ENVIRONMENTAL HEALTH AND SAFETY

Annual Report 2018-2019

Case Western Reserve University, Department of Environmental Health and Safety Annual Report 2018-2019

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Mission Statement

Case Western Reserve University Department of Environmental Health and Safety

We protect the Environment and the university by acting in a regulatory responsible manner that both respects personnel and the research objectives of the community

We protect the Health and Safety of the CWRU community by providing the support and knowledge required to maintain a healthy and safe workplace

Notable Accomplishments 2018-2019

ACCOMPLISHMENTS

Began Implementation of Electronic Inventory Program Enhanced Regulatory Inspection Program Began Campus Machine Shop Safety Program Enhanced Summary Reporting of Safety and Environmental Issues to Chairs and Deans Enhanced Integrity of EHS Training Database Began Enhanced Training Notification Program Added EHS Course Catalog to Website Worked With Chemistry and Macromolecular to Audit and Implement a Robust EPA Updated Compliance Policy Continued Policy Review of All EHS Documents and Policies

PROGRAM CHANGES:

Added new Machine Shop Safety Positon

Added Part Time Employee for Training follow up

Shutdown Dental Hg Program and reopened at new location

AGENCY INSPECTIONS

Cleveland Department of Health Quarterly: No issues

CDC BSL3/ABSL3: No Issues

NEORSD Mercury Program: No Issues

BWC Machine Shop Inspection: Large Punch list generated

BUSTER-Underground Storage Tank inspection: No issues

OSHA: Reportable Amputation. Fined for lack of machine specific procedures

MISCILLANEOUS

Began process for new Medical School and Dental School opening

OBJECTIVES 2019-2020

EHS Objectives: Each year EHS strives to develop a portion of the many programs for which it has responsibility. The follow global objectives are set for the calendar year 2019-2020

- 1) Maintain Regulatory Compliance
- 2) Enhance Training enforcement
- 3) Continue Summary Reporting to PIs, Chairs, and Deans
- 4) Continue Rollout of Inspection Enhancements
- 5) Continue Collection of Electronic Chemical Inventories
- 6) Implement Campus Machine Shop Safety Program
- 7) Continue Hazardous Materials Review of Campus
- 8) Implement Mechanical Space Inspections
- 9) Complete full inventory of machines and write specific lock out tag out procedures for all devices.
- 10) Hire Construction Safety Specialist

Organizational Chart 2018-2019



DEPARTMENT DESCRIPTION

The Department of Environmental Health and Safety is charged with maintaining a safe work environmental for more than 6,000 employees and 10,000 undergraduate and graduate students who work and/or live in over 100 buildings at CWRU and at 5 other major Northeastern Ohio research locations. In addition to the Ohio-based research, EHS shares safety responsibility for its personnel in locations worldwide.

EHS works to balance federal, state and local safety regulations with the requirements of research. At times, these tasks appear to conflict with each other and require innovation to achieve the needs of both a safe work environment and productive research community. EHS's customer service approach distinguishes its activities from the strict regulator approaches of yesteryear.

Dissemination of safety information is accomplished through cooperative interactions with its customers (faculty, staff and students) through, formal training, consultation, and safety document creation and maintenance, inspection and oversight activities that are encompassed in the activities of the EHS department. Audit through inspection acts as the feedback mechanism used to measure the level of compliance and the level of community understanding achieved through departmental education and consult efforts.

In a complex environment, however, accidents sometimes occur. In these cases, EHS is called upon for emergency response, mitigation of hazardous situations and forward planning where possible to avoid similar future incidents. Departmental services in and following emergencies include in house hazmat response as well as planning with external agencies for larger emergency situations. EHS works closely with internal emergency management, plant, police and security departments as well as with external agencies to generate cooperative plans and responses. Part of this effort with external agencies is directed toward familiarizing governmental regulatory and response organizations with our institutional resources and response workers. This effort provides needed groundwork for synergistic responses during emergencies.

