclave bag into a black polypropylene trash bag. Ensure that the contents do not puncture the trash bags;
6. Put the bag into a second black polypropylene trash bag; and,
7. Place the bags in a dumpster.

9.5.3. BIOLOGICAL WASTE WITH HAZARDOUS CHEMICALS

Any waste that contains any hazardous chemicals (e.g., formaldehyde, polyacrylamide, ethidium bromide) must be disposed of as a hazardous waste. Never autoclave FLAMMABLE, REACTIVE, CORROSIVE, TOXIC or RADIOACTIVE MATERIALS.

9.5.4. ANIMAL BODY PARTS

Animal body parts should be double-bagged in black plastic trash bags and disposed of in the dumpsters, provided they have not been preserved with formaldehyde.

9.6. CHEMICAL CARCINOGENS AND MUTAGENS

If original containers are to be discarded, label with a completed hazardous waste label (Option A). For associated contaminated disposable labware, place in lined plastic bucket (Option C). Triple rinse empty containers and collect all rinsate as hazardous waste. Alternatively, empty containers can be properly labeled and disposed of as hazardous waste.

9.7. CHLOROFORM/PHENOL

Collect liquid mixtures using waste collection Option D. Note the percentage of each. Chloroform/phenol contaminated labware, such as pipette tips and Eppendorf tubes, with small volumes of liquid must be collected using waste collection Option C (mini-prep tubes can be included in this waste stream and do not need to be emptied of contents prior to disposing into the bag, as long as they are capped). **It is not acceptable to throw this type of waste into general trash containers or autoclave in biohazard bags.**

9.8. CONTROLLED SUBSTANCES

DEA-regulated drugs must be kept under lock and key security. If you have a DEA license, you must register this number with EHS. Contact EHS if you want to dispose of expired drugs or unwanted controlled substances.

9.9. CYANIDES

Cyanides, nitrites and sulfides are among the most toxic and rapidly acting substances found in a chemical lab. Symptoms of toxicity occur if these materials are swallowed, inhaled, or absorbed through the skin. Keep stored in locked and secure locations. Always use secondary containers to help prevent breaks or spills. Use waste collection Option A or B for disposal.

9.10. DIOXANE

Dioxane (1,4-Dioxane) is a highly flammable liquid and can form potentially explosive peroxides upon long exposure to air. Containers of dioxane must be dated when opened and tested periodically for the presence of peroxides. Dioxane must be collected using waste collection Option D. If old, undated dioxane is found, contact EHS immediately.

9.11. ETHER

Ether is a highly flammable liquid and can form potentially explosive peroxides over time. Containers of ether must be dated when opened and tested periodically for the presence of peroxides. Ether must be collected using waste collection Option D.

Ether cans have expiration dates on the label. **Dispose of cans before they expire.** If old, undated ether is found, contact EHS immediately.

9.12. ETHIDIUM BROMIDE (EtBr) AND PROPIDIUM IODIDE

Aqueous solutions of 5 micrograms/milliliter or less must be treated by using Schleicher & Schuell Extractor device. This includes staining and running buffer solutions. Follow the manufacturer's instructions. After filtration, the decontaminated filtrate can be safely discarded down the drain (pH must be between 5.5 and 12). The filters are discarded by using waste

collection Option C. Experience with these filters has shown that they will become blocked if agarose or other solids are present in the liquid—pre-filter large solids first.

Solutions of greater than 5 micrograms/milliliter such as stock solutions and ethidium bromide mixed with cesium chloride and/or alcohol must be disposed using waste collection Option B.

Ethidium bromide/propidium iodide contaminated disposable labware can be disposed using waste collection Option B.

Never use bleach to treat EtBr wastes. This actually increases the toxicity.

Note: SYBERSafe™ gel is sold as a safer alternative to ethidium bromide. It is less toxic and the stain and gels can be disposed as regular waste. SYBERSafe™ can be used in the same manner as solutions of EtBr. Tests indicate that it is just as, if not more than, sensitive as EtBr. It can also be read in the same manner with a standard UV or visible light trans-illuminator, or laser based scanner. SYBERSafe™ is provided ready to use as a concentrate—it can be cast directly in the gel or used as a post stain. It may also be used to stain RNA in gels. Recommended storage time is six months at room temperature. To learn more, visit <http://www.probes.com/products/sybrsafe>.

9.13. FORMALIN/FORMALDEHYDE/GLUTARALDEHYDE/PARAFORMALDEHYDE

Unwanted or unused formalin or formaldehyde must be disposed through waste disposal Option A. If you have a large number of specimens preserved in formalin that you wish to dispose of, contact EHS at 358-2879 to discuss disposal options.

Note: The use of so-called “cold sterilants” such as Cidex® or other higher M.W. aldehydes such as glutaraldehyde is strongly discouraged for both occupational and environmental reasons.

Carosafe™ is a preservative and holding solution for biological specimens. It contains no formaldehyde and is not a tissue fixative. Most specimens in Carosafe™ are first preserved with a formalin solution and then washed and placed in formaldehyde-free Carosafe™. This produces a formalin-preserved specimen that, when dissected, minimizes exposure to formaldehyde. To learn more visit

<http://www.carolina.com/category/teacher+resources/lab+safety/specimens+in+carosafe.do>

Carolina's Perfect Solution® is another alternative to traditional formaldehyde-preserved specimens. Independent, certified laboratory analyses of specimens fixed in Carolina's Perfect Solution® have found them to be nontoxic and free of dangerous off-gassing. Classrooms and labs using Carolina's Perfect Solution® specimens do not require specialized ventilation. However, some active ventilation is recommended when working with any preserved specimens or chemicals. The safe nature of Carolina's Perfect Solution® also means that in most localities there are no mandated disposal requirements. Go to: to learn more:

http://www.carolina.com/category/teacher+resources/classroom+activities/carolina+perfect+solution+comparison.do?s_cid=em_ct_031908.

9.14. FORMAMIDE

Formamide must be collected using waste collection Option B.

9.15. GAS CYLINDERS

Compressed gases are among the most problematic wastes to handle and dispose. Avoid buying gas cylinders if at all possible. Buy only what you need, use all you buy and return cylinders to the gas vendors if empty or not routinely used. Lecture bottles can be a serious disposal problem. If at all possible, return these to the manufacturer or supplier for reuse. If not, dispose of through EHS. Label integrity is essential. Ensure that the label on each cylinder is legible. Keep the valve protection cap on the cylinder when not in use. When the cylinder is in use, keep this valve cap near the cylinder so that it does not get misplaced. Attach a hazardous waste label when the cylinder is to be disposed.

Note: Never dispose of the contents of a compressed gas cylinder by releasing outdoors or in a fume hood, unless it is an inert gas.

9.16. MERCURY

Mercury and mercury compounds are especially hazardous. If spilled, elemental mercury in cracks of lab benches or floor tiles may pose an exposure hazard for years. Few hazardous waste facilities accept mercury. Therefore, it is essential that the use of mercury be avoided. Substitute mercury thermometers with non-mercury alternatives or electronic devices to measure temperature and pressure.

All mercury compounds and materials must be disposed through EHS. For mercury spills, contact EHS at 358-2879.

9.17. OILS

Uncontaminated instrument and machine oils such as centrifuge, diffusion pump and vacuum pump oils must be collected in plastic containers and labeled with a hazardous waste label.

Note: All vacuum pumps must be emptied of oil prior to disposal. If sending them out or to the shop for service, they must be rinsed and purged with clean oil.

9.18. ORGANIC MERCURY (ALKYL AND ARYL) COMPOUNDS

Organic mercury compounds pose special hazards in the laboratory and are strongly discouraged for both occupational and environmental reasons. Alkyl mercury compounds require prior approval from EHS before purchase or use. Contact EHS for assistance in planning, use and disposal before using these compounds.

9.19. OSMIUM TETROXIDE

Osmium tetroxide solutions must be disposed of using waste collection Option A or B. The osmium tetroxide can be converted to a less volatile (safer) form by adding corn oil to the solution and shaking. This method takes advantage of the double bonds of unsaturated oil to form a cyclic osmic ester. The reaction may be slow, as corn oil is not readily miscible in water,

but it's easy and it works. Osmium tetroxide contaminated labware must be disposed of by using waste collection Option C.

9.20. PAINT

Paint can be a significant potential source of pollution in our landfills. Dispose of all oil-based paints through EHS. Old, unwanted full cans of latex paints must also be disposed of through EHS. Opened, nearly empty cans of latex paint can be allowed to air dry until solid, then be disposed as non-hazardous waste.

9.21. PAINT THINNERS, RELATED CHEMICALS, CONTAMINATED RAGS

Chemicals associated with the use of paint thinner, brush cleaners, linseed oil, etc. must be collected for disposal by EHS. Rags and paper towels contaminated with paint thinner or related chemicals are hazardous waste. Contact EHS for more information on collection options and disposal.

9.22. PERCHLORIC ACID

Perchloric acid is prohibited at Keene State College, as it can only be used in a special perchloric acid hood which we do not have at KSC. Consult EHS regarding perchloric acid use.

Perchloric acid reacts violently with many oxidizable substances. The anhydrous (dehydrated) acid presents a serious explosion hazard. It is unstable and can decompose explosively at ordinary temperatures or in contact with many organic compounds. Amounts in labs must be limited to 1 pound or less. Use waste collection Option A or B for disposal.

