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|  | Southern Heat Exchanger Services Safety Program | Section: | 15 |
| | | Initial Issue Date | 3/11/09 |
| PERSONAL PROTECTIVE EQUIPMENT/ASSESSMENTS- (PPE) | | Revision Date: | Initial Version |
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Purpose

The purpose of the Personal Protective Equipment section is to set forth the procedures for the use, care, and maintenance of personal protective equipment required to be used by employees for the prevention of injuries.

Scope

Applies to all SHECO Services employees. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers SHECO Services employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Key Responsibilities

HSE Manager


- Assists in the selection of appropriate PPE. If a task exposes an employee to hazards which cannot be eliminated through engineering or administrative controls, the HSE Manager assists the supervisor and project manager to identify and select PPE suitable for the specific task performed, conditions present, and frequency and duration of exposure. Employees need to give feedback to the supervisor about the fit, comfort, and suitability of the PPE being selected.
- Assists supervisor and site managers in assuring all PPE obtained meets regulatory and this procedure's requirements.
- Performs Worksite Hazard Assessments - Initially and as needed to assess the need for PPE. Sources of hazards include, but are not limited to: hazards from impact/motion, high/low temperatures, chemicals, materials, radiation, falling objects, sharp objects, rolling or pinching objects, electrical hazards, and workplace layout.
- Certifies in writing the tasks evaluated, hazards found and PPE required to protect employees against hazards and ensures exposed employees are made aware of hazards and required PPE before they are assigned to the hazardous task.

Managers and Supervisors

- Supervisors and managers shall regularly monitor employees for correct use and care of PPE, and obtain follow-up training if required to ensure each employee has adequate skill, knowledge, and ability to use PPE.
- Supervisors and managers shall enforce PPE safety rules following the guidance of the SHECO Services progressive disciplinary procedures and ensure Required PPE Poster is posted properly.

Employees

- Complying with the correct use and care of PPE.
- Reporting changes in exposure to hazardous conditions that might require a follow-up assessment of the task for PPE.
- Reporting and replacing defective PPE, which shall not be used.
- Wearing of required PPE is a condition of employment.

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Procedure

General

Employee owned equipment is NOT permitted, except for safety toe footwear and prescription safety glasses. SHECO Services is still responsible for the assurance of its adequacy, maintenance and sanitation of those two items.

All PPE issued shall be at no cost to the employee and PPE shall be used and maintained in a sanitary and reliable condition.

All employees will know and follow the procedures outlined in this Program.


Eye Protection

Employees must use appropriate eye or face protection when exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids or chemical gases or vapours. Eye and Face PPE must comply with ANSI Standard Z87.1-2003 (Z87+), *Occupational and Educational Personal Eye and Face Protective Devices*.

Safety Glasses

Safety glasses, with side shields, that meet ANSI Z-87.1-2003 standards with "high Impact lenses" are required to be worn by all employees, subcontractors, and visitors while on COMPANY property, at all times, as described below:

- At field locations, in shops and warehouses, except in approved, designated, striped safety zones.
- In all yard work zones or by everyone when in the vicinity of loading or unloading equipment, performing mechanic or maintenance work, test stand operations, operating equipment such as forklifts, welding, or any type of work which has the potential to inflict an eye injury.
- In any office, restroom, or any other building while performing any type of work where a potential eye injury may be present.
- Visitors will be provided with visitor glasses. In the absence of approved prescription safety glasses, "Over the glass" type safety glasses or goggles, must be worn over the nonsafety glasses until approved prescription safety glasses are obtained.
- Workers assisting welders must wear absorbent safety glasses that protect the wearer from ultra-violet (UV) and/or infrared rays (IR).
- Dark shaded lens (sunglasses) darker than a # 1 shade is prohibited to be worn indoors unless welding or assisting a welder.
- A doctor must support "exceptions for medical reasons" in writing to exempt safety eyewear requirements.
- Safety glasses are not required:
 - Inside offices.
 - Parking lots when traveling from vehicles to and from office buildings by way of main doors that do not pass through shops.

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Goggles

- Chemical splash proof goggles shall be worn when handling or mixing liquid chemicals, solvents, paints, etc., and/or as recommended on the Material Safety Data Sheet (MSDS) of the material being handled.
- Dust proof goggles shall be worn when blowing equipment down with air or while performing other jobs where safety glasses are not adequate to prevent airborne particles from entering the openings around the lenses and side shields.

Face Shields

- Full face shields shall be worn over safety glasses when operating hand held or stationery grinders with abrasive or wire wheels, while chipping paint or concrete or, performing jobs where there is the potential for flying objects striking the face and safety glasses or goggles would not provide adequate protection.