EHS is staffed by six main sub-groups that encompass Biological, Chemical, Facilities, Fire/Life Safety, Construction, and Radiation safety concerns

Biological Safety

The Biosafety program at CWRU employs a multifaceted approach to ensure safe and responsible laboratory practices while maintaining compliance with the various Regulatory agencies to whom we are responsible. The program consists of the following areas:

Maintain compliance with NIH, OSHA, CDC, USDA, DOT, FAA, DHS and DEA regulations as they pertain to training, handling, transporting, storage, and shipping biological materials and DEA Controlled Substances.

Work with laboratories to prepare for USDA and CDC permitting inspections

Review of Exposure Control Plans, IBC protocols and IACUC protocols for the use of biohazardous materials and to ensure proper controls and procedures are in place to protect researchers as well as the greater University community.

Educate investigators on the biological hazards in their laboratories, current Best Practices, post exposure measures and changing Regulations.

Collaborate with University Health Services to provide a robust Occupation Health Monitoring program including recommended prophylaxis and post-exposure treatments based on specific biohazards.

Provide personal consultations on best work practices, engineering controls and personal protective equipment based on specific biological hazards.

Ensure proper function of and decommissioning of the High Containment (BSL-3) Laboratories on Campus.

Maintain an up-to-date inventory of the Biohazardous Materials on the CWRU campus.

Provide specific training and work practice recommendations to the Animal Resource Center staff who will come in contact with contaminated materials.

Develop written policies on the handling of specific Biohazardous materials

Chemical Safety

With over 1,500 campus locations designated as hazardous material use areas, chemical safety is by far the largest program incorporated under EHS. Areas that fall under the chemical safety program include medical research labs, chemistry and engineering labs, construction and maintenance sites and clinical areas such as dental, nursing and Health Services.

Maintains campus wide compliance with OSHA, EPA, TSCA, ODH, DOT, IATA, FAA, EAR, ITAR, DHS, DEA, DOD, NFPA, BOCA, as well as local and state agencies

Conducts safety training for all students, faculty and staff

Conducts laboratory inspects annually

Provides on-one-on consultation with laboratories regarding safety plans

Provides environmental testing and occupational testing support

Provides facilities with air testing equipment

A review of all chemical safety protocols for the use of hazardous materials, to ensure that proper controls and procedures are in place to protect researchers as well as the greater University community

Education of campus students, faculty, and staff in the chemical and physical hazards associated with their daily routines, and the proper hazard controls used to protect themselves

Collaborates with University Health Services to provide a robust occupation program including recommended treatment and post-exposure treatments based on specific chemical and physical hazards

Provides consultation on best work practices, engineering controls and personal protective equipment based on specific chemical and physical hazards

Assures proper function and decommissioning of all hazardous work environments on campus

Verifies up-to-date chemical or hazard communication plans, unique to each hazardous material use area, are current. This includes inventory of hazardous chemicals and annual site-specific training and review date

Providing specific training and work practice recommendations to specific campus departments including, but not limited to, police and security, facilities, contractors, custodial and athletics

Assures compliance with all hazardous waste regulations and facilitates the removal of all hazardous waste

Provides respiratory protection training, and fit testing

Provides advice on the use of hazardous materials in laboratories and construction sites

Conducts indoor air quality and other IH assessments

Reviews upcoming legislation and provides senior management compliance advice

Works actively with local, state, and federal agencies to provide preplanning for Emergency Response

Provides limited hazmat response to small releases of materials

Provides HVAC controls testing for engineering controls such as fume hoods

A search for a more streamlined, on-line CHP is being reviewed. On-line programs from UH are available, as well as an improved model from ACS.

An SOP template for chemical processes is in place.

Continue to use pre-inspection notification with summary of CHP requirements

Chemical Fume Hoods:

Student Assistant Pilot Program: This program has been a complete success in continuing the front line determination of the safe working conditions for one of the most important engineering controls in our laboratories. Two part-time student employees and one newly minted doctoral student have learned the behind the scenes technical aspects of fume hood testing and provided EHS with on-the floor input of employee use and status of our laboratory fume hoods. Most importantly, the needed follow-up on the repairs for the fume hoods have been tracked and retested. From the later valued input not only have several long-standing issues have come to the forefront (need for fume hood monitors, efficient and focused decreased of higher velocity fume hoods across campus and a need for better education of fume hood usage, but the pathways to improving these conditions are implemented.

