

# Chemical Hygiene Plan For University of Florida Laboratories

This is a site specific Chemical Hygiene Plan for:

Laboratory or Room number(s): \_\_\_\_\_

Building: \_\_\_\_\_

Principal Investigator/Lab Manager: \_\_\_\_\_

Department: \_\_\_\_\_

**Environmental Health and Safety Division**

**PO Box 112190, Building 179**

**University of Florida**

**Gainesville, FL 32611**

**Reviewed August 2007**

**Revised August 2007**

## I. Introduction

This Chemical Hygiene Plan has been developed by the University of Florida Division of Environmental Health and Safety (EH&S) to assist University of Florida (UF) departments in the recognition, evaluation and control of hazards associated with UF laboratory chemical operations and is intended to meet the requirements of the OSHA Laboratory Standard, 29CFR1910.1450.

The primary focus of this core Chemical Hygiene Plan (CHP) is to provide guidance to the laboratory staff to safely use chemicals in the laboratory. The plan shall be made site specific for each laboratory to ensure that compliance with this regulation is maintained. To make this CHP site specific, each individual lab must perform a "Hazard Assessment" of the lab and of the procedures involved with the storage, use and disposal of chemicals.

These Hazard Assessments shall be used to develop Standard Operating Procedures (SOPs) for each chemical use process in the lab. The SOPs will provide specific information on how to handle, use, store or dispose of each potentially hazardous chemical found in the laboratory. The site specific Hazard Assessment and SOP must be attached to this core CHP and used in: identifying potential chemical hazards, instructing laboratory personnel the potential hazards, training employees in safe practices, correcting work errors or dangerous conditions and requiring the proper personal protective equipment.

This Chemical Hygiene Plan minimally addresses the use of biological or radioactive materials or the disposal of chemical, biological or radioactive wastes. Individuals having questions are urged to call EH&S for assistance, 352-392-1591. For more information on these topics, please consult the:

Biological Safety Manual <http://www.ehs.ufl.edu/Bio/Files/bsm2.pdf>  
Radiation Control Guide <http://www.ehs.ufl.edu/Rad/RCGuide/rcgcon.htm>  
Chemical Waste Policy <http://www.ehs.ufl.edu/HMM/HWguide.pdf>

The CHP must be made readily available to all employees, their designated representatives and regulatory officials. The core CHP will be reviewed annually by EH&S, and will be revised as necessary. Records of the review will be kept on file at EH&S. Notice of any revisions will be sent to each UF department using chemicals for distribution to laboratories and staff. Lab staff shall review the Hazard Assessments and SOPs as needed, for each lab. The lab shall retain records of this review and revision.

## II. Assignment of Responsibility

**Chemical Hygiene Officers (CHO)** are individuals who can provide technical guidance in the implementation of this CHP. The EH&S Coordinator for Laboratory Safety will act as the Chemical Hygiene Officer for the main University of Florida campus. Each off-campus research facility will designate an individual to act as a CHO for the lab. This individual will be the PI of the lab unless delegated. This CHO must be identified to EH&S using the form Appendix A.  
<http://www.ehs.ufl.edu/Lab/CHP/appa.pdf>

**Individual laboratory workers** are responsible for their own safety and the safety of their co-workers and visitors to their laboratories. All staff must demonstrate this responsibility in their actions and attitudes. It will be each laboratory worker's responsibility to wear appropriate personal protective equipment (PPE), ensure that hazards are minimized and controlled, adhere to prescribed safety rules and regulations, and to know and follow all recommended procedures. All lab staff must pre-plan their work to ensure their safety and the safety of those individuals who work around them.

