

# UAB Occupational Health and Safety

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Annual Report 2011-2012

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**The University of Alabama at Birmingham**  
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## Highlights Of The Year

### Electronic Data Management

#### Electronic Audit Program

Improved electronic paperless communication: Over the past 18-24 months, a multidisciplinary team within OH&S has revised and standardized the research compliance audit process, with environmental audits and fire and life safety audits. The audits now utilize iPads that electronically communicate directly with our database from the field. This has improved efficiency and accuracy. Investigators can now respond to audits and citations on line and auditors have improved compliance and receive far more of a timely response to issues identified. This also allows for more accurate and comprehensive metrics for tracking compliance and improving ongoing training.



#### Research Project Registration

- Integration with training and lab audit database: The Project Registration portion of the OH&S database has been integrated with the training and lab audit database which permits a project reviewer to access training status of personnel involved with a project as well as audit results for the laboratory space.
- Improved paperless electronic communication: The researcher completes one form, which includes biosafety, chemical, radiation, and physical safety to register the project. This permits reviewers to evaluate using an “all-hazards” approach and consider the impact of all hazards as observations and recommendations are made.
- Communication with the PI, results of evaluations, approvals and notes are captured electronically and can be accessed by applicable OH&S staff for information sharing or answering questions (especially from PIs requesting the review status of their project).

### Controlled Substances Program

Designed and Implemented a DEA Approved Program: OH&S assumed administration and oversight of the use of controlled substances for research, veterinary care and teaching purposes at UAB. A program has been developed over the past year that addresses identification of user, registration, responsibilities, training, ordering, inventory management, storage, and disposal. The program was fully implemented in May 2013.

#### Controlled Substances Program Electronic Support

Electronic registration, inventory and tracking: OH&S has developed and implemented electronic registration and tracking software to assist researchers, veterinarians and staff to manage the acquisition, use, inventory, and disposal of drugs whose manufacture, possession, use are regulated by the state and federal government. Guidance, forms, training, policies, and regulations are all available online at <http://www.uab.edu/ohs/pages/chemicalsafety/cs/cs.html>

### New OH&S Support Facility

#### Relocation

The City of Birmingham and UAB reached an agreement to provide land space needed for the development of a new ballpark for the Birmingham Barons baseball team. As a result, UAB was required to relocate the hazardous and regulated materials facility originally on the corner of 3<sup>rd</sup> Avenue South and 14<sup>th</sup> Street. The facility was originally opened in 1986 as a holding and shipping facility for radioactive materials, chemicals, and biological wastes generated in UAB research operations and the hospitals.



#### Plan, Design, Construct, State-of-the-Art Facility

The development, design, and construction of a new 12,000 square foot facility were performed in 2012 and relocation was completed in December 2012. This new facility is located at 700 7<sup>th</sup> Avenue South on the south end of the Remote Parking Lot #1 and is named the OH&S Support Facility.

#### Decommissioning of the Old Facility

The old facility underwent decommissioning during the last quarter of 2012 and the final reports were approved by the Alabama Division of Radiation Control and the Alabama Department of Environmental Management.

### Emergency Management

#### Director On Call Program

OH&S has implemented the Director on Call Program to ensure the availability of qualified personnel to receive and triage emergency calls 24/7/365. A program director or assistant director is always on call to make available to UAB Police, Birmingham Fire and Rescue and other emergency responders, a qualified individual from OH&S to provide the best available safety information.

#### Drills and Tabletop

A series of ongoing drills and tabletop exercises have been implemented to ensure awareness and applicability of emergency response plans.

- UAB Police conducted two “live” active shooter drills on campus.
- Student Services conducted tabletop exercises addressing active shooter and severe weather scenarios.
- An Enterprise-wide severe weather tabletop drill was conducted that involved departments across UAB in detailed planning for winter weather.
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#### Emergency Operations Center

