Department of

Environmental Safety, Sustainability and Risk

DIVISION OF ADMINISTRATIVE AFFAIRS

HAZARD COMMUNICATION PROGRAM

Approved as UMD Policy – May 2002

Revised – July 2012

UNIVERSITY OF MARYLAND, COLLEGE PARK, MD 20742-3133 ❋ (301) 405-3960 ❋ FAX (301) 314-9294

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Emergency Telephone Numbers

UM Emergency (FIRE - POLICE - RESCUE) - 24 hour # 911
Any telephone – (301) 405-3333
Verizon, AT&T, T-Mobile, or Nextel/Sprint cell phone - #3333

CALL IMMEDIATELY FOR ANY EMERGENCY INCLUDING INJURED OR SICK PERSON, CHEMICAL SPILL OR FIRE

Environmental Safety, Sustainability and Risk (Main Office) (Industrial Hygiene, Hazardous Waste Management, Fire Protection, Safety Education, Occupational Safety, Biological Safety, Radiation Safety)	301-405-3960
University Health Center Occupational Health (Medical Consultation and Evaluation)	301-314-8172
Workers' Compensation Office	301-405-5466
Facilities Management Work Control (Repair of Facility Equipment Deficiencies, e.g., fume hoods, emergency eyewashes, ventilation, etc.)	301-405-2222
University Department of Public Safety - Non-Emergency (To contact ESSE staff after normal business hours)	301-405-3555

Policy on Hazard Communication

I. Purpose.

This is a statement of official University policy to establish the process for compliance with the Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.1200 (Hazard Communication) and Maryland regulations COMAR 09.12.33 and Title 5, Subtitle 4, §5-401 thru 410 of the Annotated Code of Maryland – Labor and Employment Article (Access to Information About Hazardous and Toxic Substances). These regulations and this policy are intended to ensure employees using hazardous materials are notified of the associated risks and the methods to protect themselves.

II. Policy.

The University is dedicated to providing safe and healthful facilities for students and employees, and complying with federal and State occupational health and safety standards. Faculty, staff and students all share responsibility for minimizing their exposure to hazardous chemical substances.

The Hazard Communication Program shall be implemented for all non-laboratory facilities at the University of Maryland where hazardous chemicals are handled. The UMD Chemical Hygiene Program shall be implemented for all teaching, research and analytical laboratory facilities where hazardous chemicals are handled.

III. Responsibilities.

A. Department of Environmental Safety, Sustainability and Risk shall:

(1) Develop, administer and update the UMD Hazard Communication Program;
(2) Manage the MSDSOnline® account for the University of Maryland. Assure that the MSDSOnline® program includes all available electronic safety data sheets (SDS) and material safety data sheets (MSDS) as advised necessary by UMD departments.
(3) Distribute the Hazard Communication Program to UMD departments;
(4) Provide consultation, worksite monitoring (sampling), advisory assistance and information concerning use of hazardous chemicals;
(5) Investigate and document significant chemical injuries, accidents and exposures;
(6) Develop, procure and maintain SDS resources for UMD access;
(7) Assist departments to obtain required SDSs;
(8) Provide Chemical Information Lists to State and local regulatory and emergency response agencies as necessary;
(9) Archive all Chemical Information Lists as a permanent record of potential employee chemical exposure;
(10) Train new Hazard Communication Coordinators on their specific duties;
(11) Provide training to workers and supervisors involved with operations where hazardous materials are handled;
(12) Maintain records of training conducted by ESSR staff;
(13) Make training records available to Hazard Communication Coordinators (or designees); and
(14) Develop and distribute basic Hazard Communication information to all employees.

B. Department Heads shall:
   (1) Ensure implementation of the Hazard Communication Program for facilities and personnel under their control;
   (2) Designate an individual(s) as Hazard Communication Coordinator to implement the Hazard Communication Program;
   (3) Notify ESSR prior to conducting operations that commercially manufacture, distribute or import hazardous chemicals; and
   (4) Inform supervisors of their Hazard Communication management responsibilities;

C. Departmental Hazard Communication Coordinator(s) shall:
   (1) Develop the workplace-specific Hazard Communication Program by completing the Program Summary and forwarding copies and Chemical Information List elements to ESSR;
   (2) Ensure an up-to-date inventory (Chemical Information List) is maintained identifying all hazardous chemicals used, acquired or maintained by staff, and forward a copy to ESSR annually;
   (3) Ensure that a system is established to make Safety Data Sheets (SDSs) readily available to employees for hazardous materials in the workplace;
   (4) Ensure that a system is established for accessing SDSs during emergencies;
   (5) Ensure that SDSs used by the department are fully included on the UMD MSDSOnline® system;
   (6) Ensure all workers using hazardous materials are properly trained. This includes instructing employees on the location for accessing hard copies of SDSs, and/or instructing employees on the procedure to locate and print out SDSs using the MSDSOnline® system;
   (7) Ensure a system is established for maintaining training records; and
   (8) Report Hazard Communication implementation problems to the Department Head for action and resolution.

D. Supervisors of workers handling hazardous materials shall:
   (1) Ensure employees have access to the written Hazard Communication Program;
   (2) Ensure employees receive training in the safe use, handling and storage of hazardous chemicals;
   (3) Ensure hazardous materials are evaluated to determine necessary precautions;
   (3) Ensure that containers of hazardous materials are labeled properly;
   (4) Ensure that SDSs are readily available to employees;
   (5) Ensure that all employees who use hazardous materials are familiar with the contents of SDSs, know where hard copies of SDSs are available in their department and/or are familiar with the MSDSOnline® system and are able to access electronic copies of the SDS for the hazardous materials they use;
   (6) Implement protective measures to minimize or eliminate employee exposure to hazardous chemicals;
   (7) Follow requirements established by the department's Hazard Communication Coordinator(s);
   (8) Assess the hazards and protective measures associated with non-routine tasks involving hazardous materials; and
   (9) Ensure completion of First Reports of Injury for employee illnesses or injuries caused by exposure to hazardous materials.

E. Project Managers shall:

(1) Ensure SDSs are available for hazardous materials used by contractors in locations where UMD employees may be exposed;
(2) Determine the nature of hazardous materials present in areas where contractors will work, and ensure contractors are informed of chemical hazards they may be exposed to while working in UMD facilities; and
(3) Coordinate exchange of hazardous chemical information between contractors and UMD employees when chemical exposures are reported.

F. University Health Center shall:
(1) Coordinate and direct all required or recommended medical surveillance programs;
(2) Provide medical consultations and examinations for workers who suspect overexposure to hazardous chemicals;
(3) Report to the supervisor an employee's ability to continue performing work following chemical exposure;
(4) Report injuries and illnesses caused by hazardous chemicals to ESSR for follow-up; and
(5) Maintain medical records relating to consultations, examinations and medical surveillance as required by law.

G. Employees shall:
(1) Attend Hazard Communication training and comply with training documentation procedures;
(2) Know where to obtain information on the name of the Department Hazard Communication Coordinator, the location of hard copies of SDSs and/or how to obtain a SDS from the electronic MSDSOnline® system.
(3) Be familiar with and implement protective measures as instructed by supervisors and as specified in SDSs;
(4) Report all workplace injuries, chemical exposure incidents or unsafe work conditions to supervisors as soon as possible; and
(5) Follow the requirements of the Hazard Communication Program.