**The principal investigator (P.I.), laboratory supervisor or manager** has the responsibility for controlling hazards in her/his laboratory. This shall include:

- Completing a hazard assessment for each procedure
- Instructing laboratory personnel on potential hazards
- Training employees in safe practices
- Correcting work errors and dangerous conditions
- Encouraging a positive attitude towards safety

- Selecting the proper personal protective equipment (PPE)
- Ensuring that the PPE is worn
- Maintaining a complete chemical inventory
- Investigating the circumstances surrounding a laboratory accident and taking steps to avoid recurrence
- All UF and UF affiliate labs will also maintain compliance with the “Minors in Research Laboratories or Animal Facilities” policy

**The research department** shall be responsible for supporting the PI and research staff with all resources necessary to ensure safety compliance. This will include providing training to PI and staff members and allowing for time away from work for training.

Research Laboratories on non-UF property, but associated with UF, must comply with all safety and health regulations of UF and site specific policies of property or facility.

**Environmental Health and Safety (EH&S)** shall be responsible for monitoring compliance and implementation of all safety and environmental regulations. This will include, but is not limited to, regulation interpretation, implementation of programs, planning reviews, facility surveys, and training and educational services. EH&S shall have enforcement authority when dealing with unsafe or illegal situations.

**The University of Florida** will provide assistance for the compliance efforts of all staff and researchers. It will foster an attitude that safety is of the utmost importance.

### **III. Protecting Laboratory Staff and Reducing Potential Exposure to Hazards**

#### **A. Hazard Identification-**

##### 1. Notice Boards

Laboratories, chemical storage areas and other potentially hazardous work areas will have a notice board at all doors leading into the workspace. These notice boards shall have stickers identifying the categories of potentially hazardous materials found in the lab and be considered a warning of the potential hazards.

An emergency contact information sticker shall also be attached and completed to identify whom to contact in case of emergency. This Emergency Call List shall provide the names and after hours phone numbers of those individuals who will know the chemicals, gases and other hazards that may be affected by an emergency in the laboratory.

##### 2. Labels

All chemical containers shall be labeled with the full chemical or trade name of the contents. The manufacturer’s label will provide personnel with specific information regarding the physical and health hazards of the substance. Directions found on the label shall be followed.

All substances transferred from an original container to a secondary container shall be labeled with the full trade or chemical name of the contents, any dilution of the chemical, the date of the transfer, appropriate physical and health hazards. No abbreviations or codes of the chemical name are acceptable, unless they are referenced on a placard prominently displayed in the work area. Chemical symbols are allowable only if the compound is a product of the research and referenced in research notebooks or similar documents.

##### 3. Chemical Inventory

A complete chemical inventory of all chemicals found at the worksite is required to be maintained at all times. This shall be updated annually, made available for staff or compliance officer review and provided to EH&S when requested.

This inventory form is found in Appendix B <http://www.ehs.ufl.edu/Lab/CHP/appb.pdf> or use ChemSwap <http://www.ehs.ufl.edu/HMM/chemswap.htm>

#### 4. Material Safety Data Sheets (MSDSs)

As required by the Hazard Communications Standard and Right-to-Know Laws, an MSDS must be available for each chemical used in the laboratory. These must be available in the workplace for laboratory staff review. The MSDSs for all hazardous chemicals should be used during the SOP training of lab staff.

Links to MSDSs may be found at <http://www.ehs.ufl.edu/HAZCOM/msds.htm>

### **B. Hazard Assessment**

#### 1. Hazard Assessment

Each Laboratory PI will be responsible for assessing the hazardous situations, chemicals, biologicals materials, energy sources (including radioactive and laser), equipment, etc., that may cause potential exposure or injury to staff members working in the lab. The Hazard Assessment will identify the potential hazardous material, equipment or processes. It will also identify the methods used to mitigate the hazard, such as procedures for safe handling or personal protective equipment that will need to be worn.

Each hazard assessment must be recorded on the attached template "Certification of Hazard Assessment", found in Appendix E (Section 1) [http://www.ehs.ufl.edu/Lab/CHP/CHPAppE\\_PPE.htm](http://www.ehs.ufl.edu/Lab/CHP/CHPAppE_PPE.htm). These must be completed, attached to this document and kept on file in each lab. The Hazard Assessment will be used to develop the SOPs for each hazardous material or procedure found in the lab. The Hazard Assessments and SOPs must be reviewed with staff at the time of their initial assignment to the lab, whenever the processes or procedures using the hazardous material or equipment is changed or modified.