- Approval was given to proceed with the development of a campus Emergency Operations Center for centralizing communication and coordination of activities related to emergency response. The area (CH19 Basement) will also serve as a training space for coordinated training with Birmingham Fire and Rescue, tabletop exercises for UAB faculty and staff and emergency management committee meetings. The space will be equipped with the technology and software to monitor any type or size emergency response from monitoring severe weather to fires or hazardous material spills.
- Tulane Memorandum of Understanding (MOU)
- A MOU was signed between UAB and Tulane University to allow for the temporary housing of between 500 and 750 students in the event of a hurricane or other disaster that would require the evacuation of the Tulane campus.
- Assistant Director of Emergency Preparedness and Business Continuity
- Reporting to the Executive Director for Emergency Management and Safety, this position will allow for greater expansion of the Emergency Management program, more training opportunities and an increased number of drills. This position will also work with departments campus wide to ensure continuity of operations planning and coordination.
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#### Severe Weather Gathering Points

Campus buildings were carefully evaluated for areas considered suitable for gathering during periods of severe weather. These areas were labeled with signage indicating “Severe Weather Gathering Point” to assist building occupants and guests. A campus-wide awareness program using posters and direct mail pamphlets helped inform faculty, staff, and students on what to do during severe weather events. Specific instructions were distributed through the Provost’s office for all classrooms and faculty on how faculty or classroom instructors should respond in the event of severe weather, police or medical emergency or evacuation because of fire or other emergencies.

### Emergency Notification

Previously, B-Alert (Blackboard Connect) was only available for enterprise-wide, action oriented, short messages during an emergency. A new contract with Blackboard Connect now allows for the creation of subgroups. Smaller groups, such as building administrators, can now also be notified via email, telephone or text message of less emergent, yet specific, information. Other subgroups are being evaluated to help inform more targeted audiences of events that may not affect the entire campus, including the broad subgroups of UAB Campus and UAB Medicine.



### Speaker Array

As an addition to the B-Alert emergency notification system, a project was initiated to install an outdoor speaker array on the west end of campus that targets the athletic fields. This will allow emergency B-Alert messages to broadcast to individuals participating in athletic events that may not have mobile phones or other ways of receiving emergency information. This project was completed in June 2013.

### Enterprise Emergency Management Committee (EEMC)

The EEMC was formed as a UAB multidisciplinary group charged with the oversight of a comprehensive emergency management program, facilitating institutional collaboration, resource-sharing, monitoring activities and planning document review to assure compliance with regulatory agencies and the accrediting bodies related to emergency management. The EEMC is comprised of UAB Medicine entities (UAB Hospital, TKC/HSF, and Callahan Eye Hospital), UAB Occupational Health & Safety, Police, Media Relations, administration, and others from the UAB campus academic, research and athletic groups as appropriate. They meet quarterly.



### Child Care Center

In an effort to better protect the vulnerable population of children at the UAB Child Care Center, a project was initiated to install a storm shelter capable of withstanding even the most severe weather. The shelter is large enough to hold up to 120 children and staff and provide shelter and power for at least two hours.

## Construction Safety

OH&S maintains a comprehensive Construction Safety program for the campus and UAB Hospital that includes design review, preconstruction conferences, infection control risk assessments, interim life safety, and ongoing inspections and coordination with project managers, contractors, as well as city and state inspectors. Construction safety personnel reviewed drawings for 219 projects and conducted over 2,100 inspections during 2012.

## Healthcare Services

### Hospital Safety

The Hospital Safety Officers conduct environmental tours at least once every six months in patient care areas to identify deficiencies, hazards, and unsafe practices in patient care areas and at least once a year in non-patient care areas. Hospital Safety staff examine the physical aspects of the building and equipment and randomly assess staff knowledge. This is a Joint Commission requirement. A schedule of inspections is maintained in the office of Hospital Safety as well as a database of areas surveyed and findings. Inspection reports are sent to the cost center managers with copies to appropriate administrators. Written responses from each area surveyed are required as evidence of correction of deficiencies noted.

### Joint Commission Survey

The Hospital had its triennial Joint Commission inspection in June of 2012. There were a number of inspectors including a Life Safety specialist on site for a week. Hospital Safety's role in the inspection predominantly included Life Safety and Environment of Care. After going through all of our documentation including management plans, annual evaluations, fire drill documentation, safety inspections, risk assessments, etc. no infractions were found. A building tour was also conducted by the life safety specialist as well as the other members of the inspection team including reviews above ceiling at fire walls, storage rooms, compressed gas cylinder storage, statement of conditions, Interim Life Safety Measures, Infection Control Measures, etc. Only one minor item was identified.

## Environmental Management

### Environmental Site Assessments

There were 10 Phase I and Phase II environmental site assessments completed as a prelude to UAB acquiring property. Unannounced environmental audits of laboratories were implemented as a method to identify problem areas and reduce EPA/ADEM violations.