Metrics on repairs are in place listing the reason for hood failures and turnaround time for repair comparing 2016 to 2017.

A new approach to safer hood use was completed by simply changing the style and message of the fume hood sash sticker, resulting in a major paradigm shift to a safer and lower sash position being used by the researchers with the added bonus of energy savings.

Assistance provided from the pilot program allowed focused attention with long standing issues in other areas of safety and the resulting collaboration with both IH and support from safety

ASHRAE of new hoods is current. On-site utility program for fume hoods has streamlined data analysis and fans systems are now being added to data.

Ergonomics program:

The field of ergonomics is defined as an applied science concerned with the design and arrangement of work environments in order to mitigate the possibility of hurt in the workplace. The goal of ergonomics here on campus focuses the implementation of administrative and engineering controls to prevent physical discomfort for Case Western Reserve University faculty, staff, and students. The ergonomics specialist, Rebecca Manning, has developed a comprehensive and user-friendly ergonomics program that is centered on the needs of the CWRU member.

The ergonomics specialist has revised and fashioned a new ergonomics assessment protocol that focuses primarily on how risk factors can be avoided in the workplace. Risk factors are consistent modes of work that lead to strain. These can include: repetition, static work postures, and over extension. The current ergonomics assessment includes a risk factor assessment, which is completed by the CWRU member in order to gauge specific risk factors associated with the employee's work environment. In addition, The risk factor assessment offers the requester an opportunity to be hands-on in documenting their pains and discomforts.

After obtaining this information, research is completed to determine what recommendations need to be made. Recommendations can include office supplies or equipment, desk stretches, or desk organization modifications. Recommendations are offered in the post-assessment summary, which provides suggestions to improve the ergonomics of the workstation, follow-up scheduling, and goals to complete before the next follow-up. The requester's supervisor also receives a copy of the post-assessment summary for signature, along with a detailed email explaining why each item is recommended. EHS always recommends that every CWRU member consultant with their personal physician regarding the reported issues recorded in each ergonomics assessment. In addition, EHS does not endorse a specific brand of ergonomic equipment.

Due to the repetitious nature of various positions on campus, aches and pains can arise gradually from everyday work practices. The ergonomics assessment program is a fundamental resource available to the CWRU community, serving as an educational tool as well as a standard for identifying potential work risks.

Shipping Hazardous Material and Export Control

Our shipping program is expanding in the area of awareness of the need for compliance to federal regulations in proper transporting of hazardous materials and for screening materials, hazardous and nonhazardous, for export.

Improvement in tracking the shipments from the University is needed. Additional efforts in spreading the word through lab safety training has been in progress.

Retraining process could be improved by a class focused on updates and adding summaries of labeling, packaging and documentations.

Coordination with other shipping centers on campus would be beneficial in assisting researchers in procuring shipping supplies.

Respiratory protection

EHS works closely with various departments to develop or maintain respiratory protection programs in compliance with current OSHA regulations. An understanding of the hazard, job requirements, and potential exposure is evaluated to ensure that the appropriate regulatory standard is followed. The department provides training, medical evaluations and respirator fit testing for personnel who require respirators during their work. We have also worked closely with various departments to evaluate the risks and potential exposures to employees.

The department continues to provide medical evaluations, training, and fit testing of medical students who are required to wear N95 respirators during their away rotations, typically in the third year. EHS is reviewing suggestions that the medical students receive their initial respirator training and fit testing during their 2nd year prior to their clinical core rotations. This will be evaluated with medical school staff in the near future. The need for respirators for the new PA program will need to be evaluated.

EHS continues to support the excellent respirator program in place for the Animal Resource Center personnel, including researchers using the BSL3 facilities. The department works closely with researchers and ARC staff to determine the appropriate level of respiratory protection based on a review of potential hazards, job responsibilities, and working conditions. Use of other personal protective equipment has been evaluated by EHS and ARC staff and some modifications to donning and doffing procedures were implemented for BSL3 users last year.

