

University of Maine at Presque Isle

181 Main Street
Presque Isle, Maine

Hazard Communication Program “Right-To-Know”

Written 2010
In Compliance with Federal OSHA Regulations

Purpose:

The purpose of the Hazard Communication Program is to address the specifically unique chemical hazards associated with the UMPI facility and staff and to establish a mechanism for its management in order to help ensure the health and safety of all University personnel working with or around chemical substances.

Scope:

The hazard Communication standard 29 CFR 1910.1200 (OSHA regulation, herein referred to as the “standard”) applies to all employers whose employees may be exposed to hazardous chemicals. Hazardous chemicals are defined by regulation, and are detailed in section 6.1 of this program. All hazardous chemicals found in the workplace under normal conditions of use or a reasonable foreseeable emergency conditions (i.e., spill or release of chemical) are included.

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1.0 UMPI Approval

It is the policy of the University of Maine at Presque Isle, to maintain an environment that will not adversely affect the health, safety, and well-being of students, employees, visitors, and neighboring populations.

The UMPI Hazard Communication Program, as outlined in the following sections, has been prepared to comply with the Occupational Safety and Health Administration's (OSHA) 29 CFR 1910.1200 Hazard Communication Regulation. This program establishes that all university personnel shall have the right-to-know information about the properties and potential safety and health hazards of chemicals that they may be exposed to in the course of their employment.

Those workers engaged in laboratory use of hazardous chemicals are not covered under this program, and should refer to the Chemical Hygiene Plan for guidance.

This program has been reviewed and approved by:

Date

Director of Physical Facilities

2.0 Background

The use of hazardous materials in today's regulatory environment has far-reaching implications. There are extensive, costly requirements for even the simplest use of a hazardous material. The Hazard Communication Program is but one of many requirements related to hazardous materials use. Additionally, there may be requirements for storage (Fire Codes, Risk Management and Prevention Plans, Superfund Amendments and Reauthorization Act, etc.), use and disposal (Resource Conservation and Recovery Act, Hazardous Waste Control Law), that are beyond the scope of this directive. These regulations reflect the high level of concern the general public has for the environment, as well as for the safety and health of individuals in the work environment.

The regulatory message being delivered by the new laws and regulations is:

If one can avoid, or minimize the use of a hazardous material, do so: It is necessary for all employees to not only use, store, handle, and dispose of all hazardous materials appropriately, but to first assess whether a less hazardous or even non-hazardous substitute exists. For instance, some industries have eliminated their use of organic solvents and returned to using soap and water for some processes.

Clearly, it is necessary to evaluate each case individually to determine whether it is appropriate to substitute products. Just as clearly, however, it has become time to perform this evaluation.

Reduce risk by reducing inventory: The basic concept underlying hazardous materials legislation and regulation is to reduce risk by minimizing inventory on hand. The elimination of hazardous materials involves not only substituting less hazardous products for more hazardous ones, but also to reduce stock. Cost savings achieved by bulk purchasing practices are more than lost by the costs associated with storing hazardous materials properly, or providing for their disposal due to outdated products.

It is, therefore, a goal of the Hazard Communication Program to ensure that all personnel responsible for selecting material for purchase have fully evaluated the relative hazards of and the necessity for using that specific material. Part of the intent of the Hazard Communication program is to train supervisors and employees in performing such an evaluation. This Program requires that this evaluation be routinely made as new information and products become available.

3.0 Purpose of Hazard Communication Program

The purpose of the Hazard Communication Program (HCP) is to address the specifically unique chemical hazards associated with the University of Maine facility and to establish a mechanism for its management in order to help ensure the health and safety of all University personnel working with or around chemical substances.

Occupational Safety and Health Administration (OSHA) standard 29 CFR 1910.1200 requires all employers using hazardous materials to establish, implement and maintain a

Hazard Communication Program. The Hazard Communication Program is intended to set procedures and guidelines to:

- identify all hazardous materials used in a workplace; and
- train these employees in the hazards of the materials and provide access to hazard summary sheets for each material (Material Safety Data Sheets).

In fulfillment of this purpose,

- all hazardous materials must be properly labeled; and
- training must be provided for all employees on the requirements of the Hazard Communication Program.

