1. Purpose

To comply with the Georgia "*Public Employee Hazardous Chemical Protection and Right to Know Act of 1988,*" the following written Hazard Communication Program has been established for Kennesaw State University (KSU). KSU will comply by compiling and maintaining a list of hazardous chemicals, using safety data sheets (SDSs), ensuring that containers are properly labeled or provide other forms of warning, and training our university employees. In addition, we will share information with other employers involved in specific projects so that they may keep their employees informed.

2. Scope

This Program applies to all work operations at KSU where employees may be exposed to hazardous chemicals under normal working conditions or during emergency situations. Under this program, our employees will be informed of the contents of the Hazard Communication Standard, the hazards of chemicals with which they work, safe handling procedures, and measures to take to protect themselves from these chemicals, among other training elements.

3. Responsibilities

The duties of the Right to Know Coordinator are shared between the Senior Environmental Programs Manger (EPM) and the Senior Research Safety and Biosafety Compliance Officer (RSBCO). They have overall responsibility for the program, including to review and update the program, as necessary.

Copies of the written program may be obtained from the Environmental Health and Safety (EHS) Department as well as on the EHS website. Moreover, all employees, or their designated representatives, may obtain further information about this written program, the Hazard Communication Standard, applicable SDSs, and our chemical list from the EHS Department.

The EPM or RSBCO will review incoming SDSs for new and significant health and safety information. They will see that any new information is passed on to the affected employees. When a new hazardous substance is to be brought on campus, toxicity information will be reviewed, a determination will be made as to whether a less toxic substance can be used and whether additional engineering controls and personal protective equipment will be needed before a final decision is made to acquire the chemical.

Finally, if after reading this Program you find that improvements can be made, please contact the EPM or RSBCO. We encourage all suggestions because we are committed to the success of our written Hazard Communication Program. We strive for clear understanding, safe behavior, and involvement in the program from every level of the university.

4. List of Hazardous Chemicals

Chemicals known to be present on our campuses are compiled on a list and submitted to the Board of Regents (BOR) twice per year. Anyone who comes in contact with a hazardous chemical on the list needs to understand the associated hazards and how to protect themselves. It is very important that hazardous chemicals in the work area are identified, whether they are found in a container or generated in work operations (e.g., welding fumes, dusts, and exhaust fumes). The hazardous chemicals on the chemical list can

cover a variety of physical forms including liquids, solids, gases, vapors, fumes, and mists.

A list of all known chemicals stored on KSU campuses is available for review from the EHS Department. Further information on each chemical can be obtained by reviewing SDSs which are located online at MSDSonline. This list will be updated by the EPM at least twice a year in January and July, as required.

5. Safety Data Sheet

SDSs are fact sheets for chemicals. These documents provide our faculty and staff with specific information on the chemicals in their work areas. The EHS Department obtains and maintains the SDSs in MSDSonline.

EHS personnel are responsible for ensuring that SDSs for new chemicals are available and will contact the chemical manufacturer or vendor if additional chemical information is needed. All chemicals purchased for KSU must be approved by EHS Staff through established procurement methods.

EHS Staff will review incoming SDSs for new and significant health and safety information and will ensure that employees are informed of any new information. It is also their responsibility to review the available information of any new substance to determine if it is the least hazardous on the market and whether additional engineering controls and personal protective equipment (PPE) will be needed before the final decision is made to procure.

The Occupational Safety and Health Administration (OSHA) allows SDSs to be kept in any form as long as the information for each hazardous chemical is readily accessible for employees in their work area(s) during each work shift. The EHS Department recognizes this flexible OSHA provision for alternatives to SDSs in the workplace. Our alternative(s) include maintaining copies of SDSs on MSDS Online for all hazardous chemicals to which employees may be exposed. Laboratories, shops, and other areas where hazardous chemicals or products are used may post a link to the online location or print SDSs, or both.

Researchers are responsible for writing SDSs for synthesized chemicals that are shipped to other laboratories. Each SDS is provided in English and includes the sections required by OSHA in the order listed in the Hazard Communication Standard. We will update these SDSs when new and significant health information is found.

SDSs will be always available for review to all employees online or in their work areas. If SDSs are not available or new chemicals do not have SDSs, contact the EPM or RSBCO immediately.

6. Container Labeling and Other Forms of Warning

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

- With the product identifier, signal word, hazard statement(s), pictogram(s), and precautionary statement(s).
- With 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 stock container 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.

Since product identifiers are found on chemical labels, the SDSs, and on our chemical list, the product identifiers link these three sources of information, permitting cross-referencing. Product identifiers used by suppliers may be common or trade names, chemical names, or numbers. Employees should be aware that label information can be verified by referring to the corresponding SDSs.

The person receiving the chemicals must ensure that newly purchased chemicals are checked for labels when containers are received. Principal Investigators (PIs), Supervisors, or Safety Managers are responsible for ensuring that all hazardous chemical containers in their work areas have proper labels or other forms of warning that are legible, in English (although other languages may also be included), and are displayed clearly on the container. In some instances, proper chemical labels can be posted in the immediate work area (e.g., shelves, carts, and racks,) if there is a system in place that connects the appropriate chemical containers and the labels. The end users of chemical containers will be responsible for updating chemical labels, as necessary.