Any new potential hazards associated with any change of procedures, new equipment, new chemicals to be used, etc., must be assessed and documented prior to being used by the lab staff.

The attached "Guidelines for Hazard Assessment and PPE Selection" (Appendix E) will aid the PI and lab staff in understanding the Hazard Assessment and completing the assessment form.

#### 2. Laboratory Safety Survey

EH&S will conduct an annual Laboratory Safety Survey (LSS) of each research laboratory. The survey will concentrate on lab safety issues, such as chemical, physical, radiological, biological and general safety. The laboratory's complete chemical inventory will be required for review at the time of the survey.

During this survey, any safety deficiencies will be noted by the surveyor and explained to lab staff. A summary letter will be sent to each P.I. to identify these concerns and to offer recommendations to correct the issues. Follow-up surveys may be performed to ensure compliance. These safety issues must be corrected to ensure compliance. These issues may need to be included in the Hazard Assessment and the SOPs of the lab.

### **C. Standard Operating Procedures**

To ensure that lab staff are provided a safe workplace, each PI and lab must document hazardous chemical use and the procedures used during each hazardous process.

The lab or process specific SOPs shall be:

- Procedure or process specific (ex: distillations, reactions, synthesis)
- Chemical specific (ex: hydrofluoric acid, formaldehyde, benzene)

- Hazard class specific (ex: acids, bases, flammables, reactives)
- Applicable so that it will address the health and safety concerns of the procedure or process

The SOPs must include the following elements:

- Procedure or process: List the procedures or processes that will include the use of the hazardous chemicals.
- Hazardous chemicals: List the hazards associated with the chemicals or by-products used or produced.
- PPE: List the PPE required to be worn during the procedure.
- Engineering Controls: List the use of required fume hoods, glove boxes, point source ventilation, shields, etc. required to be used to minimize staff exposures.
- Emergency Equipment: List the equipment and its location that may be needed in case of an emergency.
- Transporting and storage requirements of chemicals to be used: Describe specific, safe handling requirements for the chemicals to be used.
- Accident, spill control and decontamination procedures: Describe specific procedures to be followed in case of an exposure, spill and the clean up of a contaminated area. List the individuals responsible for these procedures.
- Waste disposal: List who is responsible for waste handling and disposal.

The following are required using "highly toxic" materials

- Required approval: Indicate if and under what circumstances prior approval is required and who will provide and document it.
- Designated chemical work areas: List the designated work area(s) where the procedure will be performed.

A template of the SOP is included in Appendix C <http://www.ehs.ufl.edu/Lab/CHP/appc.pdf>. This must be completed and attached to this document and kept on file for review and use in staff training.

## D. Training

All employees of labs will be trained by the P.I. or other designated and knowledgeable individual, regarding the UF policies of chemical hazards. Each employee shall receive this training at the time of initial assignment to the lab and prior to assignments involving new exposure situations. This training shall include, but not be limited to:

- the contents of the OSHA Laboratory Standard, availability of the CHP
- the hazards identified in the Hazard Assessment
- the specific SOPs involving hazardous materials or situations
- the methods of detecting the presence of chemicals
- physical and health hazards of the chemicals in the lab this will also include:
  - a discussion about the Permissible Exposure Limits (PELs)
  - an explanation of the symptoms of exposure
- measures employees must follow to protect themselves from exposure to these hazards
- availability of reference materials, such as Material Safety Data Sheets

All training shall be recorded on the form found in Appendix D.

<http://www.ehs.ufl.edu/Lab/CHP/appd.pdf>

## E. Chemical Usage

1. Obtaining chemicals for laboratory use.  
EH&S will require the review of the lab's Hazard Assessments and SOPs for the proposed use of hazardous chemicals prior to the original purchase of the chemical. This would include, but is not limited to: toxins, carcinogens, toxic gases, etc.
2. Designated chemical use areas.