4.0 Scope of Hazard Communication Program

The Hazard Communication standard 29 CFR 1910.1200 (OSHA regulation, herein referred to as the “standard”) applies to all **employers** whose **employees** may be exposed to **hazardous chemicals**. Hazardous chemicals are defined by the regulation, and are detailed in section 6.1 of this program. All **hazardous chemicals** found in the workplace under normal conditions of use or reasonably foreseeable emergency conditions (i.e., spill or release of a chemical) are included, with the following exceptions:

- Hazardous waste;
- Tobacco products;
- Wood products, except chemically treated wood or wood dust, which is NOT exempted;
- Articles, as defined in the standard (manufactured items; not excluded are hazardous substances used in the articles);
- Food, alcoholic beverages, cosmetics and prescription or over-the-counter drugs intended for personal use by university personnel;
- Consumer products or hazardous substances, as defined in the Consumer Product Safety Act (15 U.S.C. 2051) and Federal Hazardous Substances Act (15 U.S.C. 1261), where the employer can show that it is used in the workplace for the purpose intended by the chemical manufacturer or importer of the product, and the use results in a duration and frequency of exposures that could reasonably be experienced by consumers when used for the purpose intended; unless employee exposure is greater than exposure to the ordinary consumer (e.g., cleaning products used by custodians in the workplace are regulated by the Hazard Communication Program);
- Ionizing and Non-ionizing radiation;
- Biological hazards.

Laboratories have a somewhat different responsibility under the law. The Hazard Communication Program regulation pertaining to laboratories is 29 CFR 1910.1450, and is detailed in the university-developed program for laboratories, (*Chemical Hygiene Plan*). This program allows an alternate approach for laboratory settings.

Those workers engaged in laboratory use of hazardous chemicals are not covered under this program, and should refer to the Chemical Hygiene Plan for guidance.

5.0 Program Administration and Responsibilities

The following departments and personnel shall be responsible for implementing this program and its policies to ensure the health and safety of university personnel.

5.1. The Department of Environmental Health and Safety (EH&S) shall act as “program administrator” and shall be responsible for the following:

- Develop and maintain the written Hazard Communication Program (HCP);
- Periodically review and update the program as new regulations are promulgated;
- Periodically review and assess the implementation and management of the written program;
- Provide guidance and technical assistance to departments regarding the program;
- Provide results of hazard analyses and monitoring results upon request to affected employees;
- Promote campus compliance with the program; and
- Provide a means by which employees can report suggestions, complaints, and concerns regarding the campus Hazard Communication Program.

5.2. The Department of Human Resources shall:

- Assist EH&S in the coordination and administration of personnel who fall within the auspices of the Hazard Communication Program;
- Analyze job descriptions relevant to potential hazardous chemicals exposure;
- Coordinate and schedule hazardous chemical exposure examinations of personnel covered by the HCP;
- Document and file all medical testing records;
- Submit statistics of testing, data and results to EH&S upon request;
- Make available, copies of medical results to all affected employees; and
- Provide affected personnel with follow-up medical examinations in accordance with the requirements of this program.

5.3. Vice Presidents, Directors, or Department Heads:

Vice Presidents, Directors, and Department Heads are responsible for Hazard Communication Program compliance within their departments. Vice Presidents, Directors, and Department Heads shall ensure that all departmental supervisors recognize their mandate in carrying out this program.

5.4. Supervisors and Faculty:

Supervisors at all levels hold the primary responsibility for ensuring that the Hazard Communication Program is properly implemented within their area. The program benefits the worker who has hands-on contact with, or works near hazardous materials. Health and safety assessments must be developed, however, by the supervisor, who has the most familiarity with the procedures that require the use of hazardous materials.

Supervisors and faculty shall:

- Acquire and maintain comprehensive knowledge of the program requirements;
- Act as the control point for all information flowing to or from a department regarding the Hazard Communication Program;
- Identify and provide information as it relates to the HCP to all individuals who need to know this information in the performance of their tasks;
- Implement and manage the day-to-day tasks associated with the program, and to advise department heads and supervisors on compliance;
- Ensure that an inventory of all non-exempt products containing hazardous chemicals within work areas for which they are responsible is conducted and maintained, and submit to EH&S;
- Ensure all products are labeled with product name, and appropriate hazard warnings which will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical. The use of all products containing hazardous materials is to be restricted by the supervisor until they are correctly labeled;
- Compile Material Safety Data Sheets (MSDSs) for all non-exempt products used within cognizant areas, and make the MSDSs available to all workers in these areas during their work shift;
- Ensure that employees are trained regarding specific hazards of all chemical products encountered in their work area;
- Document and retain departmental training and training records; and
- Provide and maintain appropriate personal protective equipment as required, and ensure proper usage by affected personnel.

