

The EPA Compliance Toolkit

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The Program

Recently, the EPA has directed enforcement initiatives at colleges and universities and the result has been significant fines and penalties on schools in the northeastern and mid-west EPA regions. Larger fines have ranged from \$500,000 to more than \$2 million in recent multi-media inspections (a joint approach to several environmental media, such as air, water, and land).

Now the EPA has focused its attention on the southeast. In an effort to both comply with regulations and avoid potentially significant fines, UAB is participating in a new cooperative program with EPA and other colleges and universities in the southeast. Referred to as the EPA Voluntary Compliance Program, it allows participating schools in the region to essentially inspect each other using their own trained auditors and expert consultants. Then, the college or university self-reports to the EPA any violations found and a plan to correct the problems, with the understanding that this may mitigate EPA imposed fines.

UAB is scheduled for our first in-depth peer audit in the spring of 2009 and will include campus laboratories, maintenance areas and equipment, art departments, as well as areas where we generate, manage or store regulated waste. Faculty and staff will be asked questions and be asked to produce training records or other documentation related to an EPA audit. However, we do have a little time to prepare before the inspection team arrives.

To help with preparation, UAB Occupational Health and Safety (OH&S) began meeting with departments all over campus, offering training programs and distributing a “toolkit” of information to help affected departments prepare for the inspection and maintain ongoing compliance with EPA regulations. If you have questions concerning the EPA Peer Audit Program and would like to know how it might impact you or your department, you can visit the OH&S web site www.healthsafe.uab.edu or call 934-2487.

The audit is currently scheduled for March 30th through April 3, 2009.

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The audit process

The following is a brief description of the EPA Peer Audit process that is scheduled to take place on the UAB campus in the spring of 2009:

A schedule and the locations of campus spaces\areas that are to be audited will be distributed to the campus community prior to the start date of the audits.

The outside auditors, consultants and UAB OH&S staff who have been trained in the EPA peer audit process will set up an Audit Command Center to coordinate the campus inspections.

UAB OH&S staff will always escort EPA Peer Auditors and consultants during the inspections.

Auditors will ask specific questions related to the type of work that is performed in any inspected space\area. Anyone working in the area may be asked questions. Data collected during the audit will be used to generate a final report that will be submitted to the EPA.

The auditors will address the main compliance items listed below:

- Medical or infectious waste,
- Hazardous waste
- Management of satellite accumulation areas
- Universal waste
- Training with emphasis on:
 - Documentation
 - Proper signage
 - Labeling
 - Storage
 - Waste container management

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What are your responsibilities?

Regulations are written in such a way that fines and penalties may be levied against an institution or the researcher, as the generator of hazardous waste. This has happened many times in the past and it is therefore extremely important to adhere to the policies established in the Chemical Safety and Waste Management Manual. Some things you should be aware of include:

- Be sure everyone in your area having responsibility for hazardous waste handling has been properly trained according to instructions in the manual and that training has been documented.
- Ensure that bottles or collection containers are in good condition and are compatible with the material being contained in them. Collection containers must be closed at all times unless you are adding waste.
- Keep waste types separated to the fullest extent possible. (e.g. do not mix solvent waste with metal waste unless it is an integral part of the experiment).
- Label the container with the contents of the waste as soon as waste is added. Be as specific as possible as to content and percentages of chemicals contained in waste. A label that says “organic waste or solvents” is not allowed
- Date the container when it is 90 to 95% full and do not overfill containers.
- Be sure and maintain all manifest records on past disposals to the waste facility and remember that waste that is corrosive, reactive, ignitable (flammable) or contains a toxic constituent such as lead, chromium, silver, chloroform, benzene is considered hazardous and must be manifested to the waste facility. If you are unsure if a material or mixture of chemicals is a hazardous waste please contact the Hazardous Materials Facility at 4-3797 or Chemical Safety at 4-2487
- Store waste in a secure location under strict control of laboratory staff and away from high foot traffic.

Lab audits have indicated that improper labeling, open containers, and containers in poor condition are the more noted items that need attention. Remember that signs of spilled material at the base of containers are indications of a potential release to the environment in the eyes of a regulatory official. Should you have any other questions or need assistance please contact Chemical Safety at 4-2487.

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Training for Labs

Training lab personnel on the proper handling of hazardous chemicals and hazardous waste doesn't have to be time-consuming. This type of training, however, is an annual requirement of the Resource Conservation and Recovery Act (RCRA) and the Occupational Safety and Health Administration (OSHA). Training can take the form of classroom training, web-based training and even on-the job training. But it must always be documented.