H. Contractors shall:
(1) Develop and implement their own Hazard Communication Program; and
(2) Upon request by UMD personnel (e.g., Project Managers) identify hazardous chemicals used on campus and provide access to SDSs.

IV. Information

Assistance will be provided by ESSR to any Department requesting guidance or training to satisfy implementation of this policy.

Glossary of Terms

The following terms used in this Hazard Communication Program are defined as follows:

Article - A manufactured item formed to a specific shape or design that has end use functions dependent upon that shape/design, and that does not release or otherwise result in exposure to a hazardous chemical under normal conditions of use. A chair is an article. Wood that is cut during construction of the chair may be considered hazardous due to health effects associated with inhalation of dusts.

Chemical - Any element, chemical compound or mixture of elements and/or components.

Consumer Commodity - Any article, product, or commodity which is available to consumers; and which is used in the same manner, frequency and duration as the typical consumer.

Employee - A worker who may be exposed to hazardous chemicals during normal operating conditions or during foreseeable emergencies. Workers such as office workers who encounter hazardous chemicals only in non-routine, isolated instances are not covered by the Hazard Communication Program.

Exposure or Exposed - Means that an employee in the course of employment comes in contact (inhalation, ingestion, skin contact or absorption) with a chemical that is a physical or health hazard; and includes potential (including accidental) exposure.

Foreseeable Emergency - Any potential occurrence such as, but not limited to equipment failure, container rupture or failure of control equipment that 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. Hazardous chemicals include carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system and agents which damage the lungs, skin, eyes or mucous membranes

Immediate Use - Means that the chemical will be under the control of and used only by the person who transfers it from a labeled container, and only within the work shift in which it is transferred.

Mixture - Any combination of two or more chemicals other than components resulting from a chemical reaction.

MSDSOnline® - A commercial management system that allows UMD employees to access electronic copies of SDSs. Assigned UMD Administrators place SDSs for the products their departments use in an electronic binder, known in the system as an "eBinder". General Users, if they choose their department, will have their search initially limited to the eBinder where they will only see the SDSs for the products used by their unit - however, the system

also allows the user to search the millions of SDSs available from the vendor. When a manufacturer updates an SDS with new information, the system allows UMD to instantly update the eBinder allowing users to view the most up-to-date information available.

Non-Routine Tasks - Tasks involving the use of a hazardous material for a purpose other than that intended (e.g., using gasoline to degrease a stove), or tasks that are not conducted routinely and that involve the use of a hazardous material (e.g., cleaning a boiler's combustion chamber).

Physical Hazard - A chemical or mixture that is combustible, explosive, pyrophoric, reactive or is a compressed gas, oxidizer or organic peroxide.

Project Manager - The UMD employee responsible for directing and overseeing the activities of an outside contractor. Most Project Managers at UMD work for the Facilities Management Department.

Trade Secret - Any confidential formula or information that is used in an employer's business and gives that employer an opportunity to obtain an advantage over competitors who do not know or use it.

Use - To package, handle, react, emit, extract, generate as a byproduct, or transfer.

Work Area - A defined space in a workplace where hazardous chemicals are produced or used, and where employees are present (e.g., Physics Machine Shop).

Workplace - An establishment at one geographical location containing one or more work areas (e.g., Facilities Management - Building Services).

Identification of Hazardous Materials

Specific definitions of hazardous materials and hazardous material categories may be found in Appendix B of the OSHA Hazard Communication Standard (29 CFR 1910.1200). Articles and Consumer Commodities (as defined in this Program) are not considered hazardous.

Hazard Communication Coordinators and Supervisors share responsibility for the identification of chemical hazards in their workplaces. Hazardous substances in unlabeled piping must also be identified if employees are anticipated to have direct contact (including inhalation) with the substance.

Information concerning physical and health hazards of chemical substances are contained in the materials' SDSs. These documents are available from:

(a) Environmental Safety, Sustainability and Risk website: https://essr.umd.edu/

(b) Department of Environmental Safety, Sustainability and Risk (ESSR) at (301) 405-3960, or after normal business hours through UMD Police Emergency Dispatcher at 911; or

(c) The vendor, manufacturer or distributor. (A SDS must be provided at the time of initial purchase by the vendor, manufacturer or distributor without charge. A nominal fee may be assessed for additional copies.)

Hazard Communication Coordinators and/or Supervisors must identify and evaluate the hazardous properties of all chemical substances used in the workplace. This information must be communicated to employees who have the *potential* for exposure to hazardous chemicals. If hazardous chemicals will be used in a non-routine manner (see definition), it is the responsibility of the supervisor to ensure that all hazards are assessed and appropriate protective measures implemented.

Use of any of the following materials may be subject to specific occupational safety and health standards:

2-Acetylaminofluorene
Acrylonitrile
4-Aminodiphenyl
Asbestos
Benzene
Benzidine
1,3-Butadiene
Cadmium
bis-Chloromethyl ether
Chromium (VI)
Coke oven emissions
3,3'-Dichlorobenzidine (and its salts)
1,2-Dibromo-3-Chloropropane
4-Dimethylaminoazobenzene
Ethyleneimine
Ethylene oxide
Formaldehyde
Inorganic arsenic
Methyl Chloromethyl Ether
Methylene chloride
Methylenedianiline
alpha-Naphthylamine
beta-Naphthylamine
4-Nitrobiphenyl
N-Nitrosodimethylamine
beta-Propiolactone
Vinyl chloride

Users of these materials must comply with the provisions of the applicable substance-specific standard if employee exposure routinely exceeds the OSHA-mandated permissible exposure limit (or Action Level, if specified). Copies of these standards may be obtained from ESSR or through the OSHA Web site at http://www.osha.gov/. Supervisors or Hazard Communication Coordinators may arrange for exposure monitoring by contacting ESSR at 301-405-3960.

Hazard Determination

All hazardous chemicals used or stored at the University of Maryland are purchased materials. There are no manufactured or intermediate hazardous chemicals in UMD facilities subject to this Hazard Communication Program except in research laboratories. Chemical manufacturers or distributors are responsible for determining material hazards.

Additional requirements not addressed by this Hazard Communication Program apply to manufacturers, distributors and importers of hazardous materials. The Department of Environmental Safety, Sustainability and Risk must be notified in advance if any employee on campus plans to:

(a) **Manufacture** chemical materials for non-research use or distribution;
(b) **Distribute** hazardous chemicals to non-UM entities; or
(c) **Import** hazardous materials from other countries for the purpose of supplying them to distributors or non-UMD entities.

Chemical Information Lists

Departments using hazardous materials must assemble and maintain accurate Chemical Information Lists that identify the hazardous materials in the workplace. The Hazard Communication Coordinator is responsible for ensuring the list is developed and maintained. Departments may develop a single list identifying hazardous materials used in multiple work areas, or may maintain a separate list for each work area. If multiple work areas are included in a single list, departments must include a system to permit the identification of hazardous materials by work area. Hazardous materials contained in piping systems where there is reasonable cause to suspect employee contact must also be included.