Many heavy metal perchlorates and organic perchlorate salts are extremely sensitive explosives; the ammonium, alkali metal, and alkali earth perchlorates are somewhat less hazardous. Mixtures of perchlorates with many oxidizable substances are explosive.

Cold 70% perchloric acid is a strong acid but is not considered to be a strong oxidizing agent; however, more concentrated solutions are good oxidizers. Work with >85% perchloric acid requires special precautions and should be carried out only by specially trained personnel and in specially designed fume hoods.

Perchlorate compounds pose special hazards in the laboratory and are strongly discouraged for both occupational and environmental reasons. Perchlorate use requires prior approval from EHS before purchase or use. Contact EHS for assistance in planning, use and disposal before using these compounds.

9.23. PEROXIDE-FORMING COMPOUNDS

As discussed in detail in *The Chemical and Biological Safety Plan for the School of Sciences and Social Sciences*, certain chemicals such as diethyl ether, dioxane, 2-butanol, and tetrahydrofuran can form organic peroxides if they are exposed to air, become more concentrated, or age. These compounds may violently explode when combined with certain other compounds (i.e., metals) or by heat, shock, friction, or static discharge. **Never move a container if there are solids in the bottom or if crystals have formed around the lip.**

- Clearly and explicitly label chemicals known to form peroxides;

- Always date the container when received and when opened;
- Keep a minimal working inventory--limit the on-hand stock to a 3 month supply or less;
- To discard empty (no excess liquid) containers, air dry under the hood, flush with large amounts of water, deface the label and put containers in the trash;
- Store away from heat and light (use explosion-proof or explosion-safe refrigerators, as needed);
- Protect from ignition sources, physical damage, contact with strong reducing agents or oxidizers, or other contamination;
- Ensure air-tight closures on containers, purge head space with nitrogen when possible;
- Never attempt to force open a rusted, stuck or scale-encrusted cap;
- Never store in a freezer;
- Never store in glass bottles with screw caps or glass stoppers;
- Never attempt to clean containers that were used to store peroxide forming compounds by scraping or rubbing, especially if an oil deposit or crusty residue is present; and,
- Prevention of unwanted peroxides is paramount. Stabilization and disposal can cost up to \$3,000 per container.

Immediately contact EHS if:

- **Crusty deposits form on the material or its container, a precipitate forms or an oily, viscous layer appears; or,**
- **Rusted, damaged, undated or suspicious looking containers of peroxide forming materials are found.**

9.24. PESTICIDES

Please contact EHS at 358-2879 if old pesticides are found.

9.25. PHENOLS/CHLOROFORM

See chloroform/phenols.

9.26. PHOTOGRAPHIC SOLUTIONS

All darkrooms must be approved by Environmental Health and Safety.

- **Used Fixer** (black & white, color, bleach, microfilm, x-ray): Fixers pick up unexposed silver during photo processing. Due to this, used fixer solutions are classified as a hazardous waste and are prohibited from drain disposal. Used fixer must be collected using waste collection Option A or B;
- **Stabilizers and Activators:** Some activators and stabilizers pick up unexposed silver during photo processing. Use waste collection Option A or B for these;
- **Indicator Stop Bath or Acetic Acid:** If Indicator Stop Bath has changed color, the solution is neutral and can be drain disposed. If Stop Bath does not have an indicator, check the pH. Stop Bath solutions with pH greater than 2 and less than 5.5 should have their pH adjusted

to between 7 and 9 before drain disposal. Used Indicator Stop Bath or acetic acid solutions that do not meet either of these conditions must be collected using waste collection Option A or B;

- **Developers, Black & White:** In general, these solutions can be drain disposed. Identify the chemical constituents from the product's MSDS and call EHS for disposal information;
- **Developers, Color:** Some color developers contain hazardous constituents and others have a pH that prohibits them from being drain disposed. Identify the chemical constituents from the product's MSDS and call EHS for disposal information and assistance;
- **Hypo Clearing Agent:** These solutions can be drain disposed; and,
- **Mixtures:** Certain photo processing operations do not allow for the collection of fixer separate from other photochemicals. These mixtures **cannot** be discharged to the sewer. All silver bearing solutions **MUST** be collected using waste collection Option A or B.

Note: All silver recovery units must be registered with Environmental Health and Safety. All automated film processors must be equipped with silver recovery systems.

9.27. REACTIVES

Chemicals that are considered reactive can react violently with air, water or other substances and also have the potential to explode. These chemicals include picric acid, sodium cyanide and sodium azide. Notify EHS of your intent to use these materials.

- Segregate oxidizers from flammable and combustible materials, organic material and reducers;
- Pyrophoric chemicals ignite spontaneously on contact with air. Store breakable glass bottles inside a plastic bottle carrier. Keep those chemicals in a cabinet below eye level;
- Shock-sensitive and/or explosive materials (benzoyl peroxide) can spontaneously release large amounts of energy when struck, vibrated, dropped or agitated. Some chemicals become increasingly shock sensitive with age. Inspect these regularly for degradation and dispose of promptly. Consult the MSDS before working with reactives; and,
- Never contaminate reactive chemicals with heavy metals or incompatibles.

9.28. SHARPS

Sharps containers are used for the disposal of hypodermic needles and syringes, razor blades and other sharp items. Containers for all sharps must be puncture-resistant. The sides and the bottom must be leakproof and they must be appropriately labeled or color-coded red to warn everyone that the contents are hazardous. Containers for disposable sharps must be closable (that is, have a lid, flap, door, or other means of closing the container), and they must be kept upright to keep the sharps and any liquids from spilling out of the container.

"Glass Only" boxes are used for the disposal of "clean" broken glass only. When $\frac{3}{4}$ full, the boxes should be properly sealed, labeled with the building/room number and disposed in a dumpster. "Sharps Containers" and "Glass Only" boxes can be obtained from the departmental offices.

If the waste contains non-medical and non-hazardous sharps (e.g., plastic pipette tips, microscope slides, cover slips, applicator sticks, etc.):

- Collect the non-medical sharps in a puncture-resistant container (e.g., coffee can, heavy duty plastic container such as a laundry detergent bottle);
- Close and seal the container when it is $\frac{3}{4}$ full; and,
- Dispose of container in the trash.

If the waste contains any hazardous chemicals (e.g., formaldehyde, residual solvents, etc.), dispose as a hazardous waste (contact the EHS Manager for additional information).

Contact the EHS office if the waste contains medical sharps (e.g., hypodermic needles, syringe with needle, Pasteur pipettes, scalpel blades), or if the waste contains non-medical sharps that have been in contact with infectious material (e.g. plastic pipette tips contaminated with human blood). The following procedure should be followed for sharps contaminated with infectious waste:

- Waste must be collected in a puncture-resistant sharps container labeled with the biohazard symbol;
- When $\frac{3}{4}$ full, the sharps container should be sealed, labeled with the building/room number, and placed into a red biohazard bag; and,
- Dispose of the biohazard bags into a biological burn box that has been lined with a second biohazard bag.

9.29. SODIUM AZIDE

Sodium azide is commonly used in low concentrations as a microbiocide to preserve samples. Curiously, it has also been used as rocket propellants or explosives and is very toxic. Avoid exposure to the pure material. Avoid weighing the solid by adding solvent to the material and diluting to working concentrations. Take care not to contaminate pure sodium azide with metals or foreign materials as this can lead to the formation of explosive metal azides. Azide solutions can also form explosive metal azides in drain pipes. Collect solutions and pure material for disposal through EHS.

9.30. SOLVENTS

All solvents must be collected using waste collection Option D. This includes methanol, methylene chloride, acetone, and xylene.

- Please list **all** chemical constituents on the waste label. This includes any metals. The pH also is very important to note on the waste label;
- Halogenated and non-halogenated solvents may be mixed together; and,
- NO excess solids or debris is allowed.

For laboratories using large volumes of certain solvents, it may be possible to distill or purify these solvents for reuse. Please consult with EHS if you are interested in recycling solvents.

9.31. STAINING SOLUTIONS

Staining solutions such as Wright's, eosin, iodine, and methylene blue stains must be disposed of using waste collection Option A or B. You must list the solvent used on the waste label (e.g., water, glacial acetic acid, methanol).

9.32. SCIENTIFIC EQUIPMENT—SURPLUS, REPAIR OR DISPOSAL

Any piece of scientific equipment must be carefully surveyed and decontaminated when they may have been in contact with potentially hazardous biological, chemical or radioactive materials. It is the responsibility of researchers to do this. Vacuum pumps must have oil removed prior to disposal and rinsed with clean oil if sent out for repair.

9.33. THINNERS

See paint thinners.

9.34. UNIVERSAL WASTE

Universal waste is "universally generated". It is defined as a hazardous waste but has low risk relative to other hazardous wastes. Types of universal wastes in the State of New Hampshire include batteries, fluorescent light bulbs, mercury-containing devices, used automotive antifreeze, certain pesticides and color cathode ray tubes.

Due to the large volume, Keene State College collects and recycles batteries and bulbs through the KSC ROCKS program. Please contact them at 358-2567 for more information on general recycling. If you have mercury containing devices, pesticides, and antifreeze, please contact EHS.