Each lab or worksite where chemicals will be used must be assessed and designated as a chemical work zones. No chemicals will be used in areas where staff will be working at desks, in areas where staff may be eating or drinking, etc.

3. Each hazardous procedure or process to be undertaken in the lab shall have prior approval to be done. . The PI in charge of the lab should grant prior approval. In some cases EH&S may be requested to grant approval for the procedure.

Criteria for this approval will be a review of the lab's Hazard Assessments and SOPs for the procedure. Once it is assured that the procedure can be undertaken safely, staff will be trained in the SOPs and approval granted.

#### 4. Engineering Controls

Physical barriers placed between the staff member and the hazard, known as "engineering controls", will be employed to minimize or eliminate potential hazards in all labs. These may include fume hoods, biological safety cabinets, glove boxes, shields, increased ventilation, point source vapor collection, etc.

Fume hoods shall be used anytime staff are using any hazardous chemical or gas. All work shall be performed a minimum of 4 inches from the front edge of the hood. The sash should be lowered to the prescribed height as designated on the EH&S hood profile sticker attached to the face of the hood.

EH&S will profile all fume hoods at least annually to ensure that the required face velocity and airflow are functioning as required. If, for any reason, the hood is not working correctly, all work in the hood must cease until the hood has been repaired. If the hood is not functioning properly, a work order shall be submitted to Physical Plant Division or IFAS Facilities. The lab staff will be responsible for clearing of all chemicals and equipment from the hood and cleaning any contamination from the hood's surfaces.

#### 5. Personal Protective Equipment

Personal protective equipment (PPE) shall be used by staff members as a final means of barrier protection against hazards. The PPE shall be fit to the individual and be specific for the hazard. Staff members must be trained in the use and wearing of the PPE. PPE may include gloves, safety glasses, gowns and under special conditions, respirators.

Manufacturer's Glove Compatibility Charts should be consulted to ensure that the gloves that are intended to be worn would protect the wearer. Links to these charts are found at <http://www.ehs.ufl.edu/Lab/CHP/gloves.htm>

If there are any concerns about the need for a respirator, please contact EH&S so an evaluation may be made. If there is a need for a respirator, the individual(s) will be placed into the Respiratory Protection Program. This will require a medical evaluation, proper fit testing of the respirator and training on use, care and maintenance of the respirator.

#### 6. Chemical waste disposal and spill control.

EH&S will dispose of chemical and radioactive waste. A pick-up request must be submitted, with a listing of the substances to be disposed of.

Spills and contaminated areas should be cleaned by lab staff if they have the correct spill control material, have been trained in proper and safe handling of the spilled material and can perform the clean up safely. If there is any concern about the spill clean up, the lab staff should call EH&S to have the spill and area cleaned.

## **F. Monitoring of Hazardous Exposures**

Personnel monitoring shall be performed if there is reason to believe that the exposure level of any chemical that may exceed the action level or Permissible Exposure Limit (PEL). Monitoring will be performed by EH&S staff or a designee. Results of the monitoring will be discussed with the affected employee(s).

## **G. Medical Consultation and Examinations**

The opportunity to receive medical attention is available to all employees who work with hazardous chemicals in the laboratory, under the following circumstances:

- whenever an employee develops signs or symptoms associated with exposure to a hazardous substance,
- when exposure monitoring reveals an exposure level above the action level for an OSHA regulated substance for which there are exposure monitoring and medical surveillance requirements,
- whenever an event takes place where employees are exposed to hazardous substances (i.e.- chemical spill, release, explosion, etc.).
- whenever an eyewash or safety has been used as the result of a spill or splash

The medical consultations and examinations will be provided at no charge to the employee, without loss of pay and at a reasonable time and place.