Chemical Information Lists must include:

(a) Complete name and business address of the employer;
(b) Date of preparation or revision;
(c) The product name (must match the name on its SDS); and
(d) The hazardous chemical constituents of the material unless the SDS indicates the composition is a Trade Secret.

Additional guidance information and examples of Chemical Information Lists are contained in Appendix F.

If a new hazardous material is brought to the workplace for use, it must be added to the Chemical Information List within 30 days. The date of addition must appear next to its entry. ESSR must be advised within 30 days when new hazardous materials are brought to the workplace so the MSDSOnline® system can be updated. Adjustments to the Chemical Information List should also be made within 30 days when hazardous materials are removed from inventory.

If symbols, letters or numbers are used to identify separate work areas, a key, map or other appropriate descriptive information must be included.

The list(s) shall be attached to the Hazard Communication Program as Appendix C Chemical Information Lists must be reviewed every year to assure they are accurate and complete. Lists will be re-alphabetized by product name annually, and copies forwarded to ESSR for recordkeeping. ESSR is responsible for providing Chemical Information Lists to the Maryland Department of the Environment and local regulatory and response agencies as necessary.

ESSR will archive all Chemical Information Lists to serve as an historical record of employees' potential chemical exposures.

Container Labels

In most cases, hazardous chemical containers at the workplace must be clearly labeled, tagged, or marked in accordance with the Hazard Communication Standard, either with:

- The product identifier, signal word, hazard statement(s), pictogram(s), and precautionary statement(s); or
- The product identifier and words, pictures, symbols, or 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 the Hazard Communication Program, will provide employees with the "specific" information regarding the physical and health hazards of the hazardous chemical.

While not required for in-house labeling, the name and address of the manufacturer, importer, or other responsible party may also be found on the label, tag, or marking because shipped containers of hazardous chemicals must bear this information. Hazards not otherwise classified, if any, do not have to be addressed on a container but must be addressed on the SDS.

Because the product identifier is found on the label, the SDS, and our chemical inventory, the product identifier links these three sources of information, permitting cross-referencing.

The product identifer used by the supplier may be a common or trade name, a chemical name, or a number. Employees should be aware that label information can be verified by referring to the corresponding SDS.

Hazard Communication Coordinators are responsible for ensuring that all hazardous chemicals in containers at the workplace have proper labels or other forms of warning that are legible, in English (although other languages may also be included), and displayed clearly on the container or readily available in the work area throughout each work shift, as required. This person will update labels, as necessary. The supervisor ensures that newly purchased chemicals are checked for labels when containers are received.

If employees transfer chemicals from a labeled container to a portable, secondary container that is intended only for their IMMEDIATE use, no labels, tags, or markings are required on the portable container. Otherwise portable containers must be labeled, tagged, or marked in accordance with our in-house labeling system for workplace containers.

OSHA also allows for alternatives to labeling, tagging, and marking to convey the required information, as long as the containers to which the alternative method is applicable are identified.

Safety Data Sheets

Safety Data Sheets (SDSs) are the primary source of reference information used by UMD supervisors and employees to evaluate materials for potential hazards, and to determine necessary precautions for safe use. Manufacturers, distributors or importers of hazardous materials must generate a SDS for each hazardous chemical, and are required to provide it to purchasers when the material is ordered or delivered. Formats for SDSs must contain the following data:

(a) Product identification (Name of material, manufacturer name, address, phone);
(b) Hazard identification
(c) Composition - Identity of the hazardous constituent(s);
(d) First Aid Measures;
(e) Fire-fighting measures;
(f) Accident release;
(g) Handling and storage;
(h) Exposure control, PPE, exposure limits;
(i) Chemical and physical properties;
(j) Stability and reactivity;
(k) Toxicological information;
(l) Ecological information;
(m) Disposal considerations;
(n) Transportation;
(o) Regulatory information; and
(p) Other.

Hazard Communication Coordinators are responsible for ensuring that a system is established for providing employees access to SDSs in the workplace. Supervisors are responsible for ensuring that employees have access to SDSs in the workplace. The SDS must be identified with the same name used on the Chemical Information List. If employees move between work sites, the SDSs may be kept at the primary work location if a system for access is established in this written program.

The Hazard Communication Coordinator is responsible for ensuring that a system is implemented for providing employee access to SDSs in the event of an emergency.

Electronic access or other "non-paper" formats are permissible if employees are assured immediate access to the information. SDSs must be in English, but copies may also be provided in other languages if desired.

The SDS does not need to include identification of chemical constituents if the material is classified a "trade secret." All other elements of the SDS must be completed to reflect the hazards and necessary precautions. Identification of the constituents must be disclosed to health care providers when requested, and when an employee's health is at issue.

SDSs must be available to employees in the work area before the hazardous materials are used. Designated employee representatives (e.g., union representative) must also be provided SDSs upon request. Supervisors are responsible for ensuring that SDSs are available prior to assigning tasks to employees that involve exposure to hazardous materials. If a SDS for a hazardous material is not available, employees shall not be assigned tasks involving that material. If an employee or designated representative requests a copy of a SDS, it must be provided within five days.

SDSs are not required to be available in a language other than English. If an employee is unable to understand or interpret the information contained in the SDS, it is the Supervisor's responsibility to ensure appropriate direction or translation is provided to assure a clear understanding of hazards and protective measures.

If a department relies on electronic means to access SDSs, a secondary method of access is required to ensure availability during power outages, computer failures, etc. Hazard Communication Coordinators may establish an internal system for hard copy access, or may designate ESSR as an emergency repository of SDSs. If ESSR is designated a point for emergency SDS access, Hazard Communication Coordinators must ensure ESSR is provided with hard copies of all SDSs. Employees must be notified of methods to obtain an SDS during an emergency.

ESSR maintains a SDS library for most hazardous laboratory chemicals used or stored at UMD. SDSs for non-laboratory chemicals are available electronically through the MSDSOnline® system available at the ESSR website::
(https://essr.umd.edu).

A detailed description of how to obtain a copy of a SDS is provided as Appendix D of this document.

In addition to SDSs provided by Supervisors and the Hazard Communication Coordinator, UMD employees may obtain a copy of a SDS from ESSR by phone (301-405-3960), E-Mail (safety@umd.edu) or by written request. During "off-hour" emergencies, SDSs can be obtained by requesting the University Department of Public Safety dispatcher (301-405-3555) page the on-call Occupational Safety & Health staff from ESSR who will coordinate information retrieval.

If SDSs are not received with a new chemical/material, the Hazard Communication Coordinator must contact the manufacturer or distributor to obtain the SDS. ESSR will provide assistance if needed and requested.

Information and Training

Within two months of hiring, every UMD employee receives a copy of the brochure "Your Right to Know" through the campus mail system. This brochure provides basic Hazard Communication information to the campus community. A copy of the brochure is included as Appendix A.

Each employee with potential exposure to hazardous chemicals shall be provided information and training regarding the hazards of the chemicals in their work area. Employees shall be informed of:

(a) Contents of the OSHA Hazard Communication Standard (29 CFR 1910.1200) and its appendices;
(b) Location and availability of the UMD Hazard Communication Program;
(c) Permissible exposure limits (PELs) for OSHA-regulated substances or recommended exposure limits if no PEL is listed;
(d) Methods and observations used to detect the presence or release of a hazardous chemical;
(e) Hazardous chemical properties including physical and health hazards associated with chemical exposure;
(f) Measures employees can take to protect themselves from chemical hazards including personal protective equipment, work practices and emergency procedures;
(g) Description of labeling systems;
(h) Description of GHS pictograms
(i) Hazardous chemical spill and leak procedures;
(j) Explanation of the SDS; and
(k) Signs and symptoms associated with exposures to hazardous chemicals used in the workplace.