You may not bring personal wastes from home for disposal through Keene State College.

9.35. UNKNOWN

Analysis and disposal of material for which the identity is not known can be expensive (costs can range from \$300 to \$1500 per unknown). If unknowns are found, consult with the other workers who may have an idea as to the identity of the material. Even a general chemical classification (such as "aromatic sulfur compound") can be very helpful. A phone call to a colleague who has left will pay for itself several times over.

APPENDIX A—SPILL REPORT FORM

Spill Report Keene State College

Date/Time:	Location:
Product:	Quantity:
Responders:	Reported by:
Notifications? Campus Safety 358-2228 Sylvie Rice, EHS 358-2879 or 209-1362 If spill discharges to sewer immediately call: Eric Swope (Keene Wastewater Pretreatment Coordinator) 357-9836, ext.6504 If there is a threat to human health or the environment or when there can be off-site impact, immediately call: NHDES 603-271-3899 or 603-223-4381, and National Response Center 800-424-8802 Environmental Protection Agency (EPA) Region I Spill Response 617-918-1279	Date/Time:
Description/Photograph(s):	

APPENDIX B—CHEMICALS NOT SUITABLE FOR DRAIN DISPOSAL

These chemicals may not be drain disposed in any amount:

1. Organic Chemicals:

- All alkanes and water-insoluble hydrocarbons
- All chlorinated and brominated hydrocarbons
- EPA Priority Pollutants (see 3 below)
- Benzene
- Cyclohexene
- Ethyl ether
- Ethidium bromide
- Hexane
- Phenol and phenolic compounds
- Toluene
- Xylene
- Chlorinated hydrocarbons:
 - Chloroform
 - Carbon tetrachloride
 - Methylene chloride
 - PCBs
 - Tetrachloroethylene
 - Trichloroethane
 - Trichloroethylene
- Chlorofluorocarbons (freons, halons)

2. Inorganic Compounds**A. Chemicals containing the following metals and compounds:**

- Antimony
- Arsenic (including Arsenate (AsO_3^- , AsO_4^{3-}) and Arsenite (AsO_2^-))
- Beryllium
- Cadmium
- Chromium (including Chromate and Dichromate)
- Copper
- Cyanides, Cyanates (OCN^-), Thiocyanates (SCN^-)
- Lead
- Mercury
- Nickel
- Selenium
- Silver, including photographic fixer
- Thallium
- Zinc

B. Specific commonly used inorganic chemicals:

- Sodium azide
- Sodium cyanide
- Chromium glassware cleaners (Chromerge®, Chromium Trioxide/Sulfuric Acid solutions)

3. EPA Priority Pollutants (40 CFR Part 122 Appendix D, Tables II and III)

A. Table II-Organic Toxic Pollutants

Volatile Organic Compounds

acrolein	acrylonitrile
benzene	bromoform
carbon tetrachloride	chlorobenzene
chlorodibromomethane	chloroethane
2-dichloroethylvinyl ether	chloroform
dichlorobromoethane	1,1-dichloroethane
1,2-dichloroethane	1,1-dichloroethylene
1,2-dichloropropane	1,3-dichloropropylene
ethylbenzene	methyl bromide
methyl chloride	methylene chloride
1,1,2,2-tetrachloroethane	tetrachloroethylene
toluene	1,2-trans-dichloroethylene
1,1,1-trichloroethane	1,1,2-trichloroethane
trichloroethylene	vinyl chloride

Acid Compounds

2-chlorophenol	2,4-dichlorophenol
2,4-dimethylphenol	4,6-dinitro-o-cresol
2,4-dinitrophenol	2-nitrophenol
4-nitrophenol	p-chloro-m-cresol
pentachlorophenol	phenol
2,4,6-trichlorophenol	

Base/Neutral Compounds

acenaphthene	acenaphthylene
benzidine	benz(a)anthracene
benzo(a)pyrene	3,4-benzofluoranthene
benzo(g,h,i)perylene	benzo(k)fluoranthene
bis(2-chloroethoxy)methane	bis(2-chloroethyl)ether
bis(2-chloroisopropyl)ether	bis(2-ethylhexyl)phthalate
4-bromophenyl phenyl ether	butylbenzyl phthalate
2-chloronaphthalene	4-chlorophenyl phenyl ether
chrysene	dibenzo(a,h)anthracene
1,2-dichlorobenzene	1,3-dichlorobenzene
1,4-dichlorobenzene	3,3'-dichlorobenzidine
diethyl phthalate	dimethyl phthalate
di-n-butyl phthalate	2,4-dinitrotoluene
2,6-dinitrotoluene	di-n-octyl phthalate
1,2-diphenylhydrazine (as azobenzene)	fluoranthene
fluorene	hexachlorobenzene
hexachlorobutadiene	hexachlorocyclopentadiene
hexachloroethane	indeno(1,2,3-cd)pyrene
isophorone	naphthalene
nitrobenzene	N-nitrosodimethylamine
N-nitrosodi-n-propylamine	N-nitrosodiphenylamine
phenanthrene	pyrene
1,2,4-trichlorobenzene	

Pesticides

aldrin	alpha-BHC
beta-BHC	gamma-BHC
delta-BHC	chlordane
4,4'-DDT	4,4'-DDE
4,4'-DDD	dieldrin
alpha-endosulfan	beta-endosulfan
endosulfan sulfate	endrin
endrin aldehyde	heptachlor
heptachlor epoxide	PCB-1242
PCB-1254	PCB-1221
PCB-1232	PCB-1248
PCB-1260	PCB-1016
toxaphene	

B. Table III – Other Toxic Pollutants (Metals and Cyanide) and Total Phenols

antimony, total	arsenic, total
beryllium, total	cadmium, total
chromium, total	copper, total
lead, total	mercury, total
nickel, total	selenium, total
silver, total	thallium, total
zinc, total	cyanide, total
phenols, total	

4. Others

dioxins – 2,3,7,8 tetrachloro-dibenzo-p-dioxin (TCDD) and others

asbestos

APPENDIX C—HAZARDOUS WASTE CODES

Table C-1 Compilation of P, U, D, and F Codes by Chemical

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
A2213				U394
Acetaldehyde	75-07-0	I		U001
Acetaldehyde, chloro-	107-20-0			P023
Acetaldehyde, trichloro-	75-87-6			U034
Acetamide, 2-fluoro-	640-19-7			P057
Acetamide, N-(4-ethoxyphenyl)-	67-44-2			U187
Acetamide, N-(aminothioxomethyl)-	591-08-2			P002
Acetamide, N-9H-fluoren-2-yl-	53-96-3			U005
Acetic acid ethyl ester	141-78-6	I		U112
Acetic acid, (2,4,5-trichlorophenoxy)-	93-76-5			See F027
Acetic acid, (2,4-dichlorophenoxy)-, salts & esters	94-75-7			U240
Acetic acid, fluoro-, sodium salt	62-74-8			P058
Acetic acid, lead(2+) salt	301-04-2			U144
Acetic acid, thallium(1+) salt, see F027	563-68-8			U214
Acetone	67-64-1	I		U002
Acetone	67-64-1			See F003
Acetonitrile	75-05-8	I,T		U003
Acetophenone	98-86-2			U004
Acetyl chloride	75-36-5	C,R,T		U006
Acetyl-2-thiourea, 1-	591-08-2			P002
Acetylaminofluorene	53-96-3			U005
Acrolein	107-02-8			P003
Acrylamide	79-06-1			U007
Acrylic acid	79-10-7	I		U008
Acrylonitrile	107-13-1			U009
Aldicarb	116-06-3			P070
Aldicarb sulfone				P203
Aldrin	309-00-2			P004
Allyl alcohol	107-18-6			P005
alpha, alpha-Dimethylbenzylhydroperoxide	80-15-9	R		U096
alpha, alpha-Dimethylphenethylamine	122-09-8			P046
alpha-Naphthylamine	134-32-7			U167
alpha-Naphthylthiourea	86-88-4			P072
Aluminum phosphide	20859-73-8			P006
Aminomethyl-3-isoxazolol, 5-(	2763-96-4			P007
Aminopyridine, 4-	504-24-5			P008
Amitrole	61-82-5			U011
Ammonium picrate	131-74-8			P009
Ammonium vanadate	7803-55-6			P119
Aniline	62-53-3	I,T		U012
Argentate(1-), bis(cyano-C)-, potassium	506-61-6			P099
Arsenic	7440-38-2		5	D004
Arsenic acid H ₃ AsO ₄	7778-39-4			P010
Arsenic oxide As ₂ O ₃	1327-53-3			P012
Arsenic oxide As ₂ O ₅	1303-28-2			P011
Arsenic pentoxide	1303-28-2			P011
Arsenic trioxide	1327-53-3			P012
Arsine, diethyl-	692-42-2			P038
Arsinic acid, dimethyl-	75-60-5			U136
Arsonous dichloride, phenyl-	595-28-6			P036
Auramine	492-80-8			U014
Azaserine	115-02-6			U015
Azepine-1-carbothioic acid, hexahydro-, S-ethyl 1 ester				U365
Aziridine	151-56-4			P054