- Only individuals who are trained in the hazards of the materials they could be using should be permitted to use these materials. MSDSs provide supplemental information, but should not be used in lieu of formal training.
- Training should include the use and selection of proper personal protective equipment; laboratory safety equipment, such as fume hoods, emergency eyewash and shower units; emergency evacuation routes and spill response procedures.
- Persons working in laboratories should be trained, before they start work, in all aspects of laboratory safety, including laboratory-specific practices.
- Annual training programs for laboratory workers should be conducted. Integration into laboratory orientation and other annual programs should be considered.

All required training is available through OH&S. Please go to www.healthsafe.uab.edu and click on the Education and Training tab for more information.

Training for Non-Lab Areas

Training personnel on the proper handling of hazardous chemicals and hazardous waste doesn't have to be time-consuming. This type of training, however, is an annual requirement of the Resource Conservation and Recovery Act (RCRA) and the Occupational Safety and Health Administration (OSHA). Training can take the form of classroom training, web-based training and even on-the job training. But it must always be documented.

- Only individuals who are trained in the hazards of the materials they could be using should be permitted to use these materials. MSDSs provide supplemental information, but should not be used in lieu of formal training.
- Training should include the use and selection of proper personal protective equipment; safety equipment, such as fume hoods, emergency eyewash and shower units; emergency evacuation routes and spill response procedures.
- Persons working in areas where hazardous chemicals are used should be trained, before they start work, in all aspects of safety, including job-specific practices.
- Annual training programs for workers should be conducted. Integration into orientation and other annual programs should be considered.

All required training is available through OH&S. Please go to www.healthsafe.uab.edu and click on the Education and Training tab for more information.

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What will I be asked?

Anyone in your work area could be asked questions or asked to produce documentation as part of the audit. Some examples include:

1. Do you have written manifests for hazardous waste you have disposed of? You must have three (3) years of records readily available.
2. Do you have a written or electronic chemical inventory?
3. Any controlled substances on site that require a DEA license?
4. What wastes are generated on site?
5. Do you have documentation of proper chemical and hazardous waste training for all appropriate staff?
6. Do you have a satellite accumulation area for hazardous chemical and/or universal waste?
7. Are wastes properly packaged, labeled and under required volume limits?
8. How do you handle spills of hazardous materials?
9. What are you allowed to pour down the sink?



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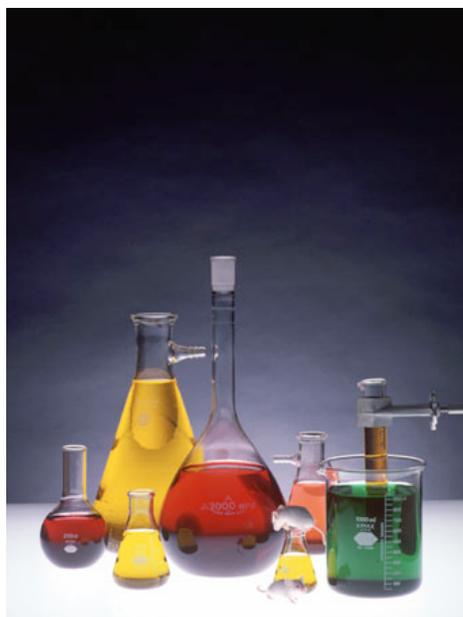
Chemical Inventory

Laboratories at UAB are now being asked to submit copies of their chemical inventories during laboratory safety audits. A basic inventory only requires a few elements:

1. **Name of the material** — this is the common name of the material. While abbreviations and chemical formulas can be included, they are **not** a substitute for the name of the material.
2. **CAS number** — Most of the regulations UAB must comply with use CAS numbers as the primary identification for materials. CAS numbers are unique identifiers for chemicals. The CAS number consists of three sets of numbers separated by dashes and may be inside brackets (ex.: water - [7732-18-5]). A chemical may have several different names, but it will only have one CAS number. Some materials will not have CAS numbers, so include a notation (ex.: N/A) on the inventory. CAS numbers are included on MSDSs, most labels and are frequently included in catalog entries.
3. **Quantity on hand** — an exact quantity is not necessary. Just list the container size and number of containers.
4. **Location** — the building and room number are sufficient.
5. **Contact information** — the name and phone number of someone who will be available and can answer questions about the inventory.

The inventory should include **all** chemicals in the laboratory. While other information can be included (ex.: vendor; specific location within the lab), it is not necessary. The inventory should be updated as needed to add or remove materials and include the date of the last update.

Note: You will be cited for old, accumulated or legacy chemicals regardless of where they are stored. Pack and manifest outdated chemicals for pick-up and disposal.



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What can go down the drain?

It is UAB policy that no chemicals be disposed of “down the drain” without PRIOR APPROVAL from the Department of Occupational Health and Safety. The only exception is for drain cleaners and other cleaning products expressly designed for use in or with plumbing fixtures.

