


# HAZARD ASSESSMENT OF EMPLOYEE ACTIVITIES BSB 0200-01

Prepared by:

  
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BOILER SAFETY BUREAU  
STANDARD OPERATING PROCEDURE MANUAL

## **1.0 PURPOSE**

The purpose of this procedure is to implement NCDOL Employee Safety & Health (S&H) Program Policy 7 in the Boiler Safety Bureau (BSB). Policy 7 establishes a requirement for Bureau management to survey the activities performed by Bureau employees in order to determine the personal protective equipment necessary to protect employees from reasonably anticipated hazards associated with those activities.

## **2.0 SCOPE**

This procedure is applicable to all activities conducted by and under control of the Bureau. The job classifications within the scope are:

- Boiler & Pressure Vessel Inspectors
- Support Staff
- Inspector Supervisors
- Bureau Management

## **3.0 PERSONNEL RESPONSIBILITIES**

- 3.1 The Bureau Chief - BSB has the overall responsibility for implementation of this procedure.
- 3.2 The Inspector Supervisors and the Assistant Bureau Chief are responsible for identifying any reasonably anticipated hazards, making the employees aware of such hazards and ensuring that employees are reasonably protected from exposure to such hazards.
- 3.3 All Bureau personnel are responsible for cognizance, understanding and use of this procedure.

## **4.0 SAFETY and HEALTH ISSUES**

Addressed in the body of this document.

## **5.0 PROCEDURE**

- 5.1 Activities performed by Bureau employees may include exposure to hazards, which are reasonably anticipated to be associated with the activities.

5.1.1 The Inspector Supervisors and the Assistant Bureau Chief will conduct hazard assessments biennially of the duties and activities of all the Bureau employees and will document them. The Bureau Chief shall make one of the following determinations for each activity with associated hazards.

- a) Prohibit the employee from performing the activity that exposes them to the hazard
- b) Select protective controls to protect the employee from the hazard. Controls could be administrative, selection of personal protective equipment or engineering.

Division/Bureau: Standards and Inspections/Boiler

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5.1.2 Employees are required to question owner/users of facilities where they will be working as to what hazards exist and what personal protective equipment is required.

5.1.3 When conditions exist that are not covered by this procedure, affected personnel are required to stop work and notify their respective supervisor to get direction on resolution of the hazard.

5.1.4 Employees may use personal protective equipment issued by the owner/user of a facility if it meets the requirements of this procedure.

5.2 Expected hazards and the required personal protective equipment are listed in the following paragraphs. Whether personal protective equipment is issued by the Bureau, purchased by the employee or is issued by an owner/user it shall be in compliance with the requirements in this procedure.

5.3 Eye and face hazards, due to:

- a) Physical chemicals or radiation agents
- b) Sparks, harmful rays, molten metal, flying particles
- c) Live steam, hot water, superheated steam
- d) Glare and heat
- e) Vapor or gases
- f) Injurious optical radiation
- g) Dust
- h) Spray or splatter of dangerous fluids
- i) Flying particles and sparks

#### 5.3.1 Eye and face protection

Protective eye and face devices must comply with the current edition of ANSI Z87.1 “American National Standard Practice”.

a) Safety glasses with side shields will be issued or purchased by employees required to wear them.

b) Face shields will be provided when needed.

c) Face Shield filter lenses required to witness welding processes must be selected with the minimum protective shade as specified in 29 CFR1910.133 (a) (5)

5.4 Respiratory hazards, due to:

- a) Oxygen deficiency resulting from operation of boilers, furnaces, process vessels or storage tanks
- b) A combination of gas, vapor and other contaminants (i.e., soot)
- c) Coal dust and welding fumes
- d) Heat and steam
- e) Asbestos (specific details exist with respect to asbestos exposure)
- f) Dust

5.4.1 Respiratory protection equipment

The type of respiratory protection that an employee can use is limited. The Boiler Safety Bureau administers a respiratory protection program; any employee that is required to wear respiratory protection must comply with the requirements of the latest revision of BSB 0200-05.

5.5 Head hazards, due to:

- a) Falling objects
- b) Construction sites
- c) Restricted spaces (i.e., low ceiling)
- d) Overhead pipes and lines
- e) Hoists and overhead cranes
- f) Electrical Shock

5.5.1 Head protection

Employee will be issued protective helmets that are in compliance with the current edition of ANSI Z89.1 and are expected to wear them whenever they are exposed to head hazards or an owner/user requires them.