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Aziridine, 2-methyl-	75-55-8			P067
Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione,6-amino-8-[[[aminocarbonyl)oxy] methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta,8aalpha,8balpha)]-	50-07-7			U010
Barban				U280
Barium	7440-39-3		100	D005
Barium cyanide	542-62-1			P013
Bendiocarb				U278
Bendiocarb phenol				U364
Benomyl				U271
Benz[a]anthracene	56-55-3			U018
Benz[a]anthracene, 7,12-dimethyl-	57-97-6			U094
Benz[c]acridine	225-51-4			U016
Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56-49-5			U157
Benzal chloride	98-87-3			U017
Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	23950-58-5			U192
Benzene	71-43-2		0.5	D018
Benzene	71-43-2	I,T		U019
Benzene				See F001, F002, F004, F0005
Benzene, (1-methylethyl)-	98-82-8	I		U055
Benzene, (chloromethyl)-	100-44-7			P028
Benzene, (dichloromethyl)-	98-87-3			U017
Benzene, (trichloromethyl)-	98-07-7			U023
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-	50-29-3			U061
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-	72-43-5			U247
Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	72-54-8			U060
Benzene, 1,2,4,5-tetrachloro-	95-94-3			U207
Benzene, 1,2-dichloro-	95-50-1			U070
Benzene, 1,3,5-trinitro-	99-35-4			U234
Benzene, 1,3-dichloro-	541-73-1			U071
Benzene, 1,3-diisocyanatomethyl-	26471-62-5	R,T		U223
Benzene, 1,4-dichloro-	106-46-7			U072
Benzene, 1-bromo-4-phenoxy-	101-55-3			U030
Benzene, 1-methyl-2,4-dinitro-	121-14-2			U105
Benzene, 2-methyl-1,3-dinitro-	606-20-2			U106
Benzene, chloro-	108-90-7			U037
Benzene, dimethyl-	1330-20-7	I,T		U239
Benzene, hexachloro-	118-74-1			U127
Benzene, hexahydro-	110-82-7	I		U056
Benzene, methyl-	108-88-3			U220
Benzene, nitro-	98-95-3			U169
Benzene, pentachloro-	608-93-5			U183
Benzene, pentachloronitro-	82-68-8			U185
Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510-15-6			U038
Benzenamine	62-53-3	I,T		U012
Benzenamine, 2-methyl-	95-53-4			U328
Benzenamine, 2-methyl-, hydrochloride	36-21-5			U222
Benzenamine, 2-methyl-5-nitro-	99-55-8			U181
Benzenamine, 4,4'-carbonimidoyl bis[N,N-dimethyl-	492-80-8			U014
Benzenamine, 4,4'-methylenebis[2-chloro-	101-14-4			U158
Benzenamine, 4-chloro-	106-47-8			P024
Benzenamine, 4-chloro-2-methyl-, hydrochloride	3165-93-3			U049
Benzenamine, 4-methyl-	106-49-0			U353
Benzenamine, 4-nitro-	100-01-6			P077
Benzenamine, N,N-dimethyl-4-(phenylazo)-	60-117			U093
Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	305-03-3			U035
Benzenediamine, ar-methyl-	25376-45-8			U221
1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117-81-7			U028

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2			U069
1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2			U088
1,2-Benzenedicarboxylic acid, dimethyl ester	131-11-3			U102
1,2-Benzenedicarboxylic acid, dioctyl ester	117-84-0			U107
1,3-Benzenediol	108-46-3			U20
Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, 1,2-	51-43-4			P042
Benzenethiol	122-09-8			P046
Benzenesulfonic acid chloride	98-09-9	C,R		U020
Benzenesulfonyl chloride	98-09-9	C,R		U020
Benzenethiol	108-98-5			P014
Benzidine	92-87-5			U021
Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts	181-07-2			U202
1,3-Benzodioxol-4-ol, 2,2-dimethyl-,				U364
1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate				U278
1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1			U141
1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7			U203
1,3-Benzodioxole, 5-propyl-	94-58-6			U090
Benzofuranol, 2,3-dihydro-2,2-dimethyl-	53-32-8			U022
Benzo[a]pyrene	189-55-9			U064
Benzo[rs]pentaphene				U367
Benzofuranol, 2,3-dihydro-2,2-dimethyl-, -2-methylcarbamate				P127
Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester				P188
Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-2-phenylbutyl)-2H-1-, & salts, when present at concentrations greater than 0.3%	181-81-2			P001
Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations of 0.3% or less	181-81-2			U248
Benzotrithloride	98-07-7	C,R,T		U023
Benzyl chloride	100-44-2			P028
Beryllium powder	7440-41-7			P015
beta-Chloronaphthalene	91-58-7			U047
beta-Naphthylamine	91-59-8			U168
2,2'-Bioxirane	1464-53-5			U085
[1,1'-Biphenyl]-4,4'-diamine	92-87-5			U021
[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91-94-1			U073
[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119-90-4			U091
[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-	119-93-7			U095
Bis(dimethylthiocarbamoyl) sulfide				U401
Bis(pentamethylene)thiuram tetrasulfide				U400
Bromoacetone	598-31-2			P017
Bromoform	75-25-2			U225
4-Bromophenyl phenyl ether	101-55-3			U030
Brucine	357-57-3			P018
1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3			U128
1-Butanamine, N-butyl-N-nitroso-	924-16-3			U172
1-Butanol	71-36-3	I		U031
2-Butanone	78-93-3	I,T		U159
Butanone, 3,3-dimethyl-1-(methylthio)-, O-4-[methylamino]carbonyl oxime	39196-18-4			P045
2-Butanone, peroxide	1338-23-4	R,T		U160
2-Butenal	4170-30-3			U053
2-Butene, 1,4-dichloro-	764-41-0	I,T		U074
Butenoic acid, 2-methyl-, 7-[[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-	303-34-4			U143
Butylate				U392
Cacodylic acid	75-60-5			U136
Cadmium	7440-43-9		1	D006
Calcium chromate	13765-19-0			U032
Calcium cyanide	592-01-8			P021

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Calcium cyanide Ca(CN)	592-01-8			P021
Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester				U280
Carbamic acid, [(dibutylamino)- thio]methyl-, 2,3,-dihydro-2,2-dimethyl- 7-benzofuranyl ester				P189
Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)]bis-, dimethyl ester				U409
Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol -2-yl]-, methyl ester				U271
Carbamic acid, 1H-benzimidazol-2-yl, methyl ester				U372
Carbamic acid, butyl-, 3-iodo-2-propynyl ester				U375
Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]-5-methyl-1H- pyrazol-3-yl ester				P191
Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H-pyrazol-5-yl ester				P192
Carbamic acid, ethyl ester	51-79-6			U238
Carbamic acid, methyl-, 3-methylphenyl ester				P190
Carbamic acid, methylinitroso-, ethyl ester	615-53-2			U178
Carbamic acid, phenyl-, 1-methylethyl ester				U373
Carbamic chloride, dimethyl-	79-44-7			U097
Carbamodithioic acid, (hydroxymethyl) methyl-, monopotassium salt				U378
Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters	111-54-6			U114
Carbamodithioic acid, dibutyl, sodium salt				U379
Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester				U277
Carbamodithioic acid, diethyl-, sodium salt				U381
Carbamodithioic acid, dimethyl, potassium salt				U383
Carbamodithioic acid, dimethyl-, sodium salt				U382
Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid				U376
Carbamodithioic acid, methyl-, monopotassium salt				U377
Carbamodithioic acid, methyl-, monosodium salt				U384
Carbamothioic acid, bis(1-methylethyl)-, S-(2,3- dichloro-2-propenyl) ester	2303-16-4			U062
Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester				U389
Carbamothioic acid, bis(2-methylpropyl)-, S-ethyl ester				U392
Carbamothioic acid, butylethyl-, S-propyl ester				U391
Carbamothioic acid, cyclohexylethyl-, S-ethyl ester				U386
Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester				U387
Carbamothioic acid, dipropyl-, S-ethyl ester				U390
Carbamothioic acid, dipropyl-, S-propyl ester				U385
Carbaryl				U279
Carbendazim				U372
Carbofuran phenol				U367
Carbofuran.				P127
Carbon disulfide	75-15-0			P022
Carbon disulfide				See F001, F002, F004, F0005
Carbon oxyfluoride	353-50-4	R,T		U033
Carbonic acid, dithallium(1+) salt	6533-73-9			U215
Carbonic dichloride	75-44-5			P095
Carbonic difluoride	353-50-4			U033
Carbonochloridic acid, methyl ester	79-22-1	I,T		U156
Carbon tetrachloride	56-23-5		0.5	D019
Carbon tetrachloride	56-23-5			U211
Carbon tetrachloride				See F001, F002, F004, F0005
Carbosulfan				P189
Chloral	75-87-6			U034
Chlorambucil	305-03-3			U035
Chlordane	57-74-9		0.03	D020
Chlordane, alpha & gamma isomers	57-74-9			U036

