ENVIRONMENTAL HEALTH AND SAFETY

<u>Index</u>

Mission Statement

Notable Accomplishments

Stated Objectives 2015-2016

Stated Objectives 2016-2017

Department Organizational Chart

Department Description

Laboratory Safety Com

Notable Accomplishments 2015-2016

No Regulatory Violations or Citations were issued in 2015-2016

Com

OBJECTIVES 2015-2016

OBJECTIVES 2016-2017





DEPARTMENT DESCRIPTION

The Department of Environ

Biological Safety

8 [[]J

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 for the control of hazards on the job site that might affect the CWRU community.
- o Provide

Facilities Safety

The facilities safety program at CWRU is responsible for the health and safety of all plant and maintenance staff members. Comprised of over 80 facility and grounds 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:

- Providing OSHA, EPA, DOT, and other training as required by law. This includes right to know, confined space entry, drivers training, lock-out tagout, fall protection, injury prevention, and many other topics annually.
- Provides lift truck and powered industrial equipment training.
- Provide training in hazardous materials handling such as asbestos, lead, mold, and chemical waste.
- o Conducts inspection and remediation for lead, asbestos, and mold.
- Conducts Job Safety Analysis of all facilities worker functions
- Providing in-the-field assistance to all maintenance personnel regularly as well as when a safety concern arises.
- Conducts 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.
- o Reviews MSDS sheets of materials used on campus for safe application
- Conducts crane inspection and foundry inspection annually to maintain compliance with the OSHA crane and hoist standard.

Goals Achieved Fiscal Year 2015

 Completed implementation of the Arc Flash Safety program for facilities electricians. This has been a deficiency for over 25 years here at CWRU. The electricians were outfitted with personal Arc Flash gear and-3(bleTBT/F14 1e)-5(a)4(

Radiation Safety

The University is authorized to use radioactive material by the State of Ohio, which became an Agreement State on August 31, 1999. Radioactive material is extensively used in the several hundred biomedical research laboratories on campus. Compliance with the complex controls and regulations governing the use of radioactivity is the primary goal of the radiation safety program. Support of research compliance and safety for faculty, staff, students, and the public is essential.

The Director of Radiation Safety is the University RSO who has a direct reporting relationship with upper University management and works under direction of the University Radiation Safety Committee as mandated by federal and state radiation Safety Agencies. At the reg

Laboratory Safety Committee Audits Safety Services Laboratory Programs 2015-2016

Assignments:

CHP/ ECP	Kim Volarcik
Hoods/ Biohoods	Cive Hamlin
Incidents	Gregory Tochtrop
Respirators	JC Scharf-Deering
Protocols	Thomas Gray
Clearances	Andrea Romani
Waste Facility	John Protasiewicz
Licensing	John Protasiewicz
Training	Emily Pentzer
Regulated Chemicals	Andrea Romani
Waste Program	Kathrine Howard
Website	John Durfee
Inspections	Clive Hamlin
Biosafety	Thomas Gray
IH/ IAQ	Katherine Howard
Shipping	Emily Pentzer

Inspections:

SOP is outdated and needs update: Agreed

The issue of two databases has been a problem. It resulted from a usability standpoint that remains to be resolved. Until that is resolved if ever we have moved completely off the HP Assist program to Filemaker. This was the program we used for 20 years prior to HP Assist and it serves us well. I have no plans to return to HP Assist until there is a very compelling reason to do so.

A suggestion to accept the inspections of sister organizations safety office was brought forward. The idea has merit and is being set in motion. This will reduce the volume of work to some extent. We will then set the laboratories we place in to this status on a rotation such that we will still perform our own inspections at an interval to be determined but not to exceed 3 years.

CHP/ECP

30 files were looked at randomly and 6 were found to lack a signature.

An additional audit of all CHP and ECP was done by the Senior director and the following was found. 429CHP and 429 ECP were identified. Of this 122 were found to be 2 years or more out of date. The breakdown is as follow: Due in the year listed:

2016-145	33%
2015-160	37%
2014-74	17%
2013-21	5%
2012-15	3%
2011-3	>1%
9 older than 2010	2%

87% of the plans are up to date or within 1 year of compliance. The remaining 13% need to be contacted and brought into compliance.

Regulated Chemicals

The regulated chemicals program shows 141 lab groups using the major regulated chemicals formaldehyde, methylene chloride, and benzene per the data collected. 39 new users were identified and trained. No further analysis is offered.

The regulated chemicals program is in need a better data collection and follow up. Part of this needs to be a visit to the identified labs to identify how they use the material and if chemical monitoring is required to determine an exposure. This process was started in the 2016-2017 year. Further, better collection means are required. The identified number of labs using methylene chloride and formaldehyde is a gross understatement of the actual usage in the laboratories per chemical inventory and general knowledge. A revamping of the regulated chemicals process to better capture all OSHA regulated chemicals is warranted.

IΗ

The Industrial Hygiene program encompasses varied and wide range of services that include indoor air quality, compliance monitoring, tracing of odor complaints, and other related work.

A major thrust of the program has been identification and monitoring of anesthetic gas users. This portion of the program has made a good start but has more work to accomplish a full inventory and monitoring repertoire.