Inspection-Laboratory

A physical inventory of all buildings is being conducted to obtain an accurate room count and type count. This is the basis of the inspection schedule for 2019-2020. Five buildings have been evaluated suing this method with 26 pending. A total of 248 inspections have been completed with 44 of those inspections remaining open.

Only laboratories are being inspected and documented. EHS looks at all rooms but does not formally document non laboratory inspection through the laboratory inspection program. These rooms are covered in other inspections such as mechanical space inspections and fire inspections. As an example, 160 room were looked at in Wickenden. Only 82 are actual laboratory spaces.

This year marked the first year of using the new HP On-Site inspection system. We now have the ability to see repeat violations during the coming year's inspections 2019-2020.

Construction Safety

The construction safety program at CWRU focuses on keeping all employees safe while construction projects occur on campus. The principal responsibility of this program is to monitor construction sites and contractors to ensure compliance with state and federal regulations pertaining to health and safety standards in the workplace. This objective is achieved by using the following disciplines:

- Provide regulatory support and assistance for the control of hazards on the job site that might affect the CWRU community.
- Provide the removal, to the extent possible, of hazards prior to handing over job sites to contractors except as detailed in contract agreements.
- Ensure workers from both the host and contract employer are informed about the hazards present at the worksite and the hazards that work of the contract employer may create on site.
- Organize, schedule, and perform required right-to-know safety training for all contractors prior to working on campus.
- Ensure all contract employers coordinate on work planning and scheduling to identify and resolve any time issues that could impact safety or health.
- Provide support to the project by maintaining a visible presence in the field and to have continued availability to assist the project manager with safety related issues.
- Communicate and assist the project managers to ensure all safety expectations are understood and met.
- Regularly review and be familiar with all applicable legislation and standards to ensure compliance.
- Participate in the investigation of incidents on campus to determine root cause, and to put effective actions in place to help ensure repeated incidents do not occur.

Goals achieved fiscal year 2018:

- Managed all environmental issues in the renovation of the Alpha Chi Omega House.
- Conducted safety oversight on the 6 successful re-roofing projects across campus.
- Conducted Max Occupancy Studies for the service building.
- Managed the environmental issues in the renovation (Asbestos, Lead, and Mold) of the Haydn Hall.
- Conducted a Fall Hazard Analysis on all of the roofs on the main quad of campus.

Goals for 2019-2020:

- Ensure the best safety and health conditions possible on the jobsite.
- Organize, schedule, and perform safety oversight for the roofing projects in the summer of 2020.
- Continue to strive for 0 lost-time injuries.
- Remove the underground storage tank that is delaying the Nash walkway project.
- Provide expertise and support to the 125 asbestos, lead, and mold projects throughout the year.

Facilities Safety

The facilities safety program at CWRU is responsible for the health and safety of all plant and maintenance staff members. The facility safety program must ensure those members are in compliance with local, state, and federal health and safety standards while performing their daily work tasks. This program includes:

- Provide OSHA, EPA, DOT, and other training as required by law. This includes right to know, confined space entry, drivers training, lock-out tag-out, fall protection, injury prevention, and many other topics annually.
- Provide lift truck and powered industrial equipment training.
- Provide training in hazardous materials handling such as asbestos, lead, mold, and chemical waste.
- Conduct inspections and remediation for lead, asbestos, and mold.
- Conduct Job Safety Analysis of all facilities worker functions.
- Conduct inspections for all mechanical rooms on campus.
- Providing in-the-field assistance to all maintenance personnel regularly as well as when a safety concern arises.
- Conduct accident and injury investigations and performs root cause analysis to prevent reoccurrence of the incident.
- Provide respiratory and hearing protection training and equipment selection.
- Supervises the entry of facilities personnel into confined spaces.
- Reviews MSDS sheets of materials used on campus for safe application
- Conduct crane inspections annually to maintain compliance with the OSHA crane and hoist standard.
- Conduct driver's safety training for the campus community that is required to drive a university owned vehicle.