Any staff member requiring medical attention should report to the UF Student Health Care Center during working hours or Shands Hospital Emergency Room after hours. Any UF staff working at an off campus facility should seek medical attention from the nearest emergency health care provider.

## **H. Accident Reporting**

All accidents involving employees, students, visitors or patients must be reported using the UF <http://www.ehs.ufl.edu/RiskMgmt/IIIRpt.pdf>

## **I. Record Keeping**

Accident forms shall be completed and filed after any accident or chemical exposure. EH&S will maintain all records of exposure monitoring. The health care provider will maintain medical records.

Training records shall be kept by the lab, department or facility.

EH&S does not require copies of the SOPs, training or hazard determination forms, but will monitor and review the in the lab as needed.

## **J. OSHA Laboratory Standard- 29 CFR1910.1450**

The OSHA Laboratory Standard is available at the UF Environmental Health and Safety Laboratory Safety Program Office. It can also be found at:

[http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10106](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10106)

A general overview of the Laboratory Standard is available at:  
<http://www.osha.gov/SLTC/laboratories/index.html>





*Appendix C of the UF Chemical Hygiene Plan*  
Standard Operating Procedures

Principal Investigator: \_\_\_\_\_

Dept.: \_\_\_\_\_

Building: \_\_\_\_\_

Room(s): \_\_\_\_\_

This SOP must be kept on file for lab staff training and review. It will be reviewed annually for accuracy.

Date: \_\_\_\_\_ Review date(s): \_\_\_\_\_ Revision date(s): \_\_\_\_\_

By: \_\_\_\_\_

The individual responsible for the Chemical Hygiene Plan in this area is:

\_\_\_\_\_

Chemicals are stored in:

\_\_\_\_\_

\_\_\_\_\_

Chemicals are safely transported by the following means:

\_\_\_\_\_

\_\_\_\_\_

In the event of an accident or other emergency, the following shall be done:

\_\_\_\_\_

\_\_\_\_\_

This is a list of our emergency equipment:

\_\_\_\_\_

\_\_\_\_\_

The following are the spill control and decontamination procedures:

\_\_\_\_\_

\_\_\_\_\_

The following are the waste disposal procedures:

\_\_\_\_\_

\_\_\_\_\_



*Appendix D of the UF Chemical Hygiene Plan*

### Documentation of Training

This form must be completed and saved as a record of the training provided to the laboratory staff as required by the UF Chemical Hygiene Plan.

Principal Investigator \_\_\_\_\_ Department \_\_\_\_\_

Building \_\_\_\_\_ Rooms \_\_\_\_\_ Phone \_\_\_\_\_

Training provided by \_\_\_\_\_ Date training was provided: \_\_\_\_\_

Procedure and chemical(s) covered by this training \_\_\_\_\_

Topics cover by training: (Please check)

- |   |  |
|---|--|
| _____ Hazard Assessment review                | _____ PPE selection                            |
| _____ Standard Operating Procedure review     | _____ PPE Use                                  |
| _____ Chemical Hygiene Plan review            | _____ Fume hood required                       |
| _____ OSHA Laboratory Standard review         | _____ Biological Safety Cabinet required       |
| _____ Procedure or process review             | _____ Other exhaust systems required:<br>_____ |
| _____ Chemicals to be used                    | _____ Shielding                                |
| _____ Chemical hazard review                  | _____ Other requirements: _____                |
| _____ MSDS review (including exposure limits) | _____  |
| _____ Symptoms of exposure                    | _____  |

This training was provided by \_\_\_\_\_  
Printed name

\_\_\_\_\_  
Signature

NAME	SIGNATURE	UF ID Number

## Appendix E

# UF Chemical Hygiene Plan

## Personal Protective Equipment

### General

This section addresses eye, face, head, hand and foot protection. Separate programs exist for respiratory and hearing protection.

Employees will be provided personal protective equipment (PPE) and will use them whenever doing so will reduce the likelihood of an injury and/or illness. PPE is not a substitute for engineering or administrative controls, or good work practices, but should be used in conjunction with these controls.