Federal, State and local laws strictly regulate the disposal of all chemical and other potentially hazardous waste. Serious penalties, including fines and imprisonment, can result from improper waste disposal. All chemicals, even very small amounts should be handled through UAB’s hazardous waste system. Centrifuge tubes, and other containers with small amounts of xylene, phenol, or other chemicals should be emptied into a collection container before being autoclaved or disposed of through the red barrel waste system. The collection container should be labeled as waste and have a listing of the materials it contains.

More information on chemical waste disposal can be found on the OH&S website at <http://www.healthsafe.uab.edu/pages/chemicalsafety/chemicalsafety.html> . Sometimes a waste will have more than one type of hazard, such as biohazard/chemical, radioactive/chemical or biohazard/radioactive. When dealing with a mixed waste contact the Department of Occupational Health and Safety at 934-2487 for guidance.



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Managing Hazardous Waste

Some things you should be aware of include:

- Be sure everyone in your area having responsibility for hazardous waste handling has been properly trained according to instructions in the Chemical Safety and Waste Management Manual and that training has been documented by taking the on-line CS055 course on the OH&S website <http://www.healthsafe.uab.edu/pages/educationandtraining/hazwastetraining.html>.
- Ensure that bottles or collection containers are in good condition and are compatible with the material being contained in them. Collection containers must be closed at all times unless you are adding waste.
- Keep waste types separated to the fullest extent possible. (e.g. do not mix solvent waste with metal waste unless it is an integral part of the experiment).
- Label the container with the contents of the waste as soon as waste is added. Be as specific as possible as to content and percentages of chemicals contained in waste. A label that says "organic waste or solvents" is not allowed
- Date the container when it is 90 to 95% full and do not overfill containers.
- Be sure and maintain all manifest records on past disposals to the waste facility and remember that waste that is corrosive, reactive, ignitable (flammable) or contains a toxic constituent such as lead, chromium, silver, chloroform, or benzene is considered hazardous and must be manifested to the waste facility. If you are unsure if a material or mixture of chemicals is a hazardous waste please contact the Hazardous Materials Facility at 4-3797 or Chemical Safety at 4-2487
- Store waste in a secure location under strict control of laboratory staff. Keep waste away from high foot traffic areas.

Recent spot checks in buildings have indicated that improper labeling, open containers, and containers in poor condition are the more noted items that need attention. Remember that signs of spilled material at the base of containers are indications of a potential release to the environment in the eyes of a regulatory official.



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Satellite Accumulation Areas

A Satellite Accumulation Area is a designated area near a process or location that generates hazardous waste where wastes are stored until they are moved to the Hazardous Materials Facility. The Satellite Accumulation Area must be at or near the point of waste generation and it must be under the control of the operator (Principle Investigator or lab manager) of the process that is generating the waste.

Federal regulations allow generators (the lab) to store up to 55 gallons of hazardous waste or one quart of an acutely hazardous waste in the satellite accumulation area. There is no limit on the amount of time to accumulate the waste. However, once a container is considered full, the lab has 72 hours to have the container transferred to the Hazardous Materials Facility. Key elements include:

- The hazardous waste is stored in containers at or near the point of generation.
- No more than 55 gallons of hazardous waste (or one quart of acutely hazardous waste) is stored at each generation point.
- While the facility is operating, the stored hazardous waste is under the control of the operator of the process generating the waste.
- Storage containers are in good condition and compatible with the waste.
- Storage containers are kept closed except when waste is added or removed.
- Storage containers are labeled with the words "Hazardous Waste" or with other words that identify the contents.

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Signage

Signs are used to warn employees of chemical and physical dangers, such as designated areas where carcinogens or highly toxic chemicals are used or stored. Principal Investigators, laboratory managers or designee must post all high hazard areas or hazardous chemical storage areas with the proper signs.

Emergency phone numbers and emergency contact numbers of at least two (2) responsible people, with knowledge of the contents of the laboratory, must be posted on all laboratory doors. Someone must be available at all times to answer questions in an emergency.

Emergency notification signs are available from the Department of Occupational Health and Safety (934-2487).



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Labeling of chemicals

Labels on purchased chemicals must include:

1. The common name of the chemical
2. The name, address and emergency phone number of the company responsible for the product
3. An appropriate hazard warning

The warning may be a single word - "danger", "warning" and "caution" - or may identify the primary hazard, both physical (i.e., water reactive, flammable or explosive) and health (i.e., carcinogen, corrosive, or irritant). Most labels provide additional safety information, including, protective measures to be used when handling the material, clothing that should be worn, first aid instructions, storage information and procedures to follow in the event of a fire, leak or spill.

All labels must remain attached to the original container and must be legible.

If a chemical is transferred to another container, you must label the new container with the same information listed above.

To print additional copies go to:

www.healthsafe.uab.edu

For questions or information:

934-2487

or

safety@uab.edu