5.5. UMPI Employees and Students shall:

- Become familiar with the requirements of the Hazard Communication Program prior to performing activities covered by the program;
- Abide by requirements established by the program and apply to the greatest extent possible the safety and health precautions specified by the university;
- Report any problems observed which could compromise health and safety to his or her immediate supervisor;
- Routinely utilize appropriate safety clothing and equipment; and
- Attend basic safety training and area-specific training as required under the Hazard Communication Program.
- Employees performing duties as contractors at non-university facilities shall comply with the requirements of the university's HCP.

5.6. Contractors retained by the UMPI shall:

- Inform university contract officials of the specific location of MSDS sheets of hazardous chemicals to be used on the job.

6.0 Hazard Identification, Evaluation and Mitigation

The Hazard Communication regulation, 29 CFR 1910.1200, specifies certain materials and defines categories of materials included in the program. It is the manufacturers' and importers' responsibility to assess the hazard of the products that they market, and to make this information available via the Material Safety Data Sheet (MSDS).

It is the responsibility of the employer that uses the materials in the workplace to keep track of the materials (inventory), assess the potential hazard posed to their workers, and to train the workers in these hazards.

6.1. Hazardous Chemicals

The OSHA standard requires a list of hazardous chemicals in the workplace as part of this program. The list serves as an inventory of everything for which an MSDS must be maintained. Initially, however, it serves as an indicator of the scope of the program required at each particular department.

Sometimes people think of "chemicals" as being solely liquids in containers. The Hazard Communication Program, however, covers chemicals in all physical forms – liquids, solids, gases, vapors, fumes, and mists – whether or not they are "contained". The hazardous nature of the chemical and the potential for exposure are the factors which determine whether a chemical is covered.

Hazardous chemicals, as defined by the regulation, and included within this program are listed in:

- 29 CFR 1910, subpart Z, Toxic & Hazardous Substances (the Z List);
- *Threshold Limit Values for Chemical Substances in the Work Environment*, American Conference of Governmental Industrial Hygienists, (latest edition);
- *Annual Report on Carcinogens*, National Toxicology Program (NTP), (latest edition);
- *Monographs*, International Agency for Research on Cancer (IARC), (latest editions).

Other chemicals which present a personal hazard as determined by scientific evidence are also included. If there is evidence to indicate that a component present in a chemical mixture in concentrations of less than one percent (or in the case of carcinogens, less than 0.1 percent) could be released in concentrations which would exceed an established OSHA permissible exposure limit or ACGIH Threshold Limit Value, or could present a health risk to employees in those concentrations, the mixture shall be presumed to present a hazard.

The lists cited above are relatively static, and do not normally undergo significant change. Recognizing this, however, the OSHA regulation was written so as to incorporate advancing knowledge of those substances that constitute a hazard to workers. Given the difficulty of each supervisor individually determining the potential hazard of each chemical or product, it is clear that a simpler approach must be taken. **Therefore, all hazardous chemicals with a National Fire Protection Agency (NFPA) health, flammability, or reactivity rating of 2 or higher, which fall within the scope of this program shall be used and maintained in accordance with applicable Federal, State and local regulations.** Refer to the EH&S manual, chapter part 11.1, Chemical Safety Policy, for details on NFPA flammability, health and reactivity rating definitions.

There are other chemicals used on campus for which MSDSs are not available. Refer to the University's Toxic Substances Control Act policy, available at EH&S, for more information.

6.2. Hazardous Chemical Inventory

6.2.1. Inventory Management

Inventory management is an essential part of the Hazard Communication Program because it is the basis for all training requirements. Complete, accurate and up-to-date inventories are essential to protect the worker from a chemical's hazardous properties, as well as to protect the supervisor from potential liability by failing to warn and train the employee. Departments are required to perform an annual inventory of chemical products on-hand. In addition, it is essential that an up-to-date

listing of chemicals on-hand be readily available for departmental personnel.

It is important to recognize the dynamic process of inventory management. Hazardous materials inventories are necessary for many different regulatory purposes today, including Uniform Fire Code requirements, Emergency Planning, and Hazard Communication. Therefore, the inventory form being used for this program may request information that extends beyond this specific program.

The basic concept of legislation related to hazardous materials is to reduce risk to personnel and property by reducing inventory. Therefore, it should be emphasized at every opportunity by those either coordinating or conducting an inventory that elimination of materials from on-hand supplies is to be promoted. **It is necessary to assure that any hazardous waste generated by reducing inventories is handled only as per established university procedure.**

6.2.2. The Annual Inventory

The Emergency Planning and Right-To-Know Act of 1986 (Title III of the Super Fund Reauthorization Act) requires facilities that make, store, or use certain chemicals to file reports with the state commission and local committees, if hazardous chemicals are present in regulated quantities. This inventory is required to be reported annually to specific local, state, and federal agencies. In order to ensure that these reports are submitted, the law allows for penalties of \$25,000 per occurrence, plus \$25,000 per day, for each day the violation continues.