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Chlorinated aliphatic hydrocarbons				See F024, F025
Chlorinated fluorocarbons				See F001, F002, F004, F0005
Chlornaphazin	494-03-1			U026
Chloroacetaldehyde	107-20-0			P023
Chlorobenzene	108-90-7		100	D021
Chlorobenzene	108-90-7			U037
Chlorobenzene				See F001, F002, F004, F0005
Chlorobenzilate	510-15-6			U038
2-Chloroethyl vinyl ether	110-75-8			U042
Chloroform	67-66-3		6	D022
Chloroform	67-66-3			U044
Chloromethyl methyl ether	107-30-2			U046
4-Chloro-o-toluidine, hydrochloride	3165-93-3			U049
Chlorophenylthiourea, 1-(o-	5344-82-1			P026
Chloropropionitrile, 3-	542-76-7			P027
Chromic acid H2CrO4, calcium salt	13765-19-0			U032
Chromium	7440-47-3		5	D007
Chrysene	218-01-9			U050
Copper cyanide	544-92-3			P029
Copper cyanide Cu(CN)	544-92-3			P029
Copper dimethyldithiocarbamate				U393
Copper, bis(dimethylcarbamo-dithioato-S,S')-,				U393
Creosote	---			U051
Cresol	-----		200	D026
Cresol (Cresylic acid)	1319-77-3			U052
Cresol (Cresylic acid)				See F001, F002, F004, F0005
Cresol, m-	108-39-4		200	D024
Cresol, o-	95-48-7		200	D023
Cresol, p-	106-44-5		200	D025
Crotonaldehyde	4170-30-3			U053
Cumene	98-82-8	I		U055
Cumenyl methylcarbamate, m-				P202
Cyanides (soluble cyanide salts), not otherwise specified	---			P030
Cyanide				See F007, F008, F009, F010, F011, F012
Cyanogen	460-19-5			P031
Cyanogen bromide (CN)Br	506-68-3			U246
Cyanogen chloride	506-77-4			P033
Cyanogen chloride (CN)Cl	506-77-4			P033
Cycloate				U386
2,5-Cyclohexadiene-1,4-dione	106-51-4			U197
Cyclohexane	110-82-7			U056
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-	58-89-9			U129
Cyclohexanone	108-94-1	I		U057
Cyclohexanone				See F003
Cyclohexyl-4,6-dinitrophenol, 2-	131-89-5			P034
1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77-47-4			U130
Cyclophosphamide	50-89-9			U058
2,4-D	94-75-7		10	D016
2,4-D, salts & esters	94-75-7			U240
Daunomycin	20830-81-3			U059
Dazomet				U366
DDD	72-54-8			U060
DDT	50-29-3			U061
D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)-4 carbonyl]amino]-	18883-66-4			U206
Diallate	2303-16-4			U062

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Dibenz[a,h]anthracene	53-70-3			U063
Dibenzo[a,i]pyrene	189-55-9			U064
1,2-Dibromo-3-chloropropane	96-12-8			U066
Dibutyl phthalate	84-74-2			U069
1,2-Dichlorobenzene (see o-dichlorobenzene)				
Dichlorobenzene, 1,4-	106-46-7		7.5	D027
3,3'-Dichlorobenzidine	91-94-1			U073
1,4-Dichloro-2-butene	764-41-0			U074
Dichlorodifluoromethane	75-71-8			U075
Dichloroethane, 1,2-	107-06-2		0.5	D028
Dichloroethyl ether	111-44-4			U025
1,1-Dichloroethylene	75-35-4			U078
Dichloroethylene, 1,1-	75-35-4		0.7	D029
1,2-Dichloroethylene	156-60-5			U079
Dichloroisopropyl ether	108-60-1			U027
3,3'-Dimethoxybenzidine	119-90-4			U091
Dichloromethoxy ethane	111-91-1			U024
3,3'-Dimethylbenzidine	119-93-7			U095
Dichloromethane (see methylene chloride)				
Dichloromethyl ether	542-88-1			P016
2,4-Dichlorophenol	120-83-2			U081
2,6-Dichlorophenol	87-65-0			U082
1,3-Dichloropropene	542-75-6			U084
Dichlorophenylarsine	696-28-6			P036
2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6, 6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta, 7aalpha)-, & metabolites	72-20-8			P051
2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a, 7,7a-octahydro-, (1aalpha, 2beta, 2aalpha, 3beta,6beta, aalpha, 7beta, 7aalpha)-	60-57-1			P037
4,6-Dinitro-o-cresol, & salts	534-52-1			P047
7,12-Dimethylbenz[a]anthracene	57-97-6			U094
2,4-Dimethylphenol	105-67-9			U101
2,4-Dinitrophenol	51-28-5			P048
2,4-Dinitrotoluene	121-14-2			U105
2,6-Dinitrotoluene	606-20-2			U106
Dieldrin	60-57-1			P037
1,2:3,4-Diepoxybutane	1464-53-5			U085
Diethyl O-pyrazinyl phosphorothioate, O,O-	297-97-2			P040
Diethyl phthalate	84-66-2			U088
Diethylarsine	692-42-2			P038
Diethylene glycol, dicarbamate				U395
1,4-Diethyleneoxide	123-91-1			U108
Diethylhexyl phthalate	117-81-7			U028
Diethyl-p-nitrophenyl phosphate	311-45-5			P041
Diethylstilbesterol	56-53-1			U089
Dihydrosafrole	94-58-6			U090
Diisopropylfluorophosphate (DFP)	55-91-4			P043
1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-	465-73-6			P060
1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a,-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-	309-00-2			P004
Dimethoate	60-51-5			P044
Dimethyl phthalate	131-11-3			U102
Dimethyl sulfate	77-78-1			U103
Dimethylamine	124-40-3	I		U092
Dimethylcarbamoyl chloride	79-44-7			U097
1,1-Dimethylhydrazine	57-14-7			U098

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
1,2-Dimethylhydrazine	540-73-8			U099
Dimetilan				P191
Dinitrotoluene, 2,4-	121-14-2		0.13	D030
Di-n-octyl phthalate	117-84-0			U107
1,2-Diphenylhydrazine	122-66-7			U109
Dinoseb	88-85-7			P020
Di-n-propylnitrosamine	621-64-7			U111
1,4-Dioxane	123-91-1			U108
Diphosphoramidate, octamethyl-	152-16-9			P085
Diphosphoric acid, tetraethyl ester	107-49-3			P111
Dipropylamine	142-84-7	I		U110
Disulfiram				U403
Disulfoton	298-04-4			P039
Dithiobiuret	541-53-7			P049
1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino)-carbonyl]oxime	115-29-7			P185
Endosulfan	145-73-3			P050
Endothall	72-20-8			P088
Endrin	72-20-8		0.02	D012
Endrin	51-43-4			P051
Endrin, & metabolites	460-19-5			P051
Epichlorohydrin	1016-89-8			U041
Epinephrine	16752-77-5			P042
EPTC				U390
Ethanal	75-07-0	I		U001
Ethanamine, N,N-diethyl-				U404
Ethanamine, N-ethyl-N-nitroso-	55-18-5			U174
Ethane, 1,1,1,2-tetrachloro-	630-20-6			U208
Ethane, 1,1,1-trichloro-	71-55-6			U226
Ethane, 1,1,2,2-tetrachloro-	79-34-5			U209
Ethane, 1,1,2-trichloro-	79-00-5			U227
Ethane, 1,1'-[methylenebis (oxy)]bis[2-chloro-	111-91-1			U024
Ethane, 1,1-dichloro-	75-34-3			U076
Ethane, 1,1'-oxybis-	60-29-7	I		U117
Ethane, 1,1'-oxybis[2-chloro-	111-44-4			U025
Ethane, 1,2-dibromo-	106-93-4			U067
Ethane, 1,2-dichloro-	107-06-2			U077
Ethane, hexachloro-	67-72-1			U131
Ethane, pentachloro-	76-01-7			U184
1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	91-80-5			U155
Ethanedinitrile	107-12-0			P031
Ethanethioamide	62-55-5			U218
Ethanimidothioic acid, 2-(dimethylamino)-N-O-[(methylamino) carbonyl]oxy-2-oxo-, methyl ester				P194
Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-1 oxo-, methyl ester				U394
Ethanimidothioic acid, N- [(methylamino)carbonyl]oxy-, methyl ester	16752-77-5			P066
Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]] bis-, dimethyl ester				U410
Ethanol, 2,2'-(nitrosoimino)bis-	1116-54-7			U173
Ethanol, 2,2'-oxybis-, dicarbamate				U395
Ethanol, 2-ethoxy-	110-80-5			U359
2-Ethoxyethanol				See F001, F002, F004, F0005
Ethanone, 1-phenyl-	98-86-2			U004
Ethene, (2-chloroethoxy)-	110-75-8			U042
Ethene, 1,1-dichloro-	75-35-4			U078
Ethene, 1,2-dichloro-	156-60-5	E		U079
Ethene, chloro-	75-01-4			U043
Ethene, tetrachloro-	127-18-4			U210

