Clemson University

Industrial Hygiene Program

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Table of Contents
RESPIRATORY PROTECTION PROGRAM

Clemson University will maintain a healthy work environment in an on going effort to protect each employee and student from potentially harmful agents. It is the goal of Clemson University to insure that employees and students will at no time suffer any adverse health effects related to their work environment.

Periodic health hazard and exposure evaluations will be conducted to determine potentially harmful conditions and to ensure compliance with all state and federal health and safety regulations. These evaluations will be conducted at the request of employees or students and when EHS deems necessary. Clemson University will actively communicate the results of all health hazard and exposure evaluations to participating individuals.

Appropriate controls will be implemented to minimize employee and student exposures to potentially hazardous conditions. These controls measures will be implemented in accordance with prudent and commonly accepted Industrial Hygiene practices. Employees will be given the opportunity to receive feedback concerning the status of control efforts occurring in their work areas.

Clemson University will maintain an Industrial Hygiene Program (IHP) for the purpose of assuring compliance with all applicable federal, state and university guidelines concerning employee/student occupational health and safety.

The objectives of the IHP include:

- To identify and quantify all environmental factors that may adversely affect the health of employees and students. This objective will be accomplished through appropriate inspection and monitoring of all university facilities.
- To develop personal protective programs that will protect the health of employees until health hazards can be eliminated.
- To develop and maintain an EHS documentation of employee occupational exposure histories.
- To provide IH training and general IH awareness as required by regulatory health and safety standards for all employees.
- To provide the means for evaluating the effectiveness of the IHP.

Regulatory Requirements

There are many employee health programs/standards required by state and federal Occupational Health and Safety Administration (OSHA). These requirements may involve personal and area monitoring, hazard abatement and/or control, record keeping and training. OSHA requirements that involve Industrial Hygiene include, but are not limited to the following:

- Ventilation 29 CFR 1910.94
- Hearing Conservation Program 29 CFR 1910.95
- Respiratory Protection Program 29 CFR 1910.134
- Confined Space Entry Standard 29 CFR 1910.146
- Welding, Cutting, Brazing 29 CFR 1910.252
- Asbestos 29 CFR 1910.1001
- Lead 29 CFR 1910.1025
- Ethylene Oxide 29 CFR 1910.1047
Responsibilities

General
In order to maintain health and safety compliance at Clemson University, assistance shall be utilized from personnel throughout the entire organization. This shall be achieved through communicating the health and safety needs related to each area of the organization. Departmental and individual responsibilities shall be specified in each of the IHPs.

Industrial Hygienist (IH)
Administration, implementation and evaluation of the IHP is the responsibility of the IH. The IH is responsible for the recognition, evaluation, and reporting of workplace exposures and for making recommendations for control measures and/or personal protection.

Employees
It is the responsibility of each employee of Clemson University to follow the rules and regulations set forth in the IHP and the individual occupational health programs. It is the employee’s responsibility to learn the health hazards associated with his/her job and the methods of protection available to mitigate these hazards. It is also every employee’s responsibility to report any hazardous condition to their supervisor.

Others
Health and safety consultants shall be utilized to support the Industrial Hygiene staff as needed and if funding allows. Consultants may be utilized to provide independent data collection, assist in employee training and to assist in compliance audits.

Equipment

Industrial Hygiene Monitoring Equipment
Calibration and maintenance records of all IH equipment are maintained in EHS. All equipment will be stored in the EHS offices.

Equipment Maintenance and Calibration
Equipment maintenance and calibration are divided into two categories:

- “User” performed
- Manufacturer performed

All “User” performed maintenance and calibrations are performed by the IH, or a trained technician. All equipment used to comply with regulatory directives must be returned annually for manufacturer performed maintenance, calibration and certification. Equipment maintenance and calibration of all monitoring equipment is performed according to acceptable professional practices and manufactures guidelines.
Operating Procedures

All IH sampling, laboratory analysis, statistical analysis, documentation, and reporting methods shall conform to acceptable professional practices, methods and procedures as prescribed in publications by the American Industrial Hygiene Association (AIHA), American Conference of Government Industrial Hygienist (ACGIH) and the National Institute for Occupational Health and Safety (NIOSH).

Data Collection / Reports / Records

Data Collection Methods

Data collection is conducted in accordance with procedures and methods approved by AIHA, ACGIH, OSHA and NIOSH. Only AIHA accredited laboratories are to be used for lab analysis of sampling required by laws and regulation.

Industrial Hygiene data is primarily collected by three methods: sampling, professional observation, and biological monitoring.

- Sampling data is collected primarily by two methods: Collection media and Direct reading Instrumentation
- Professional observation data are notes made during observation and Industrial Hygiene Surveys. Professional observation is a crucial part of exposure/hazard assessment and every effort will be made to thoroughly document events observed by the IH.
- Biological Monitoring data are obtained by the Medical Surveillance Office. This data is not maintained or controlled by the IH, but should be available for correlation with exposure data.

Individuals will be notified of their sampling results within 15 working days (from receipt of laboratory results, etc.) and will be given an opportunity to discuss the results with the IH.

Reports

There are no regulatory requirements concerning routine external reporting of IH data. Non-routine reporting may be required by the state OSHA in response to an employee’s complaint or as a request for information related to an investigation.

Internal reporting of IH data is necessary to accomplish three primary objectives: employee/departmental notification, request for engineering control evaluation/instillation and for centralized posting of sampling results. Industrial Hygiene reports are filed and sent with computers when possible. Use of E-mail and other electronic means are encouraged as the method of choice for communicating IH reports. The content and structure of IH reports will be dependent upon the type of data being reported.

Report Distribution

All IH reports involving personal exposure sampling will be copied to the following individuals:

1. Chief EHS Officer;
2. Laboratory supervisor or area supervisor.
3. If feasible, all employees involved in exposure sampling.
4. Any other involved/concerned parties.

All IH reports involving workplace violations will be sent to the primary customer, usually the lab, or area, supervisor for corrective measures. Failure to correction the workplace hazards documented in a report will require the resending the report to the distribution list above and the professor or departmental supervisor.

**Records**

All regulatory compliance data such as personal exposures, chemical exposures and training records shall be retained indefinitely. OSHA regulations require that IH records pertaining to personal sampling, chemical exposures, and training be retained in a format that allows easy and logical access.

**Industrial Hygiene Audits**

**Internal Audits**

Periodically the IH will audit the IHP. This audit will include a complete review of procedures. Necessary changes will be made based on the results of the audit. The internal audit will also include a review of all investigations and reports issued in the previous year and any inconsistencies or inaccuracies will be noted. The IH will notify the Chief EHS Officer of the internal audit findings, plans to correct any deficiencies, and possible measures that could be implemented to improve the IHP.

**External Audits**

Documentation of violations of the IHP discovered during audits or by other means shall include plans for corrective action.

**Industrial Hygiene Training**

- Training, as specified in OSHA regulations, training will be conducted as required. Notification of personal sampling results - all employees and students sampled shall receive a discussion of the exposure results and measures implemented to reduce unacceptable exposures.
- Every Industrial Hygienist within EHS will take steps toward achieving the status of Certified Industrial Hygienist (CIH) - as denoted by the American Board of Industrial Hygiene (ABIH).
- All CIH’s must take continuing education courses to maintain ABIH Certification.