The Department Head is responsible for obtaining completed annual inventories from each work site in that department. It is the work site supervisor's responsibility to assure that work sites within their cognizance have completed an annual inventory.

The procedure to follow for completing inventories will be as follows:

- The chemical inventory process is initiated by the Department of Environmental Health and Safety on, or before, November 1 of each year. At that time, EH&S will provide a comprehensive checklist and information packet to each department and serves as an information resource to all departments and remote sites.
- All workspaces and storage areas throughout the University must submit an annual chemical inventory to EH&S by January 15 of each year, for the previous calendar year. This applies to offices, laboratories, classrooms, office or lab storage areas, janitor's closets, dark rooms, maintenance areas, and remote sites.

- Department Heads shall ensure that a complete annual chemical inventory is performed in applicable workspaces and storage areas within their departments as per the guidelines set forth by this program, utilizing the Annual Chemical Inventory Report Form, illustrated in chapter 11 of the EH&S Policies and Procedures Manual.
- EH&S will provide each area with the proper forms, chemical lists and instructions necessary to complete the annual chemical inventory, provide assistance in proper completion of the annual inventory forms, tabulate and compile the data received, and submit annual summary reports to appropriate local, state and federal authorities and agencies.
- Site personnel determine and segregate materials no longer needed by the department due to change in need, substitution of products, expired shelf life, etc.;
- Supervisor arranges for proper hazardous waste disposal in conjunction with the Coordinator;

6.2.3. The "Continuous" Inventory:

Each department in conjunction with EH&S must perform an annual inventory of all non-exempt chemical products on hand. While the annual snapshot of chemicals fulfills a number of regulatory requirements, it does not provide for one major aspect of the Hazard Communication Program requirements.

The Hazard Communication program requires that employees must be trained in the hazards of a chemical prior to its usage. This in turn obligates the employer to be up-to-date at all times on the chemicals being utilized in the workplace, and mandates an MSDS be available in order to provide adequate training.

It is essential that work areas establish procedures for acquiring the MSDS and training the employee(s) in the hazards of a new product prior to its use. Therefore, it is the supervisors responsibility to maintain a current inventory of all products on hand or ordered, and to assure that the necessary training occurs. Each department must have procedures in place to control the selection and purchase of materials, and the acquisition and distribution of the MSDSs **PRIOR TO EMPLOYEE USAGE OF THE PRODUCT.**

6.3. Material Safety Data Sheets

The completed continuous inventory has two major implications:

- the acquisition, dissemination, filing and accessibility of Material Safety Data Sheets, and
- the training of all employees.

6.3.1 Material Safety Data Sheets (MSDS) are a printed description of the chemicals used in the workplace. These sheets provide the employer and employees with the necessary information to use the chemicals safely and how to deal with chemical accidents. There are a number of items which must be completed for every MSDS. These items are divided into sections which address specific issues as follows :

- Section 1 - Materials and Company Identification
 - Chemical name - usually the IUPAC or CAS name is given. Other common names and trade names may also be given.
 - CAS registry number - not required by OSHA, but most state right-to-know laws require it.
 - Date prepared - OSHA requires date literature was prepared or date of latest update.
- Section 2 - Material Composition and Information on Ingredients
 - Composition of mixtures - includes all hazardous materials over 1%, and all carcinogenic materials over 0.1%.
 - OSHA PEL - either a time weighted average limit for an 8-hour day or a maximum concentration exposure limit for the items on the OSHA list. In ppm or mg/m³.
 - ACGIH TLV - maximum exposure limits recommended by the American Congress of Governmental Industrial Hygienists
- Section 3 - Hazards Identification
 - Health effects - target organs or systems adversely affected by overexposure
 - Carcinogenicity of material and test results
 - Acute and chronic effects
- Section 4 - First Aid Measures
 - Treatment for exposure - inhalation, ingestion, eye contact, skin contact
- Section 5 - Fire Fighting Measures
 - Fire and explosion data - usually includes :
 - flashpoint - temperature at which the chemical vapor can be ignited