## OH&S Employee Health Program

The OH&S Employee Health Program provides a variety of services to UAB employees dependent upon an individual's health history and the potential health risk posed by the work they perform at UAB. Currently the program actively serves around 3,000 employees. Last year the part-time occupational physician and/or nurse scheduled 1,290 appointments and provided 2,209 vaccinations, TB screens, respiratory fit tests and/or status updates.

## Departmental Reorganization

During 2012, a two-phase plan was approved to reorganize the Department of Occupational Health & Safety. Phase one was implemented in the last quarter of 2012 and consisted of:

- The addition of Executive Director of Research Safety through reclassification
- The addition of Executive Director of Emergency Management and Safety through reclassification
- The reclassification of IBC Director to Director of Research Committees
- The reclassification of the Director of Emergency Management to the Assistant Director of Emergency Preparedness and Business Continuity
- The addition of Director of Laboratory Health & Safety

Phase one focused more heavily on activities involving research. Several audit functions were combined allowing more efficient use of staff and resources and less interruption of laboratory operations. Phase one also aligns executive management more closely to these activities fostering better planning and more direct response to new regulations and requirements.

Phase two is planned for implementation in 2013 and will be directed at providing a more comprehensive health and safety program for student life, construction safety, healthcare safety, training, and IT development.

## Learning Opportunities

### Training Courses

OH&S currently offers over 50 on-line courses through the Learning Management System, as well as over 25 live courses, workshops, and practicums. Course topics include basic biosafety, blood borne pathogens, hazardous materials, chemical safety, radiation safety, OSHA topics, defensive driving, nanotechnology, personal protective equipment, new employee orientation and many more. Several of the courses offered are required for compliance with regulations or accreditation for licensing. In all, nearly 8,000 faculty, staff, and students on campus and in the Medical Center received health and safety training either on-line or in a classroom setting. Some highlights include:

#### A/BSL3 Training

UAB's BSL3/ABSL3 training program is a 5 day, comprehensive safety training program designed to provide participants a thorough understanding of potential workplace hazards and the knowledge of how to best reduce or eliminate their risk of exposure. After completing basic prerequisites, participants receive didactic and hands-on training as well as proficiency evaluation related to the following:

- Review of BioContainment Control Mechanisms
- Engineering Controls
- Administrative Controls
- Personal Protective Equipment
- Respirators and Fit Testing
- SEBLAB Practical for New Employees
- Agent Specific Training for BSL3 and ABSL3
- SEBLAB Specific Training
- Mentorship
- Select Agent Training
- General Hazard Awareness for Non-Laboratory Personnel

This training has been developed and is offered through OH&S at no cost to the registrant. This is a cost savings of \$2,500 per participant over what they could get elsewhere. For 2012, that represents a total savings of \$57,500 for the total 23 students that were trained.



#### Laboratory Safety Workshop

In response to many requests, OH&S has developed a Laboratory Safety Workshop designed to offer principal investigators, laboratory managers, supervisors and science educators an in-depth review of laboratory safety practices, UAB policies and procedures, regulatory compliance, as well as legal and liability issues. In depth discussions and demonstrations are offered on Biosafety, Chemical Safety, Hazardous Materials, Waste, Emergency Response, and General Safety. One workshop was held in 2012 and each workshop is 8 hours in duration. A total of 25 students were trained.



#### Defensive Driver Training

It is required every three years for all employees that drive a UAB vehicle as a regular part of their job. It is used to promote and encourage an environment of proactive safety by providing training beyond what is required to obtain a drivers license and to help reduce the frequency of accidents by educating our drivers on the importance and techniques of defensive driving. Furthermore, it provides us an opportunity to highlight specific areas and situations that UAB drivers will find themselves, driving in tight areas and interacting with pedestrians, ambulances, one-way streets, etc. and UAB procedures for vehicle inspection and post-accident reporting. Seven classes were offered in 2012 and 203 individuals completed training.

#### 15 Passenger Van Training

This is additional training for those who also operate multi-passenger vans on campus and addresses the special issues associated with the larger vehicles. Six classes were offered in 2012 and 49 individuals completed training.