If faculty or staff 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. PIs, Supervisors, or Safety Managers in each College or Department will ensure that all secondary containers in their laboratories or shops are labeled with either a copy of the original manufacturer's label or with an in-house label which includes the chemical identity and the hazard warning.

Our in-house chemical labeling system follows the Globally Harmonized System (GHS) for Classification and Labeling of Chemicals, which provides a universal framework for chemical hazard labeling and recognition. However, there are also other labeling systems that are acceptable and may be found in laboratory areas, such as the National Fire Protection Association (NFPA) or Hazardous Material Information System (HMIS) system labeling.

The NFPA labeling system can be found on signage affixed to laboratory and shop doors and is used primarily for emergency response personnel to describe the conditions to expect in a fire or release emergency. The NFPA label appears as a diamond with four interlocking-colored diamonds; a blue "health" diamond, a red "flammability" diamond, a yellow "reactivity" diamond, and a white "special hazard" diamond. The blue, red, and yellow diamonds will contain ratings from zero to four, where zero is negligible and four is most severe.

The HMIS labeling system uses a numerical hazard rating system, labels with colored bars, and training materials to inform workers of chemical hazards. PPE information is supplied to give employees information needed to protect themselves from hazardous materials they might encounter on the job.

HMIS labels always appear as a rectangle-shaped block of colored bars with a blue "health" bar on top, a red "flammability" below that, followed by a yellow "reactivity" bar and a white "PPE" bar. There may be additional space on the label for other information, such as the product name, supplemental warnings, manufacturer information, or additional HMIS information.

For help with labeling, please contact the EPM or RSBCO.

7. Employee Training and Information

Everyone who works with or is potentially exposed to hazardous chemicals on the job will receive initial training on the Hazard Communication Standard and the safe use of those hazardous chemicals before starting work. Exposure means that an employee comes in contact with or has the potential to come in contact with (e.g., accidental, incidental) a chemical that is a physical or health hazard during the course of their employment. Whenever a new chemical hazard is introduced or an old hazard changes, additional training is provided. All training is conducted by a Subject Matter Expert (SME).

Effective information and training are critical parts of the Hazard Communication Program. EHS will ensure that faculty and staff are trained to read and understand the information on labels and SDSs, determine how the information can be obtained and used in their own work areas, and understand the risks of exposure to the chemicals in their work areas as well as ways to protect themselves. KSU's goal is to ensure that when end-users are exposed to hazardous chemicals, they have the skills to read and use labels and SDSs and understand how to appropriately follow the protective measures we have established. We urge our employees to ask PIs, Supervisors, and Safety Managers questions for greater comprehension.

As part of the assessment of the training program, the EHS Manager or Programs and Training asks for input from employees regarding the training they have received and their suggestions for improving it. In this way, we hope to reduce any incidence of chemical-related illness or injury. The training program emphasizes the following elements:

- Summary of the Hazard Communication Standard.
- What hazardous chemicals are present in operations in employee work areas.
- Chemical and physical properties of hazardous chemicals (e.g., flash point and reactivity) and how to detect the presence or release of these chemicals, including chemicals in unlabeled pipes.
- Physical hazards of chemicals (e.g., potential for fire and explosion).
- Health hazards, including signs and symptoms of overexposure, associated with exposure to chemicals and any medical condition known to be aggravated by exposure to them.
- Any simple asphyxiation, combustible dust, and pyrophoric hazards, as well as hazards not otherwise classified, of chemicals in work areas.
- Any steps the University has taken to reduce or prevent exposure to hazardous chemicals, such as engineering controls.
- Procedures to protect against hazards and exposure (e.g., work practices or methods to assure proper use and handling of chemicals and any required PPE and its proper use and maintenance).
- Procedures for reporting and responding to chemical emergencies.
- How to read and use both the workplace labeling system and labels received on shipped containers.
- The order of information found on SDSs and how to read the information and what it means.
- How to access SDSs and the written Hazard Communication Program, including the chemical inventory.

Prior to a new hazardous chemical being introduced into any laboratory, shop, or department, each employee who will potentially be exposed will be given information and training on its hazards. Also, if any

employee is transferred into a new area where exposures to hazardous chemicals can occur, that employee will receive any necessary additional training prior to beginning that assignment.

After attending the training class, each employee will sign a form to verify that they attended the training, received our written materials, and understood the policies of KSU on hazard communication.

8. Hazardous Non-Routine Tasks

Periodically, staff are required to perform hazardous non-routine tasks. Prior to starting work on such projects, each staff member will be given information by their supervisor about hazardous chemicals to which they may be exposed during such activity. This information will include:

- Specific chemical hazards.
- Protective safety measures the employee should take.
- Measures KSU has taken to lessen the hazards, including ventilation, respirators, presence of another employee, and emergency procedures.

9. Informing Contractors

It is the responsibility of the Project Manager to provide contractors with the following information:

- Hazardous chemicals to which they may be exposed while on the jobsite.
- Precautions the employees may take to lessen the possibility of exposure by usage or appropriate protective measures.
- Agency safety rules.
- Availability and location of SDS for all hazardous chemicals to which contractor's employees maybe exposed.

The Project Manager will be responsible for contacting each contractor before work is started to gather and disseminate any information concerning chemical hazards that the contractor is planning to use at KSU.