- auto ignition temperature - temperature at which chemical ignites spontaneously in air
 - flammability limits - concentrations in air above and below which it cannot burn
 - recommended extinguishing material
 - unusual fire and explosion hazards
- Provides basic instructions for addressing fire situation
- May include NFPA diamond markings
- Section 6 - Accidental Release Measures
 - Procedures for cleaning up small and large spills
 - Cites specific regulations surrounding chemical spills
- Section 7 - Handling and Storage
 - Provides information regarding safe storage of materials
 - Provides information regarding safe usage of materials
- Section 8 - Exposure Controls/Personal Protection
 - Types of protective equipment including gloves, clothing, eye protection, respiratory protection
 - This section will indicate if a hood, glove-box or extra ventilation is needed.
 - Administrative controls such as preplacement and periodic medical exams
 - Also will indicate type of shower or eyewash facility that should be available
- Section 9 - Physical and Chemical Characteristics
 - Usually includes such chemical information as boiling point, melting point, vapor pressure, specific gravity, solubility in water, and evaporation rate
 - Physical attributes such as physical state, appearance and odor
- Section 10 - Stability/Reactivity

- Indicates stability of material, what causes instability, incompatibilities and if hazardous decomposition products are possible.
 - Also may include conditions to avoid
- Section 11 - Toxicological Information
 - includes one or more of the following :
 - LD50 (lethal dose 50) - lethal single dose (usually oral) in mg/kg (milligrams of chemical per kilogram of animal body weight) of a chemical that results in the death of 50% of a test animal population
 - LC50 (lethal concentration 50) - concentration dose expressed in ppm for gases or micrograms of material per liter of air for dusts or mists that results in the death of 50% a test animal exposure administered in one exposure
 - May include information about reproductive effects
- Section 12 - Ecological Information
 - May be used to provide information on the effects the material may have on plants and animals
 - Provides information regarding the environmental fate of the material
- Section 13 - Disposal Considerations
 - Appropriate waste disposal methods
- Section 14 - Transport Information
 - Provides basic shipping requirements - shipping name and classification, packaging requirements and quantity limitations
- Section 15 - Regulatory Information
 - Cites pertinent EPA and OSHA regulations
- Section 16 - Other Information
 - Cites references used for construction of the document
 - May indicate author of document
 - May provide legal disclaimer

The handling of MSDSs can be difficult and complex depending on the number of materials used by a department and the rate of changeover from one material to another. In addition, as MSDSs are updated by the manufacturer they must be distributed in addition to the continued filing of the previously existing MSDS.

Each worksite supervisor shall maintain a file of MSDSs used within their area that is accessible to all employees at that worksite during their work shift, since regulations require that an employee have access to MSDSs at their worksite during work hours. **Supervisors of personnel involved in field work or at worksites away from the University campus will ensure that MSDSs are readily available to employees.**

The supervisor is responsible to assure that MSDSs are available for all products in use within their work area. For products currently in use MSDSs must be obtained immediately. For new products the MSDS must be obtained, and appropriate training provided **prior to the use of the product by any employee**, and it is the supervisor's responsibility to assure this.

The supervisor shall request an MSDS of products presently in use for which no MSDS is on file from Environmental Health & Safety.

6.4. Labeling

All hazardous materials used in the workplace must be labeled properly. Hazardous materials that are shipped in and used with their original container are most often already properly labeled by the manufacturer or distributor. Some hazardous materials which are repacked by a distributor are less subject to regulatory scrutiny and therefore may not be accurate. The supervisor should review these products to determine if they are correctly labeled before allowing their use.

Hazardous materials which are dispensed into smaller containers than the original shipping container for distribution and use around the workplace must meet various labeling requirements. Specifically the label of all of these containers must specify:

- Identity of the hazardous chemical(s) contained therein; and
- Appropriate hazard warnings, or alternatively, words, pictures, symbols, or a combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under this program provides specific information regarding the physical and health hazards of the hazardous chemical.

No hazardous chemicals shall be used which are not labeled according to these criteria. It is the supervisor's responsibility to assure proper labeling and **removal of any unlabeled materials** from the work area.

Supervisors will ensure that hazardous chemicals are labeled if left unattended.