### Responsibilities

PIs have the primary responsibility for implementation of the PPE Program in their work area. This includes:

- Conducting a hazard assessment in their work area.
- Determining what type of PPE is required.
- Ordering the necessary equipment.
- Ensuring the employees are trained on the proper use, care and cleaning of PPE.
- Ensuring the employees are wearing the PPE.
- Seeking assistance from EH&S to evaluate hazards.
- Maintaining records on hazard assessments.
- Replacing defective or damaged equipment immediately.

Employees have the primary responsibility for wearing and cleaning the assigned PPE in accordance with the training received.

Departments have the primary responsibility for purchasing PPE for employees.

Environmental Health and Safety (EH&S) has the primary responsibility for the development, implementation and administration of the PPE Program. This includes:

- Assisting in conducting hazard assessments.
- Providing training and technical assistance to supervisors on the proper use, care, and cleaning of approved PPE.
- Providing guidance to the supervisor for the selection and purchase of approved PPE.

## Hazard Assessment and PPE Selection

PIs will conduct a walk-through survey of each work area to identify potential hazards. Each survey will be documented using the Hazard Assessment Form (Appendix E-Section 1). A guideline for filling out the assessment follows the actual form. The hazard assessment should be dated and signed as the written certification and maintained for inspection and training with the department. Additional assistance may be obtained by calling EH&S at 2-1591.

## Protective Devices

All PPE will be appropriate for the work to be performed and maintained in a clean condition. Equipment must meet American National Standards Institute (ANSI) standards. Gloves must be selected based on style, size and performance characteristics of the glove in relation to the hazards encountered.

## Training

Employees who wear PPE shall be trained in the following:

- Which PPE is necessary
- When PPE is necessary
- How to properly adjust and wear their PPE
- The limitations of the PPE
- The proper care, decontamination and maintenance of PPE
- The proper disposal of the PPE

Training will be provided prior to the employee working in an area requiring the use of PPE. Additional training is needed when:

- Changes in the employee's job duties require different PPE.
- Changes in the style or type of PPE used renders the previous training obsolete.
- An event has occurred which indicates the affected employee has not retained the training on the proper use of the PPE.
- The employee is observed incorrectly using the assigned PPE.

A training certificate will be kept for each employee. The certificate will contain the name of the employee trained, date of training and identify the PPE covered in the training. Appendix E (Section 2) contains a certification form. These certificates should be kept in the employee's training file.

## Eye and Face Protection

Employees must use appropriate eye or face protection when exposed to hazards from flying particles, liquid chemicals, acids or caustics, chemical gases or vapors, or injurious light radiation. Eyewear shall comply with ANSI Z87.1 as indicated by labels on the PPE. When there is a hazard from flying objects, side protectors meeting ANSI standards must be used.

Those employees wearing prescription glasses need to wear approved safety glasses that incorporate the prescription into the glasses or wear goggles over the prescription glasses.

Visitors, contractors, or others passing through an identified eye hazard area need to wear appropriate eyewear also. An ample supply of visitor safety glasses should be available for use.

## Occupational Foot Protection

Employees working in areas where there is a danger of foot injuries due to falling or rolling objects, or objects piercing the sole shall wear protective footwear. All safety footwear shall comply with ANSI Z41-1991.

## Head Protection

All employees must wear a hard hat when there is a danger from impact and/or penetration from falling objects in any work location. Where there is a possibility of hitting the head on protruding objects or pipes, a bump hat may be worn

## Hand Protection

Employees must use appropriate hand protection when exposed to hazards from skin absorption of harmful substances, severe cuts or lacerations, abrasions, punctures, chemical burns, or temperature extremes. A careful evaluation of the hazard must be made due to the enormous variety of gloves on the market. Glove selection will be based on performance characteristics of the gloves, conditions, duration of use, and hazards present. One type of glove will not work in all situations. No glove will protect the wearer from all hazards. Even if a glove will protect the wearer, it will not last forever and must be changed regularly, as chemicals eventually permeate all glove materials.