### Orientation Classes For Graduate Students, Post Docs, and New Faculty

- Two classes for new grad students were held.
- Two classes for new post docs were held.
- One class for new faculty was held.
- One Grant Writing Course was held.

A total of 175 individuals were trained in the above in 2012.

### Radiation Safety Practicum

The second part of a two part requirement for working with radioactive materials, the Applied Radiation Safety Practicum has a prerequisite of completing and passing the on-line Radiation Safety Training Course. The Practicum then consists of two components: submittal of a pre-operational baseline bioassay; and successful completion of the live hands-on practicum. The live hands-on practicum consists of several stations that feature practical in-lab tasks of which the student must demonstrate proficiency. The stations include, but are not limited to:

- Proper Surveying Techniques
- Understanding the Characteristics of Different Types of Radiation
- Determination and Use of the Proper Shielding
- Proper Waste Handling and Packaging Techniques
- Staging your Radiation Work Space
- Spill Management

Ten classes were offered and 23 individuals completed training in 2012.



### Health & Safety Fairs (TKC, Hospital, LHL)

During 2012 there were three comprehensive Health and Safety fairs held on campus that featured information and training from a number of areas within OH&S. The fair held at Lister Hill Library targeted both undergraduate and graduate students and was open to the general public and reached over 300 people.

- The Kirklin Clinic Health and Safety Fair is an annual training event that targets TKC and Health Services employees and reached over 700 people.
- The University Hospital Health and Safety Fair is an annual training event that targets Hospital employees to accomplish annual training goals and reached over 1,000 people.



### Dorm Room Burn Demonstration

In order to highlight the potential speed and severity of a fire in a typical dorm room, and the value of our fire sprinkler systems, two mock dorm rooms were built (one sprinkled, one not), furnished and set up near the Campus Green. With the assistance of Birmingham Fire and Rescue, each room was ignited and timed. Several hundred students and faculty attended. Refreshments and t-shirts were given away along with fire safety information.



**Culture Of Safety Initiative****Enterprise Risk Management Initiative and Endorsement**

UAB leadership is partnering with UAB Occupational Health & Safety to design and implement strategies to enhance our safety culture by “promoting a culture of laboratory safety that recognizes the importance of compliance with regulations and policies and consistently implements safety procedures reducing the potential for breach and/or impact of breach” (a current UAB Enterprise Risk Management initiative) without adding undue burden, arduous processes or more paperwork.

- Rollout: Second quarter of 2013
- Research Operations Contact (ROC) and Research Operations Lab Liaison (ROL) with Safety

The Research Operations Safety Program provides an essential link between OH&S and the research laboratory staff using vital connections between staff at the administrative level (Research Operations Contact-ROC) and at the laboratory level (Research Operations Lab Liaison-ROL). It establishes clear lines of responsibility and authority, which aid in risk assessment, safety practice, implementation, incident mitigation, follow-up, and ownership in overall safety.

It provides direct contact between laboratories and OH&S service issues i.e. scheduling audits, equipment certifications, waste management, and laboratory set up or shut down, etc. Participants from research departments and labs will assist in activities such as:

- Identifying employees that require laboratory safety training and assure training and documentation meets OH&S requirements.
- Assisting with regular safety self-inspections of their laboratory.
- Encouraging regular attendance for quarterly updates.
- Receiving and distributing safety updates to their laboratory.

**Regulatory Updates 2012****Alabama Department of Environmental Management (ADEM) / Environmental Protection Agency (EPA) Inspection, Violations**

- One notice of violation from December 2011 joint ADEM/EPA hazardous waste inspection. Corrective actions included:
  - UAB signed a Consent Agreement with ADEM in June 2012 to resolve existing violations.
  - UAB paid a \$30,000 fine for the violations.
- One notice of violation from ADEM for failure to conduct cathodic protection tests on three underground storage tanks. Corrective actions included:
  - The tests were actually conducted but the results were not forwarded to ADEM. The issue was resolved by sending ADEM copies of the tests and including the reporting requirements on the Environmental Management compliance calendar to avoid future instances.