Hazardous Materials Information System (HMIS) labels will be used for these secondary containers, as illustrated below:

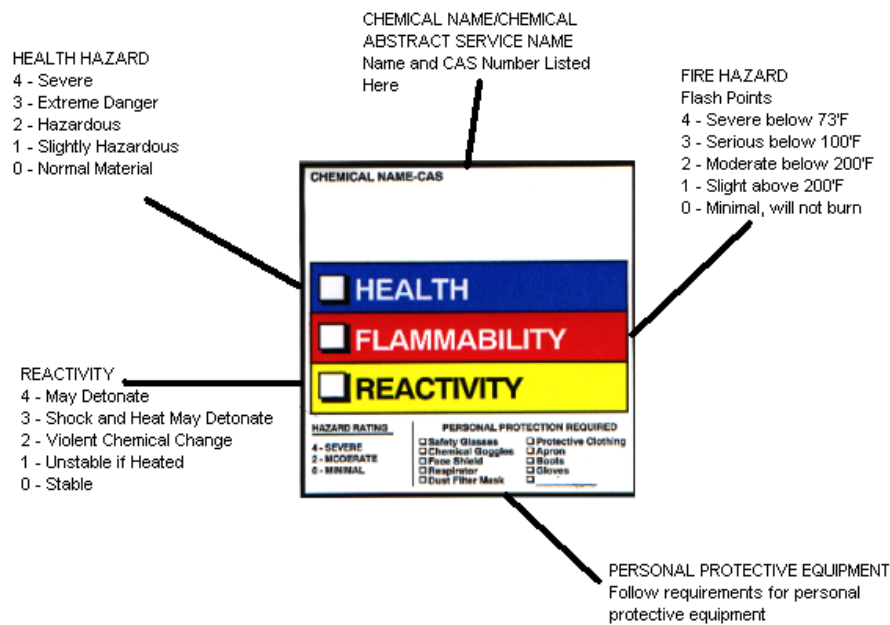


Figure 6.1 HMIS Label

6.4.1. Food or Liquid Consumption Where Hazardous Chemicals are Used

Toxic materials shall be separated from eating and drinking areas, in order to prevent possible ingestion of toxic materials. Therefore, no employee or student shall be allowed to consume or store food or beverages in any area exposed to toxic material. Additionally, no food or beverage shall be stored in a refrigerator or freezer where chemicals, biohazards, or other experimental processes are stored. No food or beverage shall be placed in a microwave oven or other heating device that is used to conduct experimental processes. Supervisors are responsible for identifying and labeling areas exposed to toxic materials with “NO EATING OR DRINKING PERMITTED IN THIS AREA” signs.

- Refrigerators, freezers, and microwaves used for the storage or processing of hazardous chemicals shall be labeled with wording that positively identifies that the equipment’s use is restricted. Words such as “CHEMICAL STORAGE ONLY”, or “CHEMICAL PROCESSING ONLY”, are appropriate.

7.0 Employee Awareness and Training

Another key component of the Hazard Communication Program is the training of employees. The training requirements for the Hazard Communication Program include the following:

Information and training on hazardous chemicals must be provided:

- at the time of initial assignment, or when new tasks are assigned for which training has not been received; or
- when a new hazardous chemical is introduced into the workplace.

Information and training may be designed to cover categories of hazards (e. g. flammability, toxicity, carcinogenicity) or specific chemicals. Chemical-specific information must always be available through labels and MSDSs.

All University of Maine employees, faculty, students and visiting researchers shall be fully trained in all aspects of this program relative to their job assignment or area of study.

7.1 Routine Training

Information and training to be provided includes:

- Details of the Hazard Communication Program, including an explanation of the labeling system and the MSDS, and how employees can obtain and use appropriate hazard information (See section 6.4);
- An explanation of the **purpose and contents of Material Safety Data Sheets**, including detail and guidance on interpreting the hazard information and technical terms included in the typical MSDS, and its intended application;
- A description of the **location and availability** of the MSDS file, the chemical inventory list and the Hazard Communication Program.
- Methods and observations that can be used to **detect the presence** of hazardous materials, such as instrumentation, odor, appearance;
- Protective measures for **minimizing exposure** and appropriate to the hazard, such as work practices, personal protective equipment, and emergency procedures;
- Appropriate handling, storage and spill procedures;
- Proper procedures for submitting a supervisor's first report of injury;
- Emergency and first aid procedures; and
- Specific hazard information which covers the **non-routine work** assignments which are periodically performed by employees.

Training and education provided to employees and others in the program must be documented with detailed records of training maintained by the department. The training records must be kept for the length of employment. A copy of all training records shall be forwarded to EH&S.

EH&S provides web-based safety training and will offer assistance in the training program to departments. Information regarding types of available training, audiovisual materials, scheduling, etc., may be obtained by contacting EH&S.