In selecting gloves for use against chemicals, the exact chemicals encountered need to be determined. Labels and MSDSs can provide this information. Recommended glove types are often listed in the section for PPE on the MSDS. A manufacturer's glove selection guide or compatibility chart must be consulted when selecting gloves. EH&S can assist in determining the specific type of glove material that should be worn for particular chemicals. Links to glove compatibility charts can be found at <http://www.ehs.ufl.edu/Lab/CHP/gloves.htm>

Latex gloves should be avoided due to the possibility of latex allergies. Studies have revealed that 8 to 12 percent of health-care workers regularly exposed to latex are sensitized. The National Institute for Occupational Safety and Health (NIOSH) recommends the selection of products that reduce the risk of allergic reactions. For general laboratory use, disposable nitrile gloves are an excellent latex substitute. In addition to reducing the risk of sensitization, nitrile gloves offer superior chemical resistance over latex to many chemical substances.

Once gloves are removed, hands should be washed thoroughly. Gloves should not be worn out of the lab or when shared lab equipment is handled.

### Additional PPE

Guidelines for the selection and use of respirators and hearing protectors are available from those specific UF policies. Cool vests and cooling scarves may be indicated for those jobs in hot environments. This includes outdoor jobs in the summer such as grounds and agricultural positions.

### Cleaning and Maintenance

It is the employee's responsibility to ensure their PPE is clean and properly maintained. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. PPE should be inspected, cleaned and maintained at regular intervals as instructed by the supervisor.

It is also important to ensure that contaminated PPE, which cannot be decontaminated, is disposed of in a manner that protects employees from exposure to hazards.

PPE Certification of Hazard Assessment

<b>Dept:</b>	<b>Area:</b>	<b>Job Classification/Task:</b>
<b>HAZARDS (Circle Hazards)</b>	<b>Describe Specific Hazards</b>	<b>Identify Type of PPE Required for the Hazards</b>
<b>Eye Hazard</b> Impact      Penetration      Dust Chemical      Radiation      Heat Bioaerosols      Projectiles		
<b>Head Hazard</b> Burn      Electric Shock Impact      Penetration Chemical      Overhead loads Overhead beams	<b>Describe Specific Hazards</b>	<b>PPE Required</b>
<b>Foot Hazard</b> Chemical      Impact      Electrical Sharp Objects (puncture risk) Wet Conditions      Construction	<b>Describe Specific Hazards</b>	<b>PPE Required</b>
<b>Hand Hazard</b> Burn      Electric Shock Impact      Penetration Chemical      Sharp Edges Biological Agents	<b>Describe Specific Hazards</b>	<b>PPE Required</b>
<b>Other Safety/Health Hazards</b>	<b>Describe Specific Hazards</b>	
Falls      Guarding      Heat Electrical      Storage Lockout      Noise Respiratory      Clothing		

I, \_\_\_\_\_, conducted the above evaluation of the identified work area on \_\_\_\_\_ Date

Printed Name

Date

\_\_\_\_\_  
Signature

## Personal Protective Equipment Training Certification

\_\_\_\_\_, has received and demonstrated  
Printed Name of Employee

understanding of the PPE training given by \_\_\_\_\_  
Name of Trainer

\_\_\_\_\_  
Signature of Trainer

\_\_\_\_\_  
Date

The following personal protective equipment are available and have been assigned for use	
Check applicable boxes	Identify specific assigned PPE
<input type="checkbox"/> Eye and Face Protection	
<input type="checkbox"/> Head Protection	
<input type="checkbox"/> Foot Protection	
<input type="checkbox"/> Hand Protection	
<input type="checkbox"/> Respiratory Protection	
<input type="checkbox"/> Hearing Protection	
<input type="checkbox"/> Other Protection	

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Date