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Ethene, trichloro-	79-01-6			U228
Ethyl acetate	141-78-6	I		U112
Ethyl acetate				See F003
Ethyl acrylate	140-88-5	I		U113
Ethyl carbamate (urethane)	51-79-6			U238
Ethyl benzene				See F003
Ethyl cyanide	107-12-0			P101
Ethyl ether	60-29-7	I		U117
Ethyl ether				See F003
Ethyl methacrylate	97-63-2			U118
Ethyl methanesulfonate	62-50-0			U119
Ethyl Ziram				U407
Ethylene dibromide	106-93-4			U067
Ethylene dichloride	107-06-2			U077
Ethylene glycol monoethyl ether	110-80-5			U359
Ethylene oxide	75-21-8	I,T		U115
Ethylenebisdithiocarbamic acid, salts & esters	111-54-6			U114
Ethyleneimine	151-56-4			P054
Ethylenethiourea	96-45-7			U116
Ethylidene dichloride	75-34-3			U076
Famphur	52-85-7			P097
Ferbam				U396
Fluoranthene	206-44-0			U120
Fluorine	7782-41-4			P056
Fluoroacetamide	640-19-7			P057
Fluoroacetic acid, sodium salt	62-74-8			P058
Formaldehyde	50-00-0			U122
Formetanate hydrochloride				P198
Formic acid	64-18-6	C,T		U123
Formparanate				P197
Fulminic acid, mercury(2+) salt	628-86-4			P065
Furan	110-00-9	I		U124
Furan, tetrahydro-	109-99-9	I		U213
Furancarboxaldehyde	98-01-1	I		U125
2,5-Furandione	108-31-6			U147
Furfural	98-01-1	I		U125
Furfuran	110-00-9	I		U124
Glucopyranose, 2-deoxy-2-(3-methyl-3-nitroso-ureido)-, Glycidylaldehyde	18883-66-4			U206
Guanidine, N-methyl-N'-nitro-N-nitroso-	765-34-4			U126
2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl) tetrahydro-, 2-oxide	70-25-7			U163
2H-1,3,5-Thiadiazine- 2-thione, tetrahydro-3,5- dimethyl-	50-18-0			U058
Heptachlor	76-44-8			U366
Heptachlor (and its epoxide)	76-44-8		0.008	P059
Hexachlorobenzene	118-74-1		0.13	D031
Hexachlorobenzene	118-74-1			D032
Hexachlorobenzene				U127
Hexachlorobenzene				See F021, F026
Hexachlorobutadiene	87-68-3		0.5	D033
Hexachlorobutadiene	87-68-3			U128
Hexachlorocyclopentadiene	77-47-4			U130
Hexachloroethane	67-72-1		3	D034
Hexachloroethane	67-72-1			U131
Hexachlorophene	70-30-4			U132
Hexachlorophene				See F020
Hexachloropropene	1888-71-7			U243
Hexaethyl tetraphosphate	757-58-4			P062
Hydrazine	302-01-2	R,T		U133
Hydrazine, 1,1-dimethyl-	57-14-7			U098
Hydrazine, 1,2-diethyl-	1615-80-1			U086

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Hydrazine, 1,2-dimethyl-	540-73-8			U099
Hydrazine, 1,2-diphenyl-	122-66-7			U109
Hydrazine, methyl-	60-34-4			P068
Hydrazinecarbothioamide	79-19-6			P116
Hydrocyanic acid	74-90-8			P063
Hydrofluoric acid	7664-39-3	C,T		U134
Hydrogen chloride				See F020
Hydrogen cyanide	74-90-8			P063
Hydrogen fluoride	7664-39-3	C,T		U134
Hydrogen phosphide	7803-51-2			P096
Hydrogen sulfide	7783-06-4			U135
Hydrogen sulfide H2S	7783-06-4			U135
Hydroperoxide, 1-methyl-1-phenylethyl-	80-15-9	R		U096
2-Imidazolidinethione	96-45-7			U116
Indeno[1,2,3-cd]pyrene	193-39-5			U137
3-Iodo-2-propynyl n-butylcarbamate				U375
Iron, tris(dimethylcarbamodithioato-S,S')-, 1,3-Isobenzofurandione	85-44-9			U396
Isobutanol				See F001, F002, F004, F0005
Isobutyl alcohol	78-83-1	I,T		U140
Isodrin	465-73-6			P060
Isolan	2763-96-4			P192
Isopropylphenyl N-methylcarbamate	62-38-4			P202
Isosafrole	120-58-1			U141
3(2H)-Isoxazolone, 5-(aminomethyl)-	628-86-4			P007
Kepone	143-50-0			U142
Lasiocarpine	303-34-4			U143
Lead	7439-92-1		5	D008
Lead acetate	301-04-2			U144
Lead phosphate	7446-27-7			U145
Lead subacetate	1335-32-6			U146
Lead, bis(acetato-O)tetrahydroxytri-	1335-32-6			U146
Lindane	58-89-9		0.4	D013
Lindane	58-89-9			U129
L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-	148-82-3			U150
L-Serine, diazoacetate (ester)	115-02-6			U015
Maleic anhydride	108-31-6			U147
Maleic hydrazide	123-33-1			U148
Malononitrile	109-77-3			U149
Manganese dimethyldithiocarbamate				P196
Manganese, bis(dimethylcarbamodithioato-S,S')-,				P196
m-Dichlorobenzene	541-73-1			U071
Melphalan	148-82-3			U150
Mercury	7439-97-6		0.2	D009
Mercury	7439-97-6			U151
Mercury fulminate	628-86-4			P065
Mercury, (acetato-O)phenyl-	62-38-4			P092
Metam Sodium				U384
Methacrylonitril	126-98-7	I,T		U152
Methanamine, N-methyl-	124-40-3	I		U092
Methanamine, N-methyl-N-nitroso-	62-75-9			P082
Methane, bromo-	74-83-9			U029
Methane, chloro-	74-87-3	I,T		U045
Methane, chloromethoxy-	107-30-2			U046
Methane, dibromo-	74-95-3			U068
Methane, dichloro-	75-09-2			U080
Methane, dichlorodifluoro-	75-71-8			U075
Methane, iodo-	74-88-4			U138
Methane, isocyanato-	624-83-9			P064

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Methane, oxybis[chloro-	542-88-1			P016
Methane, tetrachloro-	56-23-5			U211
Methane, tetranitro-	509-14-8			P112
Methane, tribromo-	75-25-2			U225
Methane, trichloro-	67-66-3			U044
Methane, trichlorofluoro-	75-69-4			U121
Methanesulfonic acid, ethyl ester	62-50-0			U119
Methanethiol	74-93-1	I,T		U153
Methanethiol, trichloro-	75-70-7			P118
Methanimidamide, N,N-dimethyl-N'-[2-methyl-4- [[[(methylamino)carbonyl]oxy]phenyl]-				P197
Methanimidamide, N,N-dimethyl-N'-[3-[[[(methylamino)- carbonyl]oxy]phenyl]-, monohydrochloride				P198
Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76-44-8			P059
Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro- 1,5,5a,6,9,9a-hexa hydro-, 3-oxide	115-29-7			P050
4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a- hexahydro-	57-74-9			U036
Methanol	67-56-1	I		U154
Methanol				See F003
Methapyrilene	91-80-5			U155
1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one,1,1a,3,3a,4,5,5,5a, 5b,6-decachlorooctah ydro-	143-50-0			U142
Methiocarb				P199
Methomyl	16752-77-5			P066
Methoxychlor	72-43-5		10	D014
Methoxychlor	72-43-5			U247
Methyl alcohol	67-56-1	I		U154
Methyl bromide	74-83-9			U029
1-Methylbutadiene	504-60-9	I		U186
3-Methylcholanthrene	56-49-5			U157
Methyl chloride	74-87-3	I,T		U045
Methyl chlorocarbonate	79-22-1	I,T		U156
Methyl chloroform	71-55-6			U226
Methyl ethyl ketone	78-98-3		200	D035
Methyl ethyl ketone (MEK)	78-93-3	I,T		U159
Methyl ethyl ketone				See F001, F002, F004, F0005
Methyl ethyl ketone peroxide	1338-23-4	R,T		U160
Methyl hydrazine	60-34-4			P068
Methyl iodide	74-88-4			U138
Methyl isobutyl ketone	108-10-1	I		U161
Methyl isobutyl ketone				See F003
Methyl isocyanate	824-83-9			P064
Methyl methacrylate	80-62-6	I,T		U162
Methyl parathion	298-00-0			P071
4-Methyl-2-pentanone	108-10-1	I		U161
4,4'-Methylenebis(2-chloroaniline)	101-14-4			U158
Methylene bromide	75-95-3			U068
Methylene chloride	75-09-2			U080
Methylene chloride				See F001, F002, F004, F0005
Methylactonitrile	75-86-5			P069
Methylthiouracil	56-04-2			U164
Metolcarb				P190
Mexacarbate				P128
Mitomycin C	50-07-7			U010
MNNG	70-25-97			U163
Molinate				U365
N,N'-Diethylhydrazine	1615-80-1			U086
1-Naphthalenamine	134-32-7			U167