7.2 Non-Routine Training

Tasks may periodically be performed which may potentially expose employees to hazardous chemicals not ordinarily used in their normal work duties. Examples of non-routine tasks performed by the University may include: repairs, spill cleanup, servicing of equipment, annual maintenance, etc. Prior to starting work on such projects, affected personnel shall be presented information by their supervisor about hazards to which they may be exposed during the task.

This training must include the same level of detail and information necessary for routinely used hazardous chemicals. The training should, in fact, emphasize that the potential hazard of working with an unfamiliar material can be greater than with those that are handled routinely. As with all training **it is necessary to document the completion and effectiveness** of the training effort.

The obligation of this section is to emphasize to the employer that frequency of assignment does not excuse or change the type, scope and detail of required training.

8.0 Hazardous Waste Management

The disposal of hazardous chemicals which are outdated, substituted or otherwise unneeded potentially creates a hazardous waste. There are numerous regulations which establish complex parameters for the disposal of hazardous waste. **Therefore, no employee shall dispose of a potential hazardous chemical without verifying whether it is legally considered a hazardous waste.**

It is the responsibility of each department head and all appropriate managers and supervisors to assure that legal handling, storage and disposal requirements are followed.

Chemicals that are verified to be a hazardous waste must be disposed of properly. The requirements for safe and legal disposal change often and require constant attention to detail. For guidance on the proper procedure to follow, follow Hazardous Waste Disposal Procedures or contact Environmental Health & Safety.

9.0 Records Retention

9.1 Employee Medical Records

As per 29 CFR 1910.1020, the medical record for each employee shall be preserved and maintained for at least the duration of employment plus thirty years, except that the following types of records need not be retained for any specified period:

- Health insurance claims records maintained separately from the employer's medical program and its records;
- First aid records (not including medical histories) of one-time treatment and subsequent observation of minor scratches, cuts, burns, splinters, and the like which do not involve medical treatment, loss of consciousness, restriction of work or motion, or transfer to another job, if made on-site by a non-physician and if maintained separately from the employer's medical program and its records; and
- The medical records of employees who have worked for less than one year for the employer need not be retained beyond the term of employment if they are provided to the employee upon termination of employment.

9.2 Employee Exposure Records

Each employee exposure record shall be preserved and maintained for at least thirty years, except that:

- Background data to environmental (workplace) monitoring or measuring, such as laboratory reports and worksheets, need only be retained for one year as long as the sampling results, the collection methodology (sampling plan), a description of the analytical and mathematical methods used, and a summary of other background data relevant to interpretation of the results obtained, are retained for at least thirty years; and
- MSDS concerning the identity of a substance or agent need not be retained for any specified period as long as some record of the identity (chemical name, if known) of the substance or agent, where it was used, and when it was used is retained for at least thirty years; and
- Biological monitoring results designated as exposure records by specific occupational safety and health standards shall be preserved and maintained as required by the specific standard.

9.3 Employee Training Records

Employee training records will be retained at the office of the Director of Human Resources.

APPENDIX A: DEFINITIONS

ABSOLUTE PRESSURE	The total pressure within a vessel, pipe, etc., not offset by external atmospheric pressure.
AEROSOL	Fine aerial suspension of liquid (mist, fog) or solid (dust, fume, smoke) particles small enough to be stable.
CARCINOGEN	Substance or agent capable of causing or producing cancer in mammals.
CAS OR CHEMICAL ABSTRACT SERVICE NUMBER	An assigned number used to identify a chemical. CAS stands for Chemical Abstracts Service, an organization that indexes information published in Chemical Abstracts by the American Chemical Society and that provides index guides by which information about particular substances may be located in the abstracts. Sequentially assigned CAS numbers identify specific chemicals, except when followed by an asterisk(*) which signifies a compound (often naturally occurring) of variable composition. The numbers have no chemical significance. The CAS number is a concise, unique means of material identification.
CHEMICAL	Any element, chemical compound or mixture of elements and/or compounds.
CHEMICAL HYGIENE PLAN	Per 29 CFR 1910.1450, OSHA standard; "Occupational Exposures to Hazardous Chemicals in Laboratories." Effective 5/1/90. A written plan that includes specific work practices, standard operating procedures, equipment, engineering controls, and policies to ensure that employees are protected from hazardous exposure levels to all potentially hazardous chemicals in use in their work areas. The OSHA standard provides for training, employee access to information, medical consultations, examinations, hazard identification procedures, respirator use, and record keeping practices.
COMBUSTIBLE LIQUID	Term used by NFPA and DOT to classify certain liquids that will burn, on the basis of flash points. NFPA and DOT generally define "combustible liquids" as having a flash point of 100F or higher. They do not ignite as easily as flammable liquids; however, they can be ignited under certain conditions, and must be handled with caution.
COMPRESSED GAS	*A gas or mixture of gases having, in a container, an absolute pressure exceeding 40 psi at 70°F; or *A gas or mixture of gases having, in a container, an absolute pressure exceeding 104 psi at 130°F, regardless of the pressure at 70°F; or *A liquid having a vapor pressure exceeding 40 psi at 100°F.
CONTAINER	Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. Pipes, piping systems, engines, fuel tanks, or other operating systems in a vehicle are not considered to be containers for the purposes of this program.