Initial Training Requirements:

Option 1:

Departments may conduct their own initial Hazard Communication training if the following are satisfied:

(a) The trainer must attend the Train-the-Trainer Program provided by ESSR,
(b) The training program content must satisfy all regulatory requirements and conditions of the UMD policy, and
(c) The trainer must be identified in the Hazard Communication Program Summary.

ESSR reserves the right to periodically audit training conducted by other departments.

Option 2:

Training may be provided by ESSR staff during regularly-scheduled classes or by other arrangements (subject to staff availability) by contacting ESSR at 301-405-3960. ESSR training schedules are available through the ESSR website: (https://essr.umd.edu).

Initial training for employees shall be coordinated through the department's Hazard Communication Coordinator. Retraining is not required unless work conditions change or unless a supervisor believes additional training is necessary.

Supplemental or Hazard-Specific Training

Hazard Communication Coordinators and/or Supervisors shall also provide or coordinate supplemental training to affected employees that identifies the specific hazardous chemicals in the workplace, the protective measures necessary to safely work with the materials and procedures to access SDSs. When new chemicals are brought into the workplace, additional training may be required to ensure employees understand the hazards and necessary protective measures. It is recommended that all training be documented by the Hazard Communication Coordinator or Supervisor.

Copies of GHS Pictograms, along with a description of hazards applicable to the symbol, are included in Appendix G.

Exposure Monitoring

OSHA has established Permissible Exposure Limits (PELs) for employee exposures to certain substances. Supervisors are responsible for identifying situations to the Department of Environmental Safety, Sustainability and Risk (ESSR) that may require exposure assessments. ESSR is responsible for conducting assessments and/or personal exposure monitoring when requested. These services are normally provided free-of-charge except for self-support organizations.

PELs are specified in the OSHA regulation 29 CFR 1910, Subpart Z Toxic and Hazardous Substances which can be accessed at: http://www.osha.gov. PELs are usually included in the SDS and can also be obtained from ESSR by calling 301-405-3960 or by email at safety@umd.edu.

Permissible Exposure Limits are often listed as:

- Eight-hour time-weighted average (TWA)
  The average concentration to which an employee may be exposed to a particular chemical for up to eight hours per day, five days per week.
- Short Term Exposure Limit (STEL);
  The average concentration to which an employee may be exposed to a particular chemical for a limited period (e.g., fifteen minutes); and/or
- Ceiling (C)
  The maximum concentration to which an employee may be exposed to a particular chemical at any time.

Employee exposure should be monitored in the following circumstances:

(a) Initially, where there is reason to believe that an employee's exposure to a chemical substance exceeds an action level (or in the absence of an action level, the PEL) for an OSHA-regulated substance; and

(b) Periodically, where initial monitoring has disclosed employee exposure over the action level or PEL.

The training provided to Hazard Communication Coordinators by ESSR will include information regarding examples of situations where employee exposure might exceed regulated or recommended exposure limits. ESSR will perform exposure assessments and/or monitoring at the request of any supervisor or employee. The employee will be provided written notification of monitoring results within 15 working days after receipt of results by the University. Supervisors may call ESSR at 301-405-3960 or email at safety@umd.edu to coordinate exposure monitoring.

Where initial monitoring discloses employee exposure over the action level or PEL, the affected employee must be provided with respiratory protection until engineering controls are available to control the exposure. If engineering controls are not feasible, respiratory protection may be used on a permanent basis.

Medical Consultation and Examinations

Employees who work with hazardous chemicals should be referred for medical consultation, examination, and/or surveillance (as appropriate to the circumstances) whenever:

(a) An employee develops signs or symptoms associated with a hazardous chemical to which the employee may have been exposed;
(b) An event takes place in the work area that precipitates a hazardous exposure (e.g., significant spill of volatile toxic material);
(c) Exposure monitoring reveals an exposure level above the action level or Permissible Exposure Limit for an OSHA-regulated substance for which there are medical surveillance requirements; or
(d) Required by UMD policy.

The University has established procedures for responding to job-related injuries. These procedures should be followed if potentially-injurious exposures to hazardous chemicals occur. In the event of life-threatening injuries or illnesses, the Emergency Dispatcher (911) should be immediately notified. All injury or illness occurring as a result of work activities must be reported to the Workers' Compensation Office immediately after the incident occurs or after the injury is treated. All incidents of injurious chemical exposure, including disposition actions, should be reported to ESSR.

Employees who suspect they require medical assistance due to chemical exposure shall inform their supervisor or the Hazard Communication Coordinator who will help the employee obtain the necessary examination and treatment. The following information should be provided to the health care professional at the time that an employee is referred for medical consultation or examination:

(a) Identity of the chemical(s) to which the employee may have been exposed;
(b) Description of the conditions under which the exposure occurred, including any quantitative exposure data, if available; and
(c) A description of the signs and symptoms of exposure that the employee experienced, if any.

Personal Protective Equipment

Supervisors in workplaces where hazardous materials are used must also comply with the provisions of the UMD Personal Protective Equipment (PPE) Program. This Program requires a written hazard assessment be conducted to identify the equipment necessary to protect employees against chemical (and other) hazards. PPE specified in the hazard assessment must be utilized by employees performing the identified task(s). Employees must be trained in the care and use of PPE.

Personal protective equipment requirements or recommendations specified by the label or SDS of a hazardous material must be followed. When new hazardous chemicals are brought into the workplace, the individual designated by this program must evaluate the materials, notify employees of necessary PPE and ensure that the equipment is available. Supervisors are responsible for ensuring employees use all required protective equipment.

Additional information concerning the Personal Protective Equipment Program may be obtained from Environmental Safety, Sustainability and Risk by calling 301-405-3960, or through the ESSR website at: https://essr.umd.edu.

Recordkeeping

Records must be generated and maintained to document compliance with the Hazard Communication Program. The following types of records will be maintained as designated below:

(a) **Chemical Information Lists** - shall be maintained by Departmental Hazard Communication Coordinators. Old lists may be discarded by departments when revised. Copies of Chemical Information Lists shall be forwarded to ESSR. The Department of Environmental Safety, Sustainability and Risk (ESSR) will archive copies of all Chemical Information Lists;

(b) **Training Records** - shall be maintained by the department responsible for conducting the training and as identified in the Hazard Communication Program. Training records for employees must be maintained for at least the duration of employment.
Records of Hazard Communication training conducted by the Department of Environmental Safety, Sustainability and Risk (ESSR) are maintained.
Access to training records is available through:
- The ESSR web site at essr.umd.edu. Employees may view their entire training history through the "Your Training Record" link.
- Training records may also be obtained by phoning 301-405-3980 or 301-405-3965.