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Naphthalenamine, N,N'-bis(2-chloroethyl)-	494-03-1			U026
Naphthalene	91-20-3			U165
2-Naphthalenamine	91-59-8			U168
Naphthalene, 2-chloro-	91-58-7			U047
1,4-Naphthalenedione	130-15-4			U166
5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-3 trideoxy)-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-	20830-81-3			U059
2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis [5-amino-4-hydroxy]-, tetrasodium salt	72-57-1			U236
1-Naphthalenol, methylcarbamate				U279
1,4-Naphthoquinone	130-15-4			U166
n-Butyl alcohol	71-36-3	I		U031
n-Butyl alcohol				See F003
Nickel carbonyl	13463-39-3			P073
Nickel carbonyl Ni(CO) ₄	13463-39-3			P073
Nickel cyanide	557-19-7			P074
Nickel cyanide Ni(CN) ₂	557-19-7			P074
Nicotine, & salts	54-11-5			P075
Nitric acid, thallium(1+) salt	10102-45-1			U217
Nitric oxide	10102-43-9			P076
Nitrobenzene	98-95-3		2	D036
Nitrobenzene	98-95-3	I,T		U169
Nitrobenzene				See F001, F002, F004, F0005
Nitrogen dioxide	10102-44-0			P078
Nitrogen oxide NO	10102-43-9			P076
Nitrogen oxide NO ₂	10102-44-0			P078
Nitroglycerine	53-63-0			P081
Nitro-o-toluidine	99-55-8			U181
2-Nitropropane	79-46-9	I,T		U171
2-Nitropropane				See F001, F002, F004, F0005
N-Nitrosodiethanolamine	1116-54-7			U173
N-Nitrosodiethylamine	55-18-5			U174
N-Nitrosodimethylamine	62-75-9			P082
N-Nitrosodi-n-butylamine	924-16-3			U172
N-Nitrosomethylvinylamine	4549-40-0			P084
N-Nitroso-N-ethylurea	759-73-9			U176
N-Nitroso-N-methylurea	684-93-5			U177
N-Nitroso-N-methylurethane	615-53-2			U178
N-Nitrosopiperidine	100-75-4			U179
N-Nitrosopyrrolidine	930-55-2			U180
n-Propylamine	107-10-8	I,T		U194
O,O-Diethyl S-methyl dithiophosphate	3288-58-2			U087
o-Chlorophenol	95-57-8			U048
Octamethylpyrophosphoramide	152-16-9			P085
o-Dichlorobenzene	95-50-1			U070
o-Dichlorobenzene				See F001, F002, F004, F0005
Osmium oxide OsO ₄	20816-12-0			P087
Osmium tetroxide	20816-12-0			P087
o-Toluidine	95-53-4			U328
o-Toluidine hydrochloride	636-21-5			U222
Oxabicyclo[2.2.1]heptane-2, 3-dicarboxylic acid	145-73-3			P088
Oxamyl				P194
1,2-Oxathiolane, 2,2-dioxide	1120-71-4			U193
Oxirane	75-21-8	I,T		U115
Oxirane, (chloromethyl)-	106-89-8			U041
Oxiranecarboxyaldehyde	765-34-4			U126
Paraldehyde	123-63-7			U182

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Parathion	56-38-2			P089
p-Benzoquinone	106-51-4			U197
p-Chloroaniline	106-47-8			P024
p-Chloro-m-cresol	59-50-7			U039
p-Dichlorobenzene	106-46-7			U072
p-Dimethylaminoazobenzene	60-11-7			U093
Pebulate				U391
Pentachlorobenzene	608-93-5			U183
Pentachlorobenzene				See F021, F026
Pentachloroethane	76-01-7			U184
Pentachloronitrobenzene (PCNB)	82-68-8			U185
Pentachlorophenol	87-86-5		100	D037
Pentachlorophenol	87-86-5			See F027
Pentachlorophenol & derivatives				See F021
1,3-Pentadiene	504-60-9	I		U186
Pentanol, 4-methyl-	108-10-1			U161
Phenacetin	62-44-2			U187
Phenol	108-95-2			U188
Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate				P199
Phenol, 2-(1-methylethoxy)-, methylcarbamate				U411
Phenol, 2-(1-methylpropyl)-4,6-dinitro-	88-85-7			P020
Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70-30-4			U132
Phenol, 2,3,4,6-tetrachloro	58-90-2			See F027
Phenol, 2,4,5-trichloro	95-95-4			See F027
Phenol, 2,4,6-trichloro	88-06-2			See F027
Phenol, 2,4,6-trinitro-, ammonium salt	131-74-8			P009
Phenol, 2,4-dichloro-	120-83-2			U081
Phenol, 2,4-dimethyl-	105-67-9			U101
Phenol, 2,4-dinitro-	51-28-5			P048
Phenol, 2,6-dichloro-	87-65-0			U082
Phenol, 2-chloro-	95-57-8			U048
Phenol, 2-cyclohexyl-4,6-dinitro-	131-89-5			P034
Phenol, 2-methyl-4,6-dinitro-, & salts	534-52-1			P047
Phenol, 3-(1-methylethyl)-, methyl carbamate				P202
Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate				P201
Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)				P128
Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-	56-53-1	E		U089
Phenol, 4-chloro-3-methyl-	59-50-7			U039
Phenol, 4-nitro	100-02-7			U170
Phenol, methyl-	1319-77-3			U052
Phenol, pentachloro	87-86-5			See F027
Phenylmercury acetate	62-38-4			P092
Phenylthiourea	103-85-5			P093
Phorate	298-02-2			P094
Phosgene	75-44-5			P095
Phosphine	7803-51-2			P096
Phosphoric acid, diethyl-4-nitrophenyl ester	311-45-5			P041
Phosphoric acid, lead(2+) salt (2:3)	7446-27-7			U145
Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester	298-02-2			P094
Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	298-04-4			P039
Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288-58-2			U087
Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	60-51-5			P044
Phosphorofluoridic acid, bis(1-methylethyl) ester	55-91-4			P043
Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester	298-00-0			P071
Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56-38-2			P089
Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297-97-2			P040
Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester	52-85-7			P097
Phosphorus sulfide	1314-80-3	R		U189

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Phthalic anhydride	85-44-9			U190
Physostigmine				P204
Physostigmine salicylate				P188
2-Picoline	109-06-8			U191
Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis-				U400
Piperidine, 1-nitroso-	100-75-4			U179
Plumbane, tetraethyl-	78-00-2			P110
p-Nitroaniline	100-01-6			P077
p-Nitrophenol	100-02-7			U170
Potassium cyanide	151-50-8			P098
Potassium cyanide KCN	151-50-8			P098
Potassium dimethyldithiocarbamate				U383
Potassium n-hydroxymethyl- n-methyldi-thiocarbamate				U378
Potassium n-methyldithiocarbamate				U377
Potassium silver cyanide	506-61-6			P099
Promecarb				P201
Pronamide	23950-58-5			U192
Propanal, 2-methyl-2-(methyl-sulfonyl)-, O-[(methylamino)carbonyl] oxime				P203
Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime	116-06-3			P070
1-Propanamine	107-10-8	I,T		U194
1-Propanamine, N-nitroso-N-propyl-	621-64-7			U111
1-Propanamine, N-propyl-	142-84-7	I		U110
Propane, 1,2-dibromo-3-chloro-	96-12-8			U066
Propane, 1,2-dichloro-	78-87-5			U083
Propane, 2,2'-oxybis[2-chloro-	108-60-1			U027
Propane, 2-nitro-	79-46-9	I,T		U171
Propanedinitrile	109-77-3			U149
Propanenitrile	107-12-0			P101
Propanenitrile, 2-hydroxy-2-methyl-	75-86-5			P069
Propanenitrile, 3-chloro-	542-76-7			P027
1,3-Propane sultone	1120-71-4			U193
Propanetriol, trinitrate	55-63-0			P081
Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	93-72-1			See F027
1-Propanol, 2,3-dibromo-, phosphate (3:1)	126-72-7			U235
1-Propanol, 2-methyl-	78-83-1	I,T		U140
2-Propanone	67-64-1	I		U002
Propanone, 1-bromo-	598-31-2			P017
Propargyl alcohol	107-19-7			P102
Propen-1-ol	107-18-6			P005
Propenal	107-02-8			P003
2-Propenamide	79-06-1			U007
1-Propene, 1,1,2,3,3,3-hexachloro-	1888-71-7			U243
1-Propene, 1,3-dichloro-	542-75-6			U084
2-Propenenitrile	107-13-1			U009
2-Propenenitrile, 2-methyl-	126-98-7	I,T		U152
2-Propenoic acid	79-10-7	I		U008
2-Propenoic acid, 2-methyl-, ethyl ester	97-63-2			U118
2-Propenoic acid, 2-methyl-, methyl ester	80-62-6	I,T		U162
2-Propenoic acid, ethyl ester	140-88-5	I		U113
Propham				U373
Propoxur				U411
Propylene dichloride	78-87-5			U083
Propylenimine	75-55-8			P067
Propyn-1-ol	107-19-7			P102
Prosulfocarb				U387
p-Toluidine	106-49-0			U353
3,6-Pyridazinedione, 1,2-dihydro-	123-33-1			U148
Pyridinamine	504-24-5			P008
Pyridine	110-86-1		5	D038