Head Protection

Employees must wear protective helmets when working in areas where there is a potential for injury to the head from employee initiated impact or impact from falling or other moving objects. Helmets must comply with ANSI Standard Z89.1-1997 Class E, *American National Standard for Industrial Head Protection* for Type II head protection or be equally effective.


- Employees must wear protective helmets when working in areas where there is a potential for injury to the head from falling objects.
- Hardhats are to be worn at all field, shop and warehouse locations, or where deemed necessary as per each location’s PPE Hazard Assessment.
- Hardhats will not be altered in any way.
- Do not paint or apply unauthorized stickers, name plates, etc.
- Do not drill, cut, bend, or apply heat.
- Do not alter the suspension system. H
- Hardhats will be inspected by the employee regularly for cracks, chips, scratches, signs of heat exposure (sun cracks), etc.
- Defective hardhats will be replaced immediately.
- Hardhats shall not be placed in rear windows of vehicles where they will be exposed to the sun or become projectiles during an accident.
- A supply of hardhats must be made available to visitors.
- SHECO Services shall provide hardhats.
- Employees will be trained in the use, care and maintenance of head protection equipment.

Hearing Protection

Hearing protection is required to be worn by all employees, subcontractors, and visitors while in posted “High Noise” areas. Refer to the SHECO Services Hearing Conservation Program for more information.

Warning signs will be posted in areas known or suspected to have noise levels exceeding 85 dBA either constantly or intermittently.

When signs are not posted, employees shall wear hearing protection when noise caused by machinery, tools, etc., prevents normal conversations to be heard clearly.

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Rule of thumb: If you have to yell to be heard, hearing protection is required

Types

- Molded Inserts (ear plugs)
- Canal Caps (head band type)
- Muff, either headband or hard hat mounted Earmuffs and earplugs shall be provided to the employee in sizes and configurations that will be comfortable to the employee.

Care and Maintenance

- Inspect hearing protection prior to each use.
- Hearing protection must be kept clean to prevent ear infections.
- Most earplugs used today are disposable and must be discarded when they become dirty, greasy, or cracked.
- Earmuffs that have deteriorated foam inserts, cracked seals or are defective must be replaced.


Fit

- Due to individual differences, not everyone can wear the same type of hearing protection. A variety of styles may have to be tried before one is found to be comfortable and provide adequate protection.
- Employees shall be instructed how to obtain the proper fit.

Hand Protection

Gloves

- Gloves are required to be worn when performing work, which may expose the hands to extreme temperatures, cuts and abrasions, or exposure to chemicals.
- Welding: Welding gloves made of leather or other heat resistant materials shall be worn when performing arc welding or oxy/gas cutting.
- Chemical: Impervious (chemical resistant) gloves shall be worn when handling chemicals that specify gloves as personal protection equipment when handling.
- Refer to the specific chemical's Material Safety Data Sheet for the correct glove type.
- Persons assigned to working with chemicals, i.e., solvent vats, shall be issued their own individual gloves for hygiene purposes.
- Leather: Leather gloves should be worn when working with sharp materials or when handling rigging equipment.
- Cloth: Cloth gloves should be worn when handling objects or materials, which could cause blisters, splinters, cuts, etc.
- Heat Resistant: Heat resistant gloves shall be worn when handling hot bearings, races, or other materials or objects that have been heated beyond ambient temperatures.
- Insulated: Insulated gloves shall be worn to prevent frostbite in extreme cold climates.
- Glove Inspections
 - Gloves shall be inspected before each use for holes, tears, and worn areas.
 - Chemical gloves shall be periodically air tested for pinholes by twisting the cuff tightly, apply low air pressure to expand the glove, and then submersing in water to check for bubbles.
 - Defective gloves shall be discarded immediately. Exception: machinists are exempted from wearing gloves while working with rotating machinery.

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Foot Protection

Safety footwear shall be worn by all employees with regularly assigned duties at field locations, in shops and warehouses.

- Office workers and visitors who enter these areas on an infrequent basis will not be required to wear foot protection provided they stay clear of the work being performed.
- If required to be in the close proximity of the work, the work will be stopped while visiting the area or safety footwear will be worn.

Shops, Field Locations, Warehouses and Parts Departments: Leather or equivalent boots, either lace up or pull up, shall be worn.

- The boot must provide ankle protection and have soles designed to protect from punctures with defined heels for climbing ladders.
- Metatarsal guards will be worn when duties present a hazard of equipment or material crushing the foot.
- All safety footwear must meet ANSI Z41-1999 standards.
- Client locations may require safety footwear to be worn by everyone; check with the local supervisor for client requirements before visiting field locations.