COORDINATOR	A trained and qualified individual, appointed by the cognizant Department Head, to develop standard operating procedures (SOP) under the guidance of the university's Hazard Communication Program, to implement and attend to the details of the SOP, and to assist the Department Head in fulfilling his/her responsibilities under the auspices of this program.
EXPLOSIVE	A chemical that causes a sudden, almost instantaneous release of pressure, gas and heat when subjected to sudden shock, pressure, or high temperature.
FLAMMABLE	Defined by DOT and NFPA as a liquid with a flash point below 100 degrees F. Flammable liquids are: <i>Class 1 Liquids and may be subdivided as follows:</i> <ul style="list-style-type: none"> • Class 1A Flash point below 73 degrees F and boiling point below 100 degrees F. • Class 1B Flash point below 73 degrees F and boiling point at or above 100 degrees F. • Class 1C Flash point at or above 73 degrees F and below 100 degrees F.
FLASH POINT	Temperature at which a liquid will give off enough flammable vapor to ignite. There are several flash point test methods, and flash points may vary for the same material depending on the method used, so the test method is indicated when the flash point is given.
FORESEEABLE EMERGENCY	Any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.
HAZARDOUS CHEMICAL	Any chemical which is a physical or health hazard.
HEALTH HAZARD	A chemical for which there is statistically significant evidence, based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees.
LABEL	Any written, printed or graphic material displayed on or affixed to containers of hazardous chemicals.
MATERIAL SAFETY DATA SHEET (MSDS)	Written or printed material concerning a hazardous chemical which is prepared as per the format specified in OSHA standard 29 CFR 1910.1200.
MIXTURE	Any combination of two or more chemicals if the combination is not, in whole or in part, the result of a chemical reaction.
OXIDIZER	Substance that yields oxygen readily to stimulate the combustion of organic matter
PHYSICAL HAZARD	A chemical for which there is scientifically valid evidence that it is a combustible

liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.

PYROPHORIC

Materials that ignite spontaneously in air below 130 degrees F. Occasionally friction will ignite them.

TOXIC SUBSTANCE

Chemical or material that (1) has evidence of an acute or chronic health hazard, and causes cancer or reproductive effects in animals at any dose level; has a median lethal dose level of less than 500 mg per kg of body weight when administered orally to rats; has a median lethal dose level of less than 1000 mg per kg of body weight when administered by continuous contact to the bare skin of albino rabbits; or has a median lethal concentration in air of less than 2000 ppm by volume of gas or vapor, or less than 20 mg per liter of mist, fume, or dust when administered to albino rats.

UNSTABLE (REACTIVE)

A chemical which in the pure state, or as produced or transported, will vigorously polymerize, decompose, condense, or will become self-reactive under conditions of shock, pressure or temperature.

WATER-REACTIVE

A chemical that reacts with water to release a gas that is either flammable or presents a health hazard.

Z-LIST

OSHA's Toxic and Hazardous Substances Tables Z-1, Z-2, and Z-3 of air contaminants, found in 29 CFR 1910.1000. These tables record PEL's, TWA's, and ceiling concentrations for the materials listed. Any material found on these tables is considered to be hazardous.

APPENDIX B

Material Safety Data Sheets (MSDS) Request Form

Please complete this form and send it to Facilities via campus mail. Remember to list any Trade Names and include all active chemical ingredients for each material. Physical Plant must have chemical abstract service numbers (CAS) or product numbers and Manufacturer information in order to process your request. If you do not have Manufacturer information, please indicate whether or not you would like a generic MSDS.

TO: Department of Facilities
Attn: David St. Peter

DATE: _____

FROM: _____
Requestor Name

EXT.: _____

Department

Address

Please send me the following MSDS(s):

Chemical Name/Trade Name (all active ingredients.)	CAS / Product Number (if any)	Manufacturer Name	Manufacturer Phone# / Address