**Federal Aviation Administration (FAA)**

- One notice of violation. Corrective actions included:
  - Review of dry ice training; clarification added
  - Added question to Project Registration to help identify laboratories that are shipping Category A, B and/or Dry Ice

**State Division of Radiation Control/ Nuclear Regulatory Commission (NRC)**

- Inspection of Broad Scope Radioactive Materials License Number 266 and Particle Accelerator License Number PA-105 were inspected on September 4<sup>th</sup> through 14<sup>th</sup> of 2012.
- One non-compliance item cited: Failure to perform annual calibration every 12 months.
- Corrective Action: None is required; however, the Radiation Safety Program expanded their audit to include more questions relating to particle accelerator operations in the Radiation Oncology Department.

**City of Birmingham**

Implementation of a joint storm drain-labeling project with the City of Birmingham. The License agreement is being circulated within UAB and once signed will be sent to the Mayor for signature and the drains will be labeled.

**Jefferson County Department of Health**

Obtain final Title V permit. Coordination with the Jefferson County Air Pollution division is on going. They are currently reviewing our Title V permit application. A draft permit on public notice is pending and should be completed by the end of 2013.

**Drug Enforcement Agency (DEA)**

Over the next year UAB can expect increased oversight by the DEA of the controlled substances program as a result of the implementation of an improved system that brings UAB into compliance with current regulations under a Memorandum of Agreement with the DEA. Department heads will hold a DEA number for their researchers. Through an OH&S web application, researchers will be issued a Controlled Substances Use Authorization (CSUA) number that permits ordering, designation of other authorized personnel to work under his/her number, documentation of training, and documentation of controlled substance possession and use. OH&S will maintain close oversight of the use of the controlled substances through a new electronic inventory system and through frequent inventory reconciliation and audits.

**Department of Defense (DoD)**

New Assurance Requirement: Grant applications from the DoD have an additional assurance statement requirement. The Office of Occupational Health & Safety has to provide an assurance statement that research related hazards have been identified and mitigated and that each PI has been consulted regarding the institutional safety policies and procedures. UAB Legal Council is currently reviewing and possibly revising the statement that will be signed by the UAB OH&S Executive Director of Research Safety.

**Centers for Disease Control (CDC)**

Subject to unannounced inspection of the UAB Select Agent Program at any time; scheduled renewal of certification due in May 2014.

## UAB Occupational Health & Safety Annual Report

January 1, 2012 – December 31, 2012

# Goals

### Emergency Operations Center

Renovate the basement area of Community Health Services Building (CH19). Construction is scheduled to begin in 2013. Installation of equipment and software to make the facility fully operational is subject to funding.

### Campus Safety Fair

Conduct a campus-wide Health and Safety Fair similar to the Fairs held in 2012, a Campus Safety Fair is being planned for the fall of 2013. It will target the undergraduate and faculty audience and involve more detailed demonstrations. It is being planned to coincide with Fire Safety Week and incorporate the Dorm Room Burn demonstration.

### Environmental Management System (EMS)

Expand and enhance the development of the UAB EMS. The scope has been defined to include both environmental and health and safety management system elements. This will begin inter departmental to OH&S.

### UAB Sustainability Program

- Continue to promote the vision and purpose established through the UAB Sustainability Committee consisting of representatives of UAB administrative and academic departments on campus, plus a student representative from the UAB Green Initiative.
- Further promote all sustainability related activities taking place on campus.
- Continue to develop and refine the UAB Sustainability website. A website committee has been established to redesign the current website, focusing on identifying and promoting sustainability activities at UAB.
- Identify current UAB sustainability activities across campus and consolidate them in the new sustainability website.

### Chemical Management Information System

In response to the Chemical Facility Anti-Terrorism Standards (CFATS) published by the Department of Homeland Security in 2007, UAB OH&S developed an electronic chemical management system to address facility inventory of a limited number of chemicals. This management system will be expanded in 2013 to also include 13 select agent toxins with the option to use the system for all chemical inventory management should a researcher desire to do so.

### ROC and ROL – Culture of Safety

The Culture of Safety initiative rollout to the UAB Research Community is planned for the end of May/first of June 2013. Preliminary meetings with Deans, Chairs, and Department Heads were completed in February 2013. Various faculty groups have requested program overviews and those sessions are available as long as they are requested.

### Web Site

The completely redesigned web site is now fully operational. We will continue to refine and improve the simplified, user-friendly navigation system consistent with UAB branding.

### Improve Project Approval Process and Integration with IRAP

OH&S staff has developed question sets for basic research project review and continue to refine the human use trials question set. OH&S will continue to work closely with Research Administration in anticipation of IRAP integration.