Records of non-radiation worker training are maintained by the Radiation Safety Office;

(c) **Safety Data Sheets** - must be immediately accessible to workers and maintained by the individual(s) identified in this Program. Old SDSs and MSDSs may be discarded when replaced by more current versions.
ESSR maintains copies of many SDSs and MSDSs; and facilitates UMD access to several web-based SDS libraries. Requests for SDSs may be made by email (safety@umd.edu), telephone (301-405-3960), or during off-hour emergencies by paging on-call ESSR employees through the University Police (301-405-3555);

(d) **Hazard Communication Program Summaries** - shall be completed by each Hazard Communication Coordinator as a component of the written Hazard Communication Program. Copies of summaries shall be forwarded to Environmental Safety, Suite 0103, Seneca Building, 4716 Pontiac Ave;

(e) **Medical Records** - shall be maintained by the University Health Center in accordance with the requirements OSHA 29 CFR 1910.1020 *(Access to Employee Exposure and Medical Records*);

(f) **Exposure Assessment/Monitoring Records** - shall be maintained by ESSR. Supervisors and/or Hazard Communication Coordinators shall maintain copies of exposure assessment/monitoring records pertaining to operations and materials under their control; and

(g) **Incident Investigation Reports** - shall be maintained by ESSR.

Outside Contractors

Hazardous chemicals are often used by non-UM employees during the course of construction or renovation activities. These contractors are required to implement a Hazard Communication Program to assure their employees are trained and protected against hazardous chemicals.

Since contractors bring hazardous chemicals to their work areas, and since hazardous materials are often present in the UMD facilities where they work, mutual access to information is required. The Project Manager has the following communication responsibilities:

(a) Upon request by the contractor, obtain information about hazardous chemicals that are present in the affected UMD work area(s) and coordinate access to Safety Data Sheets (SDSs) through the facility user;
(b) Determine (through the appropriate Hazard Communication Coordinator, or designee) if the contractor must implement precautionary measures to protect his/her employees during the course of work or in foreseeable emergencies;
(c) Determine if precautionary measures are needed to protect UMD faculty, staff and students from hazardous materials used by the contractor;
(d) Convey information to the contractor (through Hazard Communication Coordinator or designee) any UMD labeling policies implemented in affected work areas (e.g., Laboratory Warning Signage System); and
(e) Upon request by UMD employees, obtain information about hazardous chemicals used by the contractor and coordinate access to SDSs.

Asbestos Management

Asbestos-containing building materials (ACBMs) are present in many University of Maryland facilities. Asbestos was used for the fabrication of resilient flooring, thermal system insulation, plaster, drywall, adhesives, caulks, wire insulation, fireproofing, ceiling tiles, wire insulation, spray-applied acoustical or decorative finishes, firedoors, laboratory benchtops and many other products.

Most maintenance and housekeeping staff perform tasks that require routine contact with ACBMs. The work performed by these employees will not generate hazardous concentrations of airborne asbestos if the ACBMs are not cut, torn, sanded, abraded or otherwise damaged. These employees are termed "Asbestos Level I Workers" according to the State Asbestos Control Program and the University's Asbestos Management Plan. Annual Asbestos Awareness Training is required for Level I employees to ensure appropriate protocols are followed to prevent asbestos dust from becoming airborne. If Level I workers encounter any damaged building material or debris they suspect is asbestos-containing, they are to cease work in that area and contact their supervisor to verify the hazard and coordinate an appropriate UMD cleanup response.

No University of Maryland employees perform any removal/repair of ACBMs, although such activities were accomplished in the past. All disturbances to ACBMs are now accomplished by outside contractors.

Outside contractors conduct all of the asbestos abatement work on campus. All contractors must be licensed to perform such work by the State of Maryland. Work is supervised by the Department of Facilities Management.

If employees may reasonably expect to come into contact with ACBMs during the normal course of their duties, the Chemical Information List must include asbestos as a hazardous material. Training concerning the hazards and appropriate procedures must be incorporated into the training program, either as a component of Hazard Communication training or as a separate program.

The UMD Asbestos Management Plan is administered by the Department of Environmental Safety, Sustainability and Risk (ESSR). Information concerning the plan including a detailed building ACBM inventory may be reviewed at the ESSR website:

https://essr.umd.edu/

Laboratories

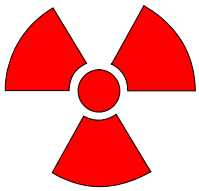
Managers of teaching, research or analytical laboratories must comply with the requirements of the UMD Chemical Hygiene Program. This program is similar to the Hazard Communication Program in that employees must be notified of chemical hazards in the laboratories and the appropriate means for protection. Details of the Chemical Hygiene Program are available on the ESSR website at https://essr.umd.edu/.

The Hazard Communication Program impacts laboratories as indicated:

(a) Labels must not be removed or defaced on containers of chemicals brought into the workplace;
(b) Safety Data Sheets (SDSs) received with incoming shipments of hazardous chemicals must be maintained and readily accessible to employees during each workshift;
(c) Laboratory employees must receive those training elements specified in the Hazard Communication Program; and
(d) Laboratory employers that ship hazardous chemicals must ensure that containers are accompanied with a valid SDS, and that containers are labeled with:
    (1) Identity of the chemical(s);
    (2) Appropriate hazard warnings; and
    (3) Name and address of the generator of the chemical(s).

Entry Into Radiation Areas

Some laboratory facilities at UMD contain radiation-producing devices or radioactive materials that generate or emit ionizing radiation. Regulations promulgated by the Nuclear Regulatory Commission and Maryland Department of the Environment prohibit non-radiation workers from entering into areas where potential for radiation exposure exists unless entrants receive training or are escorted by knowledgeable laboratory workers who can ensure that hazardous conditions are avoided. Locations at UMD where potential radiation exposure exists are demarcated with the radiation symbol:



The ESSR's Radiation Safety Office provides training by request to workers who require unescorted access into these restricted areas. Hazard Communication Coordinators and supervisors are responsible for determining if employees require this training. Requests for training or additional information may be made by phone to (301) 314-8336.

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Appendix A - “Your Right to Know” Brochure

The brochure titled “Your Right to Know” is incorporated herein as Appendix A. This publication is mailed to all UMD employees by ESSR to provide a basic foundation of Hazard Communication training and to explain the roles and responsibilities for program management at the University of Maryland.

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Appendix B - Program Summary

The Program Summary provides details concerning management of the Hazard Communication Program within the workplace established by this written Program. Each department impacted by this Program shall complete and maintain a current Program Summary, and forward it to ESSR for recordkeeping and training. This section is to be completed by the Hazard Communication Coordinator(s). Guidance information for completing this section may be found elsewhere in the Hazard Communication Program and in Appendix E. The summary shall be updated by the Hazard Communication Coordinator(s) or designee whenever any element changes, and a current copy forwarded to ESSR for recordkeeping and training purposes. Additional pages may be added to the Program Summary as necessary to identify program components and responsibilities.

Specific elements that must be defined for this written Hazard Communication Program are identified below.