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Pyridine	110-86-1			U196
Pyridine				See F001, F002, F004, F0005
Pyridine, 2-methyl-	109-06-8			U191
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-, & salts 5	¹ 54-11-5			P075
2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-	66-75-1			U237
4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56-04-2			U164
Pyrrolidine, 1-nitroso-	930-55-2			U180
Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS- cis)-				P204
Reserpine	50-55-5			U200
Resorcinol	108-46-3			U201
Saccharin, & salts	¹ 81-07-2			U202
Safrole	94-59-7			U203
Selenious acid	7783-00-8			U204
Selenious acid, dithallium(1+) salt	12039-52-0			P114
Selenium	7782-49-2		1	D010
Selenium dioxide	7783-00-8			U204
Selenium sulfide	7488-56-4			U205
Selenium sulfide SeS2	7488-56-4	R,T		U205
Selenium, tetrakis(dimethyldithiocarbamate)				U376
Selenourea	630-10-4			P103
Silver	7440-22-4		5	D011
Silver cyanide	506-64-9			P104
Silver cyanide Ag(CN)	506-64-9			P104
Silvex (2,4,5-TP)	93-72-1			See F027
Sodium azide	26628-22-8			P105
Sodium cyanide	143-33-9			P106
Sodium cyanide Na(CN)	143-33-9			P106
Sodium dibutyldithiocarbamate				U379
Sodium diethyldithiocarbamate				U381
Sodium dimethyldithiocarbamate				U382
Streptozotocin	18883-66-4			U206
Strontium sulfide				NH03
Strychnidin-10-one, & salts	¹ 57-24-9			P108
Strychnidin-10-one, 2,3-dimethoxy-	357-57-3			P018
Strychnine, & salts	¹ 57-24-9			P108
Sulfallate				U277
Sulfur phosphide	1314-80-3	R		U189
Sulfuric acid				See F006
Sulfuric acid, dimethyl ester	77-78-1			U103
Sulfuric acid, dithallium(1+)salt	7446-18-6			P115
2,4,5-T	93-76-5			See F027
Tetrabutylthiuram disulfide				U402
Tetrachlorobenzene				See F021, F026
1,2,4,5-Tetrachlorobenzene	95-94-3			U207
1,1,1,2-Tetrachloroethane	630-20-6			U208
1,1,2,2-Tetrachloroethane	79-34-5			U209
Tetrachloroethylene	127-18-4		0.7	D039
Tetrachloroethylene	127-18-4			U210
Tetrachloroethylene				See F001, F002, F004, F0005
Tetrachlorophenol				See F020, F027
2,3,4,6-Tetrachlorophenol	58-90-2			See F027
Tetraethyl lead	78-0-2			P110
Tetraethyl pyrophosphate	107-49-3			P111
Tetraethyldithiopyrophosphate	3689-24-5			P109
Tetrahydrofuran	109-99-9	I		U213
Tetramethylthiuram monosulfide				U401
Tetranitromethane	509-14-8			P112

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
Tetraphosphoric acid, hexaethyl ester	757-58-4			P062
Thallic oxide	1314-32-5			P113
Thallium chloride TICl	7791-12-0			U216
Thallium oxide TI ₂ O ₃	1314-32-5			P113
Thallium(I) acetate	563-68-8			U214
Thallium(I) carbonate	6533-73-9			U215
Thallium(I) chloride	7791-12-0			U216
Thallium(I) nitrate	10102-45-1			U217
Thallium(I) selenite	12039-52-0			P114
Thallium(I) sulfate	7446-18-6			P115
Thioacetamide	62-55-5			U218
Thiodicarb				U410
Thiodiphosphoric acid, tetraethyl ester	3689-24-5			P109
Thiofanox	3689-24-5			P045
Thioimidodicarbonic diamide	541-53-7			P049
Thiomethanol	74-93-1	I,T		U153
Thioperoxydicarbonic diamide [(H ₂ N)C(S)] ₂ S ₂ , tetramethyl-	137-26-8			U244
Thioperoxydicarbonic diamide, tetrabutyl				U402
Thioperoxydicarbonic diamide, tetraethyl				U403
Thiophanate-methyl				U409
Thiophenol	108-98-5			P014
Thiosemicarbazide	79-19-6			P116
Thiourea	62-56-6			U219
Thiourea, (2-chlorophenyl)-1	5344-82-1			P026
Thiourea, 1-naphthalenyl-	86-88-4			P072
Thiourea, phenyl-	103-85-5			P093
Thiram	137-26-8			U244
Tin				See F006
Tirpate				P185
Toluene	108-88-3			U220
Toluene				See F001, F002, F004, F0005
Toluene diisocyanate	26471-62-5	R,T		U223
Toluenediamine	25376-45-8			U221
Toxaphene	8001-35-2		0.5	D015
Toxaphene	8001-35-2			P123
2,4,5-TP (Silvex)	93-72-1		1	D017
Triallate				U389
1H-1,2,4-Triazol-3-amine	61-82-5			U011
1,1,1-Trichloroethane				See F001, F002, F004, F0005
1,1,2-Trichloroethane	79-00-5			U227
1,1,2-Trichloroethane				See F001, F002, F004, F0005
Trichloroethylene	79-01-6		0.5	D040
Trichloroethylene	79-01-6			U228
Trichloroethylene				See F001, F002, F004, F0005
Trichlorofluoromethane				See F001, F002, F004, F0005
Trichloromethanethiol	75-70-7			P118
Trichloromonofluoromethane	75-69-4			U121
Trichlorophenol				See F020, F027
2,4,5-Trichlorophenol	95-95-4		400	D041
2,4,5-Trichlorophenol	95-95-4			See F027
2,4,6-Trichlorophenol	88-06-2		2	D042
2,4,6-Trichlorophenol	88-06-2			See F027
1,1,2-trichloro-1,2,2-trifluoroethane				See F001, F002, F004, F0005
Triethylamine				U404
1,3,5-Trinitrobenzene	99-35-4	R,T		U234

Contaminant	Chemical Abstract Number	Hazard Code	Regulatory Level (mg/L)	NHDES/EPA Hazardous Waste Number
1,3,5-Trioxane, 2,4,6-trimethyl-	123-63-7			U182
Tris(2,3-dibromopropyl) phosphate	126-72-7			U235
Trypan blue	72-57-1			U236
Uracil mustard	66-75-1			U237
Urea, N-ethyl-N-nitroso-	759-73-9			U176
Urea, N-methyl-N-nitroso-	684-93-5			U177
Used Oil				NH01
Vanadic acid, ammonium salt	7803-55-6			P119
Vanadium oxide V ₂ O ₅	1314-62-1			P120
Vanadium pentoxide	1314-62-1			P120
Vernolate				U385
Vinyl chloride	75-01-4		0.2	D043
Vinyl chloride	75-01-4			U043
Vinylamine, N-methyl-N-nitroso-	4549-40-0			P084
Warfarin, & salts, when present at concentrations greater than 0.3%	¹ 81-81-2			P001
Warfarin, & salts, when present at concentrations of 0.3% or less	¹ 81-81-2			U248
Xylene	1330-20-7	I		U239
Xylene				See F003
Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-	50-55-5			U200
Zinc				See F006
Zinc cyanide	557-21-1			P121
Zinc cyanide Zn(CN) ₂	557-21-1			P121
Zinc phosphide Zn ₃ P ₂ , when present at concentrations >10%	1314-84-7			P122
Zinc phosphide Zn ₃ P ₂ , when present at concentrations of ≤10%	1314-84-7			U249
Zinc, bis(diethylcarbamodithioato-S,S')-				U407
Zinc, bis(dimethylcarbamodithioato-S,S')-				P205
Ziram				P205
Notes:				
Ignitable waste	I			
Corrosive waste	C			
Reactive waste	R			
Toxicity characteristic waste	E			
Acutely hazardous waste	H			
Toxic waste	T			
¹ CAS number given for parent compound only				
Removed from EPA list (vol.52.No.116,6/17/97, p. 32974), but not from NHDES list				

Table C-2 List of Generic Process Waste (F) Codes

EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1- trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	T
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	T
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	I*
F004	The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	T
F005	The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	I, T
F006	Wastewater treatment sludge from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and align=center etching and milling of aluminum.	T
F007	Spent cyanide plating bath solutions from electroplating operations.	R, T
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	R, T
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	R, T
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	R, T
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	R, T
F012	Quenching waste water treatment sludge from metal heat treating operations where cyanides are used in the process.	T
F019	Wastewater treatment sludge from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.	T
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol.).	H
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or	H

EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
	manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.	
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	H
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4,5-trichlorophenol.).	H
F024	Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludge, spent catalysts, and wastes listed in § 261.31 or § 261.32).	T
F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	T
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.	H
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.).	H
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.	T
F032	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with § 261.35 of this chapter or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	
F034	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	
F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	
F037	Petroleum refinery primary oil/water/solids separation sludge--Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludge include, but are not limited to, those generated in: oil/ water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludge generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludge generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludge generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.	
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge--Any sludge and/or float	

EPA Hazardous Waste Number	Hazardous Waste	Hazard Code
	generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludge and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludge generated in DAF units. sludge generated in stormwater units that do not receive dry weather flow, sludge generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludge and floats generated in aggressive biological treatment units as defined in § 261.31(b)(2) (including sludge and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and f037, K048, and K051 wastes are not included in this listing.	
F039	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of this part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.)	

I Ignitable waste
 C Corrosive waste
 R Reactive waste
 E Toxicity characteristic waste
 H Acutely hazardous waste
 T Toxic waste

Table C-3 New Hampshire Generic Process Wastes

NH Haz Waste Number	Substance	Hazard Code
NH01	Used Oil	T
NH51 to NH74	Reserved	