



Environmental Health & Safety

1314 Kinnear Rd.
Columbus, Ohio 43212

Phone (614) 292-1284

Fax (614) 292-6404

<http://www.ehs.ohio-state.edu/>

The Ohio State University

Job Hazard Analysis Program

Date of completion/revision:	2011
------------------------------	------

Plan prepared by:

The Ohio State University

Office of Environmental Health & Safety (EHS)

Occupational Health, Safety & Industrial Hygiene

1314 Kinnear Road

Columbus, OH 43212

P: 292-1284

F: 292-6404

www.ehs.ohio-state.edu

Table of Contents

Section	Page
1.0 Introduction	3
2.0 Procedure	3
3.0 Recordkeeping.....	7
Appendix A – Job Hazard Analysis SOP.....	9
Appendix B – Job Hazard Analysis Template.....	10

1.0 Introduction

1.1 Scope

1.1.1 The Job Hazard Analysis Program has been developed by OSU's Office of Environmental Health & Safety to ensure safety hazards encountered in the workplace are properly identified and workers are protected against the hazards. Controlling exposure to occupational hazards is essential for protection of workers. EHS implements the following hierarchy of controls to adequately protect workers from hazards.

1.1.1.1 Elimination/Substitution of the hazard

1.1.1.2 Engineering Controls for worker protection

1.1.1.3 Administrative Controls to minimize hazard exposures

1.1.1.4 Personal Protective Equipment to provide protection to employees when the hazard cannot be removed from the workplace.

1.2 Responsibilities

1.2.1 Environmental Health & Safety

1.2.1.1 EHS is responsible for maintaining the written Job Hazard Analysis program and JHA reports for typical job titles present throughout the University. EHS can perform a JHA upon request from University Departments and/or personnel.

1.2.2 Supervisors

1.2.2.1 Supervisors are responsible for ensuring a completed Job Hazard Analysis is on file for all job titles in the workplace; recommended safety precautions are in place; and required training is completed and documented.

2.0 Procedure

2.1 EHS utilizes the Job Hazard Analysis (JHA) Standard Operating Procedure to complete on-site job hazard analyses (Appendix A). Each JHA is documented to provide information including job titles, tasks being performed, hazards associated with the task(s) and appropriate controls and training required to ensure the task is completed safely (Appendix B). It is recommended all supervisors completing job hazard analyses use a similar format. At a minimum, the JHA should be performed as follows.

2.1.1 Walk-through survey. The purpose of the walkthrough survey is to identify potential hazard sources to which an employee may be exposed.

2.1.1.1 Basic hazard categories and items to be considered during the walkthrough survey include, but are not limited to the following.

- Impact hazards
- Harmful dusts, mists and particles
- Confined Spaces
- Radiation from Light
- Infectious materials/Bloodborne pathogens
- General material handling
- Chemical exposure
- Electrically energized equipment
- Radioactive materials
- Toxic gases
- Cold/Heat
- Sharps
- Machinery
- Elevated work surfaces requiring fall protection
- Hot Work
- Elevated sound levels

2.1.1.2 Within the hazard categories, specific hazard sources should be identified. Typical hazard sources include, but are not limited to the following.

- Motions that may result in the employee hitting, or being hit by an object
- Repetitive motions, which may lead to injury
- Chemical exposures (inhalation, absorption, ingestion)
- Sources of high/low temperatures that could result in burns
- Dust sources
- Sources of light radiation (welding, high power lighting)
- Sharp objects
- Sources of rolling or pinch hazards
- Electrical hazards
- Biological hazards
- Dangerous machinery (power tools, material handling equipment)
- Environmental conditions, which may result in injury
- Elevated work surfaces where fall hazards exist

- Noise sources, which may expose worker to excessive sound levels

2.1.2 Controlling Hazards. Once specific hazards are identified for employees, it is the responsibility of the supervisor or EHS (if being conducted by EHS) to evaluate each hazard and determine the appropriate control method. EHS employs the following hierarchy of hazard controls to mitigate workplace hazards.

2.1.2.1 Elimination/Substitution: If the hazard can feasibly be removed from the workplace or can be substituted by a less hazardous operation, this is the first option. Elimination of the hazard ensures the worker will not be exposed and the injury/illness risk is eliminated along with the hazard.

2.1.2.2 Engineering Controls: Utilizing design and engineering, the hazard is mitigated and does not present an exposure hazard to the employee. An example of engineering controls is the use of ventilation (fume hood, snorkel vent) to evacuate hazardous fumes, mists, or vapors from the workplace preventing inhalation by employees.

2.1.2.3 Administrative Controls: Administrative controls minimize the identified hazard by implementing specific standard operating procedures into the workplace. An example of an administrative control is worker rotation to prevent repetitive motion injuries.

2.1.2.4 Personal Protective Equipment (PPE): The use of PPE is considered a last defense against workplace hazards. However, certain job duties require the use of PPE as the only measure of protection against a hazard. If PPE is the chosen method of protection, it must be selected, provided and utilized as outlined in this program.

2.1.3 Personal Protective Equipment. PPE must be selected to ensure an appropriate level of protection is provided to employees to protect them against known hazards in the workplace.

2.1.3.1 To properly select PPE, conduct and document a PPE assessment for each work task or job duty.

2.1.3.2 Select PPE appropriate for the hazard identified. PPE must comply with applicable American National Standards Institute (ANSI) requirements. When selecting PPE for protection against a job hazard, the following should be considered.