1. This Hazard Communication Program applies to the following workplace(s):

2. Hazard Communication Coordinator(s) (name, campus address, phone number):

3. Chemical Information List Maintained by (name, campus address, phone number):

4. SDSs are provided by (name, campus address, phone number):

5. Evaluation of hazardous materials conducted by (name, campus address, phone number):

6. Methods to label containers (missing labels or transferred contents):

7. Assessment for protective equipment and/or engineering controls determined by (name, campus address, phone number):

8. Employee training is coordinated or conducted by (name, campus address, phone number):

9. In-house training records are located at:

10. The written Hazard Communication Program for this workplace is located at:

11. Material Safety Data Sheets for chemical substances used in this workplace are located at:

12. Procedure(s) to access SDSs during an emergency:

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Appendix C - Chemical Information List

The Hazard Communication Chemical Information List shall be alphabetized by material name and inserted here by the Hazard Communication Coordinator. A copy shall be forwarded annually to the Department of Environmental Safety, Sustainability and Risk (ESSR). If codes or other designators are used in this list to indicate multiple work areas, a key must also be included. Additions to the inventory may be placed at the bottom of the list until the next annual review when it shall be re-alphabetized with a copy forwarded to ESSR.

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Appendix D – MSDS ONLINE

What is MSDSOnline®?

MSDSOnline® is a commercial management system that supplements the need to retain and manage paper ("hard") copies of SDSs. SDSs are managed electronically, which automates the task of keeping SDSs up-to-date.

In the program, assigned Administrators will place SDSs for the products their departments use in an electronic binder, known in the system as an "eBinder". General Users, if they choose their department, will have their search initially limited to the SDS for products used by their unit - however, the system also allows the user to search for electronic SDS for all non-laboratory departments at the University of Maryland. And when a manufacturer updates an SDS with new information, the system allows UMD to instantly update each department's eBinder - so users are getting the most up-to-date information available.

Users: How to Access the System

MSDSOnline® is hosted by the Department of Environmental Safety, Sustainability and Risk. In conjunction with unit administrators, ESSR has set up a system that provides eBinders for affected units. You may access the system at https://essr.umd.edu. You may refer back to this page for assistance in using the system.

Users: How to Find an SDS

To FIND AN SDS

1. See all SDSs for a Location (e.g., shop)

   - Go to the Department of Environmental Safety, Sustainability and Risk's Hazard Communication web page at https://essr.umd.edu.
   - Click on the link for "Find an MSDS".
   - Click on the link for "MSDS online".
   - Under **the SDS Search tab** there are three choices after **Quick Lists**: Products, Locations or Suppliers. Choose Locations.
   - From the list of Facilities (organizations) that opens, find your Division or College. Then click on the "+" mark in the box to the left of the organization name. A list of various shops or departments will be displayed. Then click on your department name.
   - You will be presented with a list of all of the SDSs in your unit's eBinder. Either locate the SDS alphabetically, or use the **Search for an SDS** instructions below.
   - From the results presented, click on the PDF icon (in the View column) to the left of the correct SDS.

- The SDS will open in a new browser window where you can view or print the SDS as needed.
- When you are done with the SDS, close the SDS window by either using the close box of your browser, or
- If you are finished using the system, simply close your browser to log out.

2. Search for an SDS

- The system should default to the SDS > Locations. This simple search looks for SDSs in all the UMD location (departmental) eBinders.
- To search the eBinder for the entire University of Maryland inventory, click on Products in the Quick Lists. This will list the multiple thousand of products used on the UMD campus. Either search alphabetically for the product or use the Product search capability.
- *TIP: It may prove time-consuming and confusing to page through the entire list of hazardous materials for the campus. See Search Terms Explained below to understand how each option works. If you get too many hits, then use more of the name and hit "Search" again.* If you get zero results, see Section 4.
- From the results presented, click on the PDF icon (in the View column) to the left of the correct SDS.
- The SDS will open in a new browser window where you can view or print the SDS as needed.
- When you are done with the SDS, close the SDS window by using the close box of your browser.
- If you are finished using the system, simply close your browser to log out.

3. Search Terms Explained

- The search functions generally have three options: "Full Text", "Contains a Match" and "Starts With". Each is explained below with examples to help you use the correct option in your search. While each example is given for the "Product Field", the same principles apply to whatever field you are using for the search.
- Full Text
  - Looks for the search string as a complete word anywhere in product name.
  - Example: a search on ACE will find ACE BANDAGES and FLYING ACE SOAP but will not find ACETONE or FACE CREAM.
- Contains a Match

- Looks for the search string anywhere in the product name including as part of a word.
- Example: a search on ACE will find ACE BANDAGES, FLYING ACE SOAP, ACETONE and FACE CREAM.

- Starts With

  - Looks for the search string only as the first characters of the product name.
  - Example: a search on ACE will find ACE BANDAGES and ACETONE but will not find FLYING ACE SOAP or FACE CREAM.

4. If the SDS is not in your eBinder

   - If you do NOT find the SDS in your unit's or division's product list and did not find it in the University's eBinder by using the search methods as described above, then look below where it says "Your location did not produce any results for: _____" Below this statement will be a box for entering the product name (and manufacturer identifier, if available) and searching the entire MSDSOnline® database (consisting of millions of SDS sheets). Enter the product or chemical name and search the main MSDSOnline® database.

   - If the item is found and you need it added to your unit's list of hazardous materials, click on the PDF icon in the View column to view or print the SDS. If this is a product your unit will be adding to its Chemical Information List, mark the checkbox (in the "Select" column) then click the "Add to eBinder" button to notify an UMD Administrator that the SDS needs to be added to your unit's eBinder.

     - Be sure to complete all of the information in the pop-up box, including your name and your specific Location (University Department) so that ESSR can locate the proper supervisor to complete your "add" request.

   - If you are finished using the system, simply close your browser to log out.

Departments/Units: How can we get involved in this program?

Contact ESSR by phone at (301) 405-3965 or by e-mail at safety@umd.edu if your unit isn't included. Mention or ask for the ESSR MSDSOnline® Administrator so your query can be directed to the appropriate individual.

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Appendix E - Program Summary Guidance

This appendix contains guidance information and examples to assist the Hazard Communication Coordinator to develop and maintain the Program Summary component of the written Hazard Communication Program. A current Program Summary must be forwarded to ESSR.

One of the goals for developing the Hazard Communication Program is to permit a management flexibility that allows for implementation as best suited to a particular unit. Examples that are cited are not intended to define any systemic constraints that must be followed. Any management system implemented that satisfies the basic fundamentals of the Hazard Communication Program is acceptable.