Fall Protection

Personal fall protection is required when performing certain elevated jobs in excess of six feet. Consult the SHECO Services Fall Protection Program.

Electrical Protection

Consult the SHECO Services Electrical Safety Program.

Worksite Hazard Assessment

During a hazard assessment the following sample hazard sources will be identified:

- High or low temperatures; Chemical exposures (use MSDSs for guidance)
- Flying particles, molten metal or other eye, face, or skin hazards
- Falling objects or potential for dropping objects; employee falling from a height of 6' or more
- Sharp objects; Rolling or pinching that could crush the hands or feet;
- Electrical hazards


Where these hazards could cause injury to employees, personal protective equipment must be selected to substantially eliminate the injury potential. Employees will be notified for the selection and reason.

The results of this assessment shall be communicated to each affected employee and kept at the local office.

Selected/identified PPE shall be fitted to each affected employee. Exemptions for use of PPE must be supported by the PPE hazard assessment.

Monitoring

Supervisors and site managers monitor worksite tasks for changes in, or the introduction of new hazards. If new hazards are discovered, they advise the HSE Manager who then conducts a hazard assessment for appropriate PPE.

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The HSE Manager monitors the effectiveness of the PPE Procedure and makes recommendations to management to improve the procedure.

Training

Each employee who requires PPE shall be properly trained. Training shall include:

- When PPE is necessary.
- What PPE is necessary.
- How to properly don, doff, adjust and wear PPE.
- The limitations of PPE.
- How to maintain PPE in a sanitary and reliable condition.

Retraining

Retraining is required when:

- The workplace changes, making the previous training obsolete.
- The type of PPE changes.
- When the employee demonstrates lack of use, improper use, or insufficient skill or understanding in PPE selection, necessity, use and limitations.

Documentation

Training shall be documented and records kept at the local office. The training documentation shall include:

- Name of employee(s) trained;
- The dates of training; and
- The training subject.



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SAMPLE PPE HAZARD ASSESSMENT FORM

| PPE HAZARD ASSESSMENT | | | Place an "X" if applicable |
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| Location: | | | |
| Hazard(s) Present | Required PPE - Eyes | Remarks | |
| 1. Flying Particles | Safety glasses | Also wear a full face shield | |
| 2. Chemical Splashes | Chemical resistant goggles | Also wear a full face shield | |
| work locations: field, shop, yard | | | |
| 3. Intense Light | Welding hood with correct lens shade in use. | Shade must be appropriate to type of welding operation. | |
| 4. Hazardous Liquid Chemicals | Chemical resistant goggles | Also wear a full face shield | |
| 5. Caustics and acids | Chemical resistant goggles | Also wear a full face shield | |
| 6. Refueling equipment | Chemical resistant goggles | Also wear a full face shield | |
| 7. Working with or handling metal | Safety glasses | | |
| Hazard(s) Present | Required PPE - Head | Remarks | |
| 1. Working under catwalks, piping | Hard Hat | | |
| 2. Falling Objects | Hard Hat | | |
| | | | |
| Hazard(s) Present | Required PPE - Ears | Remarks | |
| 1. Loud noise | Hearing Protection | Ear Plugs(molded), Canal Caps, Muffs | |
| 2. Loud work environment | Hearing Protection | Ear Plugs(molded), Canal Caps, Muffs | |
| Hazard(s) Present | Required PPE - Hands | Remarks | |
| 1. Extreme Temperatures | Insulated/Heat resistant gloves | | |
| 2. Cuts and abrasions | Leather gloves | | |
| 3. Flying Particles | Leather gloves | | |
| 4. Welding | Welding gloves | | |
| 5. Chemicals | Chemical resistant gloves | Refer to MSDS for correct type of gloves. | |
| 6. Handling rigging equipment | Leather gloves | Chains, wire rope slings, cables, etc. | |
| 7. Material/Metal Handling | Leather or cotton gloves | Leather gloves when working with sharp material. | |
| 8. Caustic or Acids | Chemical resistant gloves | Check MSDS for appropriate gloves. | |
| Hazard(s) Present | Required PPE - Foot | Remarks | |
| 1. Falling Objects | Leather Safety Footwear | | |
| 2. Fluids | Rubber Safety Footwear | | |
| | | | |
| Hazard(s) Present | Required PPE - Body | Remarks | |
| 1. Working at heights | Fall Protection | Used when work levels exceed 6 feet or higher. Refer to UCI Fall Protection policy. | |
| 2. Fire | Flame Retardant clothing | Required by specific customers, know customers PPE requirements prior to entering location. | |
| 3. Caustic and Acids | Chemical resistant Apron | Refer to MSDS for correct type. | |

Assessment Completed by: _____

Date: _____