- 2.1.3.2.1 Eye and Face Protection: Employees must be provided eye protection when there is a potential for eye/face injury from flying particles, toxic chemicals, thermal or radiation hazards, and lasers. PPE must be adequate to protect the worker from the hazard present and meet the ANSI Z87.1-1989 standard.
- 2.1.3.2.2 Hand Protection: When there is a potential for cuts, lacerations, punctures, chemical/thermal burns, temperature extremes, biological/infectious materials, and absorption through the skin by chemicals, the employee must be provide appropriate hand protection to prevent injury. Hand protection must be selected according to the hazard present and shall afford the appropriate level of protection to the employee.
- 2.1.3.2.3 Foot Protection: Employees working in areas where there is a danger of slipping, objects falling on or compression injuries, piercing the sole and where feet may be exposed to electrical or chemical hazard, the employer must provide foot protection. Foot protection shall provide adequate means of injury prevention from the hazards encountered in the workplace.
- 2.1.3.2.4 Body Protection: Work duties presenting hazards, which may contact the employee's body, should be addressed through appropriate body protection. This may include chemically resistant aprons, disposable suits, lab coats, electrical safety clothing, and cut resistant materials. Protective body equipment must be selected to provide protection against the identified hazard.
- 2.1.3.2.5 Hearing Protection: Workers exposed to excessive noise as part of their job duties may be required to wear hearing protection. If worker is expected to be exposed to excessive sound levels, their supervisor must contact EHS to ensure sound level and dosimetry measurements are conducted or on file and the employee is enrolled in the hearing conservation program (<http://www.ohio-state.edu/docs/ohse/Hearing%20Conservation%20Program-Rev2010.pdf>).

- 2.1.3.2.6 Respiratory Protection: Workers exposed to respiratory/inhalation hazards may be required to wear a respiratory as a means of protection against the hazard. Any employee required to wear a respirator must be enrolled in the OSU Respiratory Protection Program (<http://www.ohio-state.edu/docs/ohse/Written%20Respiratory%20Program%20Rev2011.pdf>) through EHS. EHS will ensure the proper respirator is chosen for the hazard present, ensure medical clearance is provided, conduct fit testing for the employee and provide training.
- 2.1.3.2.7 Fall Protection: Workers exposed to fall hazards shall comply with the OSU Fall Protection Program (<http://www.ohio-state.edu/docs/ohse/Fall%20Protection%20Program%202011.pdf>). A competent person, assigned under the Fall Protection Program must be involved in decisions related to fall hazards.
- 2.1.3.3 Once the appropriate PPE is selected, the employer/supervisor/EHS must properly communicate the selection with the employees, provide the PPE to the employee free of charge, provide and document training, and ensure PPE is properly worn in the workplace.
- 2.1.3.3.1 Training must be documented and provided to each affected employee to address proper PPE use, care and maintenance of PPE, and limitations of PPE.
- 2.1.4 Training: Once hazards are identified through the walkthrough survey and the hazard is mitigated through elimination, engineering controls, administrative controls, and/or the selection of PPE, all affected employees receive appropriate training relating to the hazards identified. Training can be provided through EHS for most circumstances. Additional training may be provided by the department as necessary.

3.0 Recordkeeping

- 3.1 Environmental Health & Safety retains records of all JHA's completed by EHS for identified job titles on OSU Campus. JHA's conducted by supervisors or others in OSU departments should be forwarded to EHS for filing.
- 3.2 Training records are maintained by EHS and each department for their employees.

3.3 Any new hazards or changes in operations resulting in additional workplace hazards should be documented through a formal Job Hazard Analysis and maintained on file with the department and/or EHS.

Appendix A – Job Hazard Analysis Standard Operating Procedure



Job Hazard Analysis (JHA) Standard Operating Procedure

1.0 Purpose

The purpose of this SOP is to identify safety hazards associated with each step of any job or task that has the potential to cause injury or accidents.

2.0 Responsibilities

It is the responsibility of all Occupational Health and Safety staff to help develop a JHA for each work unit and train the supervisors and staff in conducting JHAs. Once trained, the supervisor and the employees who perform the work should develop remaining JHAs for their particular operation.

3.0 Scope

The procedure outlines the steps to conduct a Job Hazard Analysis.

4.0 Procedures

Using a blank JHA form, complete the following steps:

- 4.1 In the task column, write down each step (or task) required to complete the job. For example:
 - a. Fuel powered leaf blower
- 4.2 In the Hazard column, write down the hazards associated with each task. Consider all types of potential hazards:
 - a. PHYSICAL pinch points, moving parts, blades, heavy lifting, etc.
 - b. CHEMICAL fuels, paints, solvents, cleaners, gases.
 - c. ENVIRONMENTAL temperatures extreme, insects/animal bites/stings, dangerous terrain
- 4.3 In the Controls column, write down all the possible controls for each of the hazards identified in each of the steps involved. There may be several controls that can be used.
 - a. Use proper lifting techniques.
 - b. Wear nitrile gloves.
 - c. Fill tank no less than 1/2 inch from the top.
- 4.4 In the equipment column list the equipment that will be used and any training that is required to operating that equipment.
- 4.5 In the required PPE columns, write down the types of PPE that are to be used to control the hazards.

Appendix B – Job Hazard Analysis Template

**Job Hazard Analysis
The Ohio State University
Department of Occupational Health and Safety**

Job Title _____
 Task Evaluated _____
 Prepared By: _____
 Approved by _____

Date _____
 JHA# _____
 Reviewed by _____

<u>Job Task</u>	<u>Hazard Identification</u>	<u>Controls</u>
Required Training on equipment:	Required PPE:	