Goals Achieved Fiscal Year 2018

- Completed a fall hazard analysis of the roofing systems on the main quad of campus. 2 issues were immediately corrected. The roof hatch at Nord was deemed unsafe and was eliminated. A guarded walkway from Sears Library is how access to that roof is achieved. Secondly, the roof hatch on Rockefeller opened the wrong was and was spun 180 degrees to correct that issue.
- Ensured the Jolly Scholar was getting new duct work over the summer of 2019 in order to correct the grease issue they were experiencing.
- Completed a campus-wide confined space review. Reviewed over 100 spaces.
- Trained the Fire and Security Systems group in scissor lift safety to ensure safe practices while conducting their work.
- Ensured that the new deadbolt locks being installed in Theta Chi were in line with Ohio Fire code standards after reviewing the plans to install incorrect locks. The incorrect deadbolt lock order was cancelled, and the correct single action locks were ordered.

Goals for Fiscal Year 2019 - 2020

- Complete mechanical room inspections across campus.
- Conduct Mock OSHA audits for all maintenance zones.
- Conduct a Fall Hazard Analysis of the roof systems of all buildings on the Medical and Mather quads.
- Complete the overhaul of the Lock-Out Tag-Out program. Create LOTO procedures for all maintenance equipment.
- Continue to provide in-the-field consultation to all maintenance personnel regularly as well as when a safety concern arises.

Fire Safety

The Fire and Life Safety Program at CWRU is tasked with the following:

- Hot Work Inspections: brazing, cutting, grinding, soldering, torch applied roofing, welding, etc.)
- Red Tag: Anytime fire protection equipment is taken out of service, a red tag permit must first be issued by the Fire and Life Safety Specialist
- Fire Safety Training: All Resident Advisors go through a fire prevention safety course
- Fire Extinguisher Training: Training is available free of charge for any university employee. All maintenance workers are required to attend once per year
- Fire Drills: Four fire drills occur yearly for all resident halls and Greek Life houses. During the summer semester a variety of campus academic buildings will also have a fire drill
- Cleary Act Reporting: The Fire and Life Safety Specialist is responsible for all Cleary reporting on the CWRU Campus in the fields of arson and fires that occur in resident areas. The Cleary Act requires all colleges and universities that participate in federal financial aid programs to keep and disclose information about crime and safety practices on and near their respective campus
- Fire Inspections: All Resident Halls and Greek Life Houses common areas are inspected two times per year for fire code violations by the Fire and Life Safety Specialist. All other University buildings are inspected on rotation. Any time a member from FM Global, the University insurer carrier, or a member of the Fire Department wishes to inspect a building the Fire and Life Safety Specialist will accompany that group
- Special Events: Any time a special event is planned on campus that requires a building to change its everyday floor layout/occupancy, when outdoor tents are being used, or hazardous materials (propane for grilling/heat, fireworks, etc.), the Fire and Life Safety Specialist is involved in the planning process

Goals Achieved Fiscal Year 2018

- Hired the new Fire and Life Safety Specialist.
- All university owned Greek houses were inspected bi-annually by EHS and housing to ensure the Ohio fire code was intact
- Updated the university's furniture rating policy. We must follow the R-2 classification of the fire code. It is also clearly stated that all new furniture must be "Cal 133" rated furniture throughout all CWRU owned residence halls if the building does not have a sprinkler system. The Ohio Fire code does give exceptions to the rule. CAL 117 rating can be used in areas where CWRU has automatic sprinkler systems with written approval from the city of Cleveland fire division and our insurer FM Global.
- Became more involved with facilities walk through events with written reports

Goals For Fiscal Year 2019

- Conduct the bi-yearly campus walk through with FM Global.
- Update and publish the annual Fire report.
- Complete egress plans for every individual dwelling unit in all housing on campus
- Update rally points for all housing on campus
- Be an integral part of the campus safety fair

Laboratory Safety Committee Audits Safety Services Laboratory Programs 2018-2019

Assignments:

CHP/ECP	Kathy Howard	Heidi Page
Fumehoods/BioHoods	Thomas Gray	Mary Ellen Scott
Incidents	Emily Pentzer	Tom Merk
Respirators	Andrea Romani	Derek Conti
Protocols	John Durfee	Heidi Page
Clearances	John Protasiewicz	Rebecca Manning
Waste Facilities/Program	Greg Tochtrop	Robert Lastch
Licenses	Clive Hamlin	Marc
Training	Kathryn Howard	Tom Merk/Heidi Page
Website	Raul Juarez	Joe Nikstenas
Inspections	John Durfee	Heidi Page
Biosafety Program	Greg Tochtrop	Heidi Page
Shipping	Andrea Romani	Mary Ellen Scott

LSC Audit Summaries and Senior Directors Response

Findings:

CHP/ECP-A high percentage of noncompliance was found with regards to updating documents.