The OSHA regulated chemicals program is expanding to include the full list. Major focus has been placed on the largest user groups formaldehyde, methylene chloride, and benzene. Since anatomy uses large quantities of formaldehyde major emphasis has been placed in this area. As was report last year efforts were taken to find alternate methods to HVAC to reduce exposures. These methods were deployed with great results reducing levels by 53%. Unfortunately, this method also resulted in damaged tissue unusable for the program. Alternate methods are now being addressed.

Additional assessments in noise were accomplished in two areas. Once was an SEM microscope and the other was a music practice area.

Areas that need improvement include better defined SOPs and a general IAQ manual. Tightening of the collection methods used to determine regulated chemical laboratories is required. Better

Respirators

The respirator program is divided into two major areas focusing on facilities use and laboratory use. The largest users of respirators are facilities worker in the asbestos, hvac, and plumbing trades. The largest set of users in the laboratory are medical school anatomy class participants and teaching staff. This portion of users is largely voluntary use users as defined by the OSHA standard. These same students eventual go on to receive additional N-95 training prior to leaving for residency.

In previous years in response to the flu concerns widespread N-95 training was conducted. This has largely ceased. Most users of N-95 are workers in biological laboratories and animal surgery. The audit defines the mandatory users more clearly. Refer to the audit for further detail.

No issues were noted during the audit.

Incidents

A database is used to hold all incidents reports that EHS responses to. The following items were noted during the audit. The SOP at this point needs to be updated. The last date was 12/12/2014. All incidents examined were determined to be resolved.

No other issues were noted in the audit.

Clearances

The clearance program is aimed at making sure that hazards are removed or placed in a safe condition prior to allowing work or non-lab workers to enter an area, dispose of equipment,

Chemical Waste Program

Further complicating this process, some investigators are employees of other institutions

Bloodborne Pathogen and Respirator training is renewed annually (Federal requirement)

OSHA Laboratory Standard and Hazards Communication training is renewed annually (a CWRU requirement)

There are a number of other trainings that are conducted by the EHS Department. They include:

Hazardous Materials Shipping (DOT/IATA) training is required to be taken every 3 years for DOT and every 2 years for IATA. CWRU requires both trainings to be conducted together every 2 years.

Vehicle Safety Training (Drivers Training) is required at the time assignment and only needs to be taken once.

as to be taken once, and anytime there is a change to the

regulation. Laboratory Safety must be taken prior to formaldehyde training. Plant and Maintenance Safety training is conducted monthly for all those working in this field. The topics vary each month and are relevant to the safety of the tasks that are performed by this group. Some of the relevant topics are:

- Safety Training for Plant and Maintenance, which includes Hazards Communication, Biohazards with Bloodborne Pathogens and Ancillary Radiation.
- o Stairways and Ladder Safety
- Hand and Power Tool Safety
- Sips, Trips and Falls
- o Scaffolding Safety
- o Hot Works
- Lockout Tagout
- Confined Space
- Powered Industrial Truck
- o Hearing Conservation

Training for Police and Security is conducted annually (in-person initially, then retraining online) and includes Hazards Communication, Biohazards with Bloodborne Pathogens and Ancillary Radiation.

Training for Oustodial Workers is conducted annually (in-person initially, then retraining online) and includes Hazards Communication, Biohazards with Bloodborne Pathogens and Ancillary Radiation.

4. Enforcement of Training Requirements.

Past-due warnings are sent for retraining by an automatically generated e-mail. Delinquency past this point is dealt with on a case-by-case manner.

5. Number of employees trained per year.

From July 1, 2015 to June 30, 2016, a total of 7,992 trainings were conducted. Here are examples of training totals.

Bloodborne Pathogens: 2537 Laboratory Standard: 2828 Hazards Communication: 792 Respirator: 124 Drivers Training: 167 Fire/ Fire Extinguisher Training: 476 Plant and Maintenance: 688 Hazardous Materials Shipping: 75 Formaldehyde: 184 Other Trainings: 121

6. Number of "in-person" trainings this year.

There have been 4188 employees trained in person from July 1, 2015 to June 30, 2016.

7. Number of "online" (Blackboard) trainings this year.

There were 3804 employees trained online between July 1, 2015 and June 30, 2016.

9. Number of delinquencies in each training area?

In total, the database showed 3277 retraining delinquencies before June 30, 2016: 1,241 in Bloodborne Pathogen training, 1,262 in Laboratory Standard training, 5 in Respirator

training, and 769 in Hazards Communication. The current database does not take into account employees who have left the university, volunteers, contractors, or any others who no longer need training.

10. Has enforcement policy been used?

Reminder emails have been issued to advise personnel of expired training, but no one has been removed from service because of persistent delinquency. The PI is contacted first,

also be contacted.

(Senior Directors Note: This process was not followed for PIs. A New process was implement to fill this gap in 2016)

Website

An audit of the website was conducted. The website was sequentially rewritten and relaunched. The audit of the new website was conducted by a team of Marketing and Communications workers.

No other issues found at this time.

Protocols

No issues noted

Biosafety

No issues noted

Shipping

No issues noted

Chemical and Biosafety Hoods