5.6 Foot hazards, due to:

- a) Falling objects
- b) Rolling objects
- c) Sharp objects which may pierce soles of shoes and injure feet
- d) Chemical hazards and electrical hazards that could come in contact with the feet
- e) Hot surfaces that could result in injury to feet
- f) Tripping hazards

5.6.1 Foot protection

Employees are authorized to purchase foot protection and are required to wear foot protection whenever doing in-service inspections, shop inspections and when it is required by an owner/ user.

Foot protection must meet ASTM F2413-05 minimum standard and comply with the current edition of ANSI Z41.

5.7 Hand hazards, due to:

- a) Grease or oil
- b) Cuts, lacerations or abrasions with sharp metal objects
- c) Burns
- d) Chemicals

5.7.1 Hand protection

Employees are authorized to purchase leather gloves for the performance of normal duties. The proper glove shall be selected to provide the protection necessary to address identified hand hazards. The Safety and Health Director or the selected glove manufacturer should be consulted in the selection.

5.8 Body hazards, due to:

- a) Exposures to hazardous and toxic substances which could contact unprotected skin or soak or otherwise be carried through clothing.
- b) Radiation exposure
- c) Heat

5.8.1 Body hazard protection

- a) Disposable tyvek suits shall be selected for exposure to asbestos and similar hazards. The Safety and Health Director should be consulted for selection of body protection for other hazards.
- b) When there are chemical, radiological, or physical hazards to the body, the employee is instructed to cease work and leave the area until the hazard has been mitigated or removed.

5.9 Fall hazards, due to:

- a) Open-sided floors and platforms
- b) Climbing on elevated structures
- c) Use of fixed and portable ladders
- d) Wet or slick floors

5.9.1 Fall Protection

The Boiler Safety Bureau administers a fall protection program as detailed in a separate procedure (BSB 0200- 03). Any employee that is required to wear fall protection must comply with the requirements of the latest revision to that procedure. The employee will be issued a safety harness with lanyard and will be trained in its maintenance and use.

5.10 Hearing hazards

Employees may be exposed to hearing hazards when in the performance of their duties. Hearing protection shall be worn whenever it is difficult to hear normal conversation from 3 feet away, when an owner/user requires protection or when an area is posted that hearing protection is required.

5.10.1 Hearing protection

Hearing protectors shall be selected by the Safety and Health Director.

5.11 Ergonomics hazards, due to:

- a) Lifting
- b) Repetitive motions (i.e., data entry keying)
- c) Other hazards arising from interaction of the body with the workplace or transportation to and from the work site

5.11.1 Ergonomic Equipment

Ergonomic equipment shall be selected under the guidelines established in Employee Safety and Health Policy 8-A: Ergonomics.

5.12 Mechanical hazards, due to:

- a) Exposure to moving machinery (i.e., forklifts)
- b) Compressors and grinders with missing guards
- c) Use of motor vehicles
- d) Overhead cranes and other lifting equipment used in ASME shops

5.12.1 Mechanical Hazards

Employee training includes tag out-lock out and hazard communication.

- 5.13 Employees will receive training from their Supervisor on how to recognize potential hazards and how to protect themselves from identified hazards. This training will include identification of hazards, when and how to invoke protection and when to refuse to enter a dangerous situation or space.
- 5.14 Each Employee will be provided with a copy of the hazard assessment program and will sign a receipt form to show his or her acknowledgement of the program and their training in accordance with the program. (See Attachment 1)
- 5.15 A copy of the hazard assessment will be provided to the NC Department of Labor Safety & Health Director.

## **6.0 CUSTOMER SERVICE REQUIREMENTS**

The purpose of following this procedure is to provide the customer, be it the public, employees of the Bureau, or other state agencies, with the most efficient service, information, training and assistance possible.

## **7.0 DATA and RECORD MANAGEMENT**

- 7.1 The signed hazard assessment training record (Attachment 1) will be maintained in the Boiler Safety Bureau office.
- 7.2 A copy of the hazard assessment done in accordance with paragraph 5.1.1 will be provided to the NC Department of Labor Safety & Health Director.
- 7.3 ***Records shall be maintained in accordance with the Functional Schedule for North Carolina State Agencies as adopted by State Archives, a Division of the North Carolina Department of Natural and Cultural Resources.***



**HAZARD ASSESSMENT TRAINING RECORD**

I \_\_\_\_\_, hereby acknowledge that I have been made aware of the reasonably anticipated hazards associated in carrying out my job duties, that I understand the consequences of such hazards and that I have been provided with the equipment required to minimize the hazards to which I may be exposed.

I further acknowledge that I may encounter situations, which were not anticipated. In such cases, I will take reasonable and common sense precautions I deem appropriate and discuss these with my supervisor or Bureau management before proceeding with any work related activities.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Supervisor's Signature

\_\_\_\_\_  
Date