Directors Response:

Completion of site specific training is required by OSHA for all laboratories. The Chemical Hygiene and Exposure control plans are the primary documents that workers have available to them in regards to the safety procedures and requirements specific to the laboratory. These plans must be updated whenever a change in procedure occurs and must be available to the workers to use. EHS requires that each PI look at the documents and update them annually. These plans are then submitted to EHS.

Collection and tracking of the completion of updates has been an ongoing challenge. EHS is moving to an electronic document system that will make this much easier to track and much easier to submit for the PI. We hope these changes will improve this challenge.

Findings:

Fume/Bio Hoods – The program is running as it should.

Directors Response:

Fumehoods and Biosafety cabinets are the primary engineering control used to isolate workers from hazards. These devices are tested on a regular basis through a combination of in-house and contractor efforts. A compressive 100 page report is available that chronical the status of the fume hoods and building systems on campus.

Findings:

Incidents-The program is running as it should. 93 incidents were logged.

Directors Response:

The incident program tracks incidents that occur on campus and tracks the completion of action items discovered during the incident. In this way no issues are left open ended. The generated reports are shared with the Lab Safety Committee at each quarterly meeting.

Findings:

Protocols-The program is running as it should

Directors Response

EHS is involved with University committees such as IACUUC, IBC, and Radiation Safety Committee. Protocols are reviewed by EHS staff for safety as it concerns both human and environmental safety.

Findings:

Inspections-60% of labs where inspected this year. The round will not be completed. There is a backlog of data entry and follow-up.

Directors Response

The inspection of laboratories is a primary mechanism for the determination of safety compliance on campus. In field observations allow EHS to find issues and to address noncompliance one on one with the personnel and PIs. Traditionally EHS has completed each round of inspection in a single year. This however has led to rushed inspections with open ended findings that lead to repeat violations that are not closed out. As a result, EHS has moved from an annual model to a more in-depth two year cycle. This allows for much more in depth treatment of the areas inspected. Further, increased communications have been put in place to elevate and communicate more effectively with the schools, compliance office, and other parts of the compliance framework not normally involved in the EHS laboratory inspection program.

Findings:

Licenses-All licenses are up to date

Directors Response

All licenses are up to date. We also added a calendar for reminders of renew dates

Findings:

Training-There are many CWRU personnel; staff, students, employees that are delinquent in one or more retraining class. Primary training is largely up to date.

Directors Response

Safety and regulatory Training is by far the most difficult program that EHS administers. EHS has historically had issues with getting people to comply with retraining requirements. EHS is successful in delivering initial training to workers, staff, students, and faculty. Many of these requirements require an annual refresher course. Getting people to take this required retraining is a challenge.

Part of the issue with retraining tracking has been a lack of the ability to know when people leave or change positions. This resulted I na large number of entries in the EHS database that were essentially ghosts. EHS has worked for three solid years to clear this data from the database. Late in 2017 we hired a new position to strictly handle sorting this issue. We have been able through cold calling and internet searching to eliminate 880 of approximately 6000 data entries from the database. We started from the oldest records and have worked forward in the three main class's lab standard, biohazards, and hazard communication. To date (Oct 2019), we have work through the period 2000-2017. We reduced the number of persons that need address to less than 50 and are now seeking to reach resolution with this group.

We are continuing forward into 2018-2019 with the goal to have a cleaned purged database by the summer of 2020. At this point we will be on a maintenance basis and will be able to keep personnel to less than 1 year delinquency before taking corrective action as we will have a high confidence of the results of our searches of delinquency.

While we have been busy cleaning and purging, with the opening of the new medical school and heightened enrollment, we have seen a spike in the number of additional trainees. This has required the selection of a number of large classrooms and the addition of additional class offerings to keep up with demand.