ESSR provides a blank format (MS Word) on its Home Page to assist development of units' Program Summaries. This format may be retrieved from:

essr.umd.edu

Program Summary Element #1

This Hazard Communication Program applies to the following workplace(s):

Define the unit and the work locations impacted by this written program. Examples could include:

1. Physics Machine Shop
   Physics Department
   Physics Building - 082
   Rooms 0305, 0305A-N, 0321, 0325

2. Building Services
   Facilities Management Department
   General Services Building - 215
   materials are stored in Bldg 217 and custodial closets throughout campus
   materials are used in all academic and administrative buildings

3. Piped Services Shop
   Facilities Management Department
   Operations & Maintenance
   Plant Operations Building - 006
   materials are stored in Bldg 217 and shop areas
   materials are used in all buildings during mechanical system repair/servicing

4. Housekeeping Services
   Residential Facilities Department
   Leonardtown Office Building - 201
   materials are stored at following locations:
   - LaPlata Hall - Room 0112
   - Denton Hall - Room 0109
   - Cumberland Hall - Room 0115

   materials are used in all residence halls for housekeeping operations

Program Summary Element #2

Hazard Communication Coordinator(s) (name, campus address, phone number):

Identify the individual (by name, with contact information) with responsibility as the Hazard Communication Coordinator. If several people are named, identify the distinctions. Examples could include:

1. William Tell
   Room 2134
   Taliaferro Hall
   (301) 405-9999

2. James T. Kirk (Urban Biology)
   Room 1125
   Leonardtown Office Building
   (301) 314-9999

   Ellen Ripley (Vehicle Maintenance)
   Room 2121
   Leonardtown Office Building
   (301) 314-9999

   Anakin Skywalker (Maintenance)
   Room 1115
   Leonardtown Office Building
   (301) 314-9999

   David Bowman (Housekeeping)
   Room 0111
   Chestertown Hall
   (301) 314-0000

Program Summary Element #3

Chemical Information List Maintained by (name, campus address, phone number):

Identify the individual (by name, with contact information) with responsibility for generation and maintenance of the Chemical Information List. A single individual must be designated to standardize the format and indicate distinctions among sub-units identified. An example is:

William Tell
Room 2134
Taliaferro Hall
(301) 405-9999

Program Summary Element #4:

SDSs are provided by (name, campus address, phone number):

Identify the individual (by name, with contact information) with responsibility for providing Safety Data Sheets to employees. If several people are named, identify the distinctions. Examples could include:

1. William Tell
   Room 2134
   Taliaferro Hall
   (301) 405-9999

2. James T. Kirk (Urban Biology)
   Room 1125
   Leonardtown Office Building
   (301) 314-9999

   Ellen Ripley (Vehicle Maintenance)
   Room 2121
   Leonardtown Office Building
   (301) 314-9999

   Anakin Skywalker (Maintenance)
   Room 1115
   Leonardtown Office Building
   (301) 314-9999

   David Bowman (Housekeeping)
   Room 0111
   Chestertown Hall
   (301) 314-0000

3. All supervisors are required to maintain copies of SDSs for hazardous materials used by their staff. Attached is a list of supervisors with contact information and descriptions of their work groups.

Program Summary Element #5

Evaluation of hazardous materials conducted by (name, campus address, phone number):

Identify the individual (by name, with contact information) with responsibility for evaluating the hazards of materials. If several people are named, identify the distinctions. Examples could include:

1. William Tell
   Room 2134
   Taliaferro Hall
   (301) 405-9999

2. James T. Kirk (Urban Biology)
   Room 1125
   Leonardtown Office Building
   (301) 314-9999

   Ellen Ripley (Vehicle Maintenance)
   Room 2121
   Leonardtown Office Building
   (301) 314-9999

   Anakin Skywalker (Maintenance)
   Room 1115
   Leonardtown Office Building
   (301) 314-9999

   David Bowman (Housekeeping)
   Room 0111
   Chestertown Hall
   (301) 314-0000

3. All supervisors are required to evaluate the hazards of chemicals and materials used during the conduct of work by their employees. Attached is a list of supervisors with contact information and descriptions of their work groups.

Program Summary Element #6

Methods to label containers (missing labels or transferred contents):

Identify the methods used to label containers when hazardous materials are transferred into other containers or when labels are missing. Examples could include any of the following:

1. Warehouse personnel under the direction of Frank Poole (Distribution Warehouse, 301-405-9999) will verify that labels are affixed to all containers of hazardous materials when they are unpacked, distributed to employees or delivered to remote storage locations. Missing labels will be reproduced and attached to containers by Warehouse staff. Reproduced labels will identify the product and relevant hazard warning information.

2. Housekeeping supervisors (see attached list) are responsible for ensuring that product names are affixed to “immediate use” containers of hazardous cleaning chemicals used by housekeeping staff.

3. Housekeeping supervisors (see attached list) are responsible for ensuring that labels on existing containers are maintained in a readable condition. Hazardous material containers with missing labels shall not be distributed to staff for use until labels are reproduced and affixed to containers. Reproduced labels will identify the product and relevant hazard warning information.

4. Frank Poole (Distribution Warehouse, 301-405-9999) is responsible for fabrication and attachment of appropriate labels to containers of hazardous housekeeping chemicals that are dispensed from bulk drums into one gallon containers. Reproduced labels will identify the product and relevant hazard warning information.

5. All supervisors (see attached list) are required to periodically evaluate the condition of labels on containers of hazardous substances used during the conduct of work by their employees. Containers without labels will be immediately removed from service by supervisors until an appropriate label is affixed to the container by the supervisor. Reproduced labels will identify the product and relevant hazard warning information.

6. Mary Contrary (Reckord Copy Center, 301-405-9999) will ensure that appropriate labels are affixed to all containers of hazardous substances. Any containers without labels will be immediately removed from service until an appropriate label is affixed to the container. Reproduced labels will identify the product and relevant hazard warning information.

Program Summary Element #7

Assessment for required protective equipment and/or engineering controls determined by (name, campus address, phone number):

Identify the individual (by name, with contact information) with responsibility for determining the appropriate personal protective equipment (e.g., neoprene gloves, splash-proof goggles, air-purifying respirator, etc.) or engineering controls (e.g., spray paint booth, welding fume extractor, HEPA-filtered drill, etc.) that are necessary to safely use hazardous materials. If several people are named, identify the distinctions. Examples could include:

1. William Tell
   Room 2134
   Taliaferro Hall
   (301) 405-9999

2. James T. Kirk (Urban Biology)
   Room 1125
   Leonardtown Office Building
   (301) 314-9999

   Ellen Ripley (Vehicle Maintenance)
   Room 2121
   Leonardtown Office Building
   (301) 314-9999

   Anakin Skywalker (Maintenance)
   Room 1115
   Leonardtown Office Building
   (301) 314-9999

   David Bowman (Housekeeping)
   Room 0111
   Chestertown Hall
   (301) 314-0000

3. All supervisors are required to evaluate the hazards of chemicals and materials used during the conduct of work by their employees, and determine the necessary personal protective equipment and engineering controls to safely perform the work. Attached is a list of supervisors with contact information and descriptions of their work groups.

Program Summary Element #8

Employee training is coordinated or conducted by (name, campus address, phone number):

Identify the individual (by name, with contact information) who is responsible for ensuring that employees receive training concerning the Hazard Communication Program, the hazards of chemicals in their work area, and the methods to ensure their safe use. A combination of training responsibilities may be necessary to ensure that employees receive all of these training elements. The individual or individuals identified must ensure that all training elements are satisfied. Examples could include:

1. William Tell
   Room 2134
   Taliaferro Hall
   (301) 405-9999

2. James T. Kirk (Urban Biology)
   Room 1125
   Leonardtown Office Building
   (301) 314-9999

   Ellen Ripley (Vehicle Maintenance)
   Room 2121
   Leonardtown Office Building
   (301) 314-9999

   Anakin Skywalker (Maintenance)
   Room 1115
   Leonardtown Office Building
   (301) 314-9999

   David Bowman (Housekeeping)
   Room 0111
   Chestertown Hall
   (301) 314-0000

3. All supervisors are required to ensure that training is completed for employees under their control. Attached is a list of supervisors with contact information and descriptions of their work groups.