A second section of training is for personnel that do not work in the labs. This includes police, security, custodial, facilities, pdc, thinkbox, student clubs, high school groups and other non-research areas. These efforts have grown considerably but due to the small size of the groups we have been able to tightly control training and retraining and see acceptable levels of compliance.

Overall the trajectory is positive though a tremendous amount of work is in front of us despite the already tremendous amount of work accomplished.

Findings

Website-No issues noted

Directors Response

While the web page is functional, I would like to see a great deal of work placed on the webpage to aid the research community. This would be in the form of short training sessions and videos as well as resources from the web organized in a topical method. The issue is strictly a time and resource allocation question.

Findings

Biosafety Program-Retraining continues to be an issue

Directors Response

The biosafety program is strong and has grown to include may additional functions. Additional committee involvements, training, inventory, and outreach efforts have been launched with great success. The testing of biological engineering controls including biosafety, laminar flow, bsl3, and other devices and facilities has been streamlined. Additional protocol review of research has been implemented to assure the exposure control plans are complete. Additional collaborative efforts with regards to occupational health have been instituted.

Findings

Hazardous Waste-no audit was completed by the committee this year.

Directors Response

The hazardous waste program is a static program with little change needed. Efforts to remove excess chemicals from laboratories have continued. These efforts have greatly increased the safety of laboratories by assuring that aging materials do not sit around and become unstable. These efforts have also helped the departments to make additional space for new incoming faculty.

Findings

Shipping-no audit was completed by the committee this year.

Directors Response

The shipping program services the needs of the university with regards to the shipping of hazardous material around the world. Generally this program involves a training component that is well established but also includes assistance with actual shipping of hazardous materials as well as permits as required.

Findings

Clearances--no audit was completed by the committee this year.

Directors Response

This program is involved with the clearance of rooms and objects so that additional service areas can safely work. This includes clearing spaces for construction, when a PI leaves, or when repair work is required. The program is running smooth with no issues.

Findings

Respirators--no audit was completed by the committee this year.

Directors Response

The respirator program services both research and non-research elements of the university. Individuals are identified through a number of mechanisms revolving around the jobs they performs for possible exposures to hazardous materials that cannot be eliminated by the use of engineering controls. These individuals are then training and fit tested as required to perform their functions. This includes preparation of medical students for residency as well as anatomy class.

2018-2019 METRICS

EHS METRICS 2018-2019

COMMITTEE AUDITS	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Committee Audits	148	100	157	128	533
CHP/ECP SUBMITTED	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
TOTAL	52	128	115	91	386
ORIENTATION	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Total	331	84	150	330	895
TRAINING	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
TOTAL	2719	1459	1617	1585	7380
Lab Inspection	July-	October-	January-	April-	Total
	September	December	March	June	
TOTAL	227	768	217	127	1339
CRANE INSPECTIONS	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Total	0	0	18	0	18
RESPIRATOR USE (From FileMaker)	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Total	148	108	382	58	696
BIOHOOD REPORTS	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Total	119	243	110	73	545
FUME VELOCITY HOOD TESTING	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
TOTAL	25	6	148	503	682
CLEARANCES	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
TOTAL	483	727	313	484	2007
ERGONOMICS	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Ergonomics Assessment	13	11	8	6	38
Follow-ups	4	8	12	7	31

CHEMICAL PURCHASE APPROVALS	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Purchase Approvals	192	143	222	186	743
HAZARDS MATERIALS SHIPPING					
DOT/IATA SHIPPING	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
TOTAL	30	22	36	26	114
TYPES OF INJURIES					
TOTAL	39	45	53	15	152
INCIDENTS	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
TOTAL	25	17	22	17	81
REPORTED FIRES	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
TOTALS	0	0	0	2	2
FIRE SAFETY REPORTS	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
TOTAL	321	196	181	251	949
ASBESTOS AND LEAD ISSUES	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
TOTAL	59	41	58	38	196
OTHER MONITORING	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
TOTAL	10	11	15	3	39
ENTRANCE CAUTION SIGNS	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
Signs	35	55	128	93	311