Program Summary Element #9

In-house training records are located at:

Identify where records will be maintained for training conducted by the department or unit impacted by this written Hazard Communication Program. Examples could include:

1. Human Resources
   Department of Facilities Management
   Service Building - Room 2305
   records maintained in employees' personnel files

2. Urban Biology
   Room 1125
   Leonardtown Office Building
   staff training file

   Vehicle Maintenance
   Room 2121
   Leonardtown Office Building
   staff training file

   Maintenance
   Room 1115
   Leonardtown Office Building
   staff training file

   Housekeeping
   Room 0111
   Chestertown Hall
   staff training file

Program Summary Element #10:

The written Hazard Communication Program for this workplace is located at:

Identify the location or locations where the written Hazard Communication Program will be available. Examples could include:

1. Facilities Management Safety Office
   Room 0215E - Service Building
   Phone 301-405-3219 for access

2. Urban Biology
   Room 1125
   Leonardtown Office Building
   Phone 301-314-9999 for access

   Vehicle Maintenance
   Room 2121
   Leonardtown Office Building
   Phone 301-314-9999 for access

   Maintenance
   Room 1115
   Leonardtown Office Building
   Phone 301-314-9999 for access

   Housekeeping
   Room 0111
   Chestertown Hall
   Phone 301-314-0000 for access

Program Summary Element #11:

Material Safety Data Sheets for chemical substances used in this workplace are located at:

Identify locations where Safety Data Sheets (SDSs) may be obtained by employees. SDSs must be made available to employees when requested. They must be physically located in a fixed work location (e.g., University Printing Shop), but may be maintained at the primary workplace facility if employees' work is carried out at more than one geographical location. Examples of SDS locations could include:

1. Patapsco Building
   Room 1101D
   Three-ringed binder labeled "MSDS" on shelf next to timeclock

2. Patapsco Building
   Room 1101D
   Computer at service desk - open web browser and select "MSDS" bookmark

3. Urban Biology
   Room 1125
   Leonardtown Office Building
   File cabinet drawer labeled "MSDS"

   Vehicle Maintenance
   Room 2121
   Leonardtown Office Building
   File cabinet drawer labeled "SDS"

Maintenance	Housekeeping
Room 1115	Room 0111
Leonardtown Office Building	Chestertown Hall
File cabinet drawer labeled “MSDS”	File cabinet drawer labeled “MSDS”

4. All supervisors maintain three-ring binders of SDSs for materials used by their employees. Attached is a list of supervisors with descriptions of their work groups and locations where SDS are maintained for employee access.

Program Summary Element #12:

Procedure to access SDSs during an emergency:

Describe the means and methods for employees to access Safety Data Sheets (SDSs) during an emergency. If the Department of Environmental Safety, Sustainability and Risk (ESSR) is identified as a resource for SDSs during an emergency, it is important for departments to forward copies of new SDSs received with shipments of hazardous materials. Examples of emergency procedures could include:

1. Contact the Dept of Environmental Safety, Sustainability and Risk:
   (301) 405-3960 during normal business hours
   (301) 405-3555 (UM Public Safety dispatcher) to page on-call
   Occupational Safety & Health staff at other times

2. Contact the appropriate unit head(s):

James T. Kirk (Urban Biology)	Ellen Ripley (Vehicle Maintenance)
Leonardtown Office Building	Leonardtown Office Building
(301) 314-9999 (office)	(301) 314-9999 (office)
(301) 240-9999 (cell phone)	(301) 240-9999 (cell phone)
(301) 209-9999 (pager)	(301) 209-9999 (pager)
Anakin Skywalker (Maintenance)	David Bowman (Housekeeping)
Leonardtown Office Building	Chestertown Hall
(301) 314-9999 (office)	(301) 314-9999 (office)
(301) 240-9999 (cell phone)	(301) 240-9999 (cell phone)
(301) 209-9999 (pager)	(301) 209-9999 (pager)

3. Copies of all SDSs are maintained by the Hazard Communication Coordinator. For emergency access, call:
   (301) 314-9999 (office)
   (301) 240-9999 (cell phone)
   (301) 209-9999 (pager)

Appendix F - Chemical Information List Guidance

This appendix contains guidance information and examples to assist the Hazard Communication Coordinator to develop and maintain the Chemical Information List (CIL) component of the written Hazard Communication Program. The current CIL must be forwarded to ESSR annually (by end of calendar year).

Consumer commodities do not need to be added to the list if employees use the materials as typical consumers. Examples include:

1. An accountant in the English Department buys **paint** from the local hardware store and paints her office.
2. A mechanic from Residential Facilities stops at the Motor Pool and fills her vehicle with **gasoline** and adds a quart of **oil** to the crankcase.
3. A carpenter from Facilities Management uses **WD-40®** to lubricate his circular saw.
4. A director from ESSR sprays her office with **Raid®** to exterminate ants.
5. A professor from Mechanical Engineering buys **Windex®** from the grocery store and washes the windows in her six laboratories.

If materials are procured or used in a manner not typical to the consumer, they must be considered hazardous and added to the Chemical Information List. Example include:

1. An accountant in the English Department buys **paint** from the local hardware store and paints all of the offices in her department (duration of use not typical to consumer).
2. A mechanic from the Motor Pool fills 30 vehicles with **gasoline** per day (frequency of use not typical to consumer).
3. A carpenter from Facilities Management uses **WD-40®** as oil paint additive (not typical consumer use).
4. A director from ESSR purchases **pyrethrins** from a chemical supply house and sprays her office to exterminate ants (product is not available to typical consumer).

One of the goals for developing the Hazard Communication is to permit a management flexibility that allows for implementation as best suited to a particular unit. Examples that are cited are not intended to define any systemic constraints that must be followed. Any management system implemented that satisfies the basic fundamentals of the Hazard Communication Program is acceptable.

The CIL must identify the workplace, product names, hazardous constituents, and date of last revision. The list is to be in alphabetic order according to the commonly-used product name. When new hazardous materials are brought into the workplace, the CIL must be modified within 30 days including the date of acquisition. New entries on the CIL may be amended to the end of the unit's list until such time as it is annually revised.

All departmental CIL lists should correspond to information on the University's MSDSOnline® list in the various e-binders. The MSDSOnline® system is the official CIL for the University that must be updated regularly.

Departments may include additional information on the CIL to:

1. Permit better identification of the product (e.g., include manufacturer's name);
2. More easily identify product location (e.g., storage location);
3. Relay information to employees concerning appropriate protective measures (e.g., indicate when protective gloves are necessary);
4. Facilitate a department's understanding and use of hazardous materials.

Appendix G – GHS Pictograms

HCS Pictograms and Hazards

Health Hazard  • Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	**Flame**  • Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	**Exclamation Mark**  • Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non-Mandatory)
Gas Cylinder  • Gases Under Pressure	**Corrosion**  • Skin Corrosion/ Burns • Eye Damage • Corrosive to Metals	**Exploding Bomb**  • Explosives • Self-Reactives • Organic Peroxides
Flame Over Circle  • Oxidizers	**Environment** (Non-Mandatory)  • Aquatic Toxicity	**Skull and Crossbones**  • Acute Toxicity (fatal or toxic)