

FSGA/HAAF GARRISON  
FT. STEWART, GA 31314

# **GARRISON SAFETY SOP – ANNEX J**

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## **PERSONAL PROTECTIVE EQUIPMENT (PPE) AND HEARING CONSERVATION**



FSGA/HAAF Safety Program SOP  
10 September 2024  
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## **1. Purpose:**

The purpose of this Garrison Safety and Occupational Health (SOH) SOP Annex is to provide Personal Protective Equipment (PPE) and Hearing Conservation guidance for personnel and employees establishing the requirements for the conduct of Job Hazard Analysis (JHA) to aid in the proper selection of PPE. PPE is required for all personnel working with materials, equipment, or performing operations that are potentially hazardous to the body when those hazards cannot first be mitigated through elimination, substitution, engineering, or administrative work controls.

## **2. Scope:**

This Annex to the Garrison SOH SOP applies to all military and civilian personnel assigned to the FSGA/HAAF Garrison. It is intended to provide adequate information so all levels of leadership, SMS, and civilian workforce can properly implement the Garrison SOH Program.

## **3. References**

29 CFR 1960, OSHA Basic Program Elements for Federal Employee Occupational Safety and Health Programs

AR 25-400-2 (The Army Records Information Management System (ARIMS))

AR 40-5, Preventive Medicine

AR 40-66, Medical Record Administration and Health Care Documentation

AR 385-10, The Army Safety Program

DA Pam 25-403 (Guide to Recordkeeping in the Army)

DA PAM 40-501, Hearing Program

DA PAM 385-10, Army Safety Program

## **4. Records Management:**

Records created throughout the processes prescribed by this Annex will be identified, maintained, and disposed of according to AR 25-400-2 (The Army Records Information Management System (ARIMS)) and DA Pam 25-403 (Guide to Recordkeeping in the Army). The primary means of recordkeeping for the Garrison Safety Office (GSO) will be the Army Safety Management Information System (ASMIS) located at <https://mishap.safety.army.mil>. Record titles and descriptions are available on the ARIMS website <https://www.arims.army.mil>.

## **5. Policy:**

This Annex will be adhered to at all times by all personnel. Top management, managers, directors, supervisors, work leaders and Garrison Safety Office (GSO) personnel will monitor all items listed under Responsibilities to ensure compliance.

- Job Hazard Analysis (JHA) and PPE selection will be completed IAW Garrison SOH SOP, Annex G, Job Hazard Analysis (JHA), applicable OSHA laws, and Army regulations. In determining the proper types or levels of PPE, supervisors will refer to Safety Data Sheets (SDS) or other documents concerning the materials used in the workplace. Further assistance required will be obtained through the Occupational Health Clinic and/or the GSO.
- Appropriate head, foot, hand, and eye protection shall be worn in all field, industrial, and construction type work settings where required, as identified by hazard assessment. It is the responsibility of the work center supervisor to ensure there is adequate PPE available for all personnel, employees and visitors entering work settings which have PPE requirements.

- Head protection is required any time in which there is an overhead hazard or there is the possibility to come in contact with live electrical circuit overhead.
- All work centers will complete JHAs for any task that has the potential to cause injury.
- All work centers will submit completed JHAs to the GSO for review and concurrence.

## **6. Responsibilities:**

### **Directors will:**

- Ensure JHAs are performed and documented for all routine operations that have the potential to cause harm.
- Review JHAs for adequacy and approve.
- Ensure all personnel adhere to the guidelines of this regulation and strictly enforce the use of PPE.
- Recommend changes needed in type and quantity of PPE.

### **Managers will:**

- Ensure JHAs are reviewed at least annually or whenever tasks, equipment, or processes change.
- Review JHAs for adequacy and make required recommendations.
- Recommend changes needed in type and quantity of PPE.
- Strictly enforce the use of PPE where required.

### **Supervisors are responsible for:**

- Supervisors shall periodically provide training on the care and use of personal protective equipment at safety meetings. Special emphasis should accompany the introduction of new items in the work center in order to increase the level of acceptance and use.
- Supervisors and leaders will wear personal protective equipment where it is required in order to set an example and to gain experience in solving problems created by the use of these devices.
- Performing and documenting JHAs to determine PPE requirements and ensuring PPE requirements are appropriate for the task.
- Informing the GSO and the Manager of any job/task activity changes which might introduce new hazards in operations or affect PPE requirements.
- Documenting the use of PPE as outlined in SOPs, JHAs, or other applicable instructions.
- Ensuring employees receive initial and annual training on requirements of PPE, to include: what PPE is required, why it is required, its limitations, proper use, proper care and maintenance, and when PPE needs to be replaced.
- Inspecting employee's PPE regularly to determine serviceability and replace items as needed.
- Posting the shop area with appropriate signs for the hazards involved (i.e. eye, noise, head, etc.).
- Ensuring visitors or temporary employees use hearing, eye, and/or foot protective items as required.

**The GSO will:**

- Assist supervision with analyzing (initially and periodically) operations to determine the need and the specific type of PPE authorized.
- Conduct periodic audits and spot check inspections of work areas to verify compliance and ensure employees are wearing the PPE required for the task being performed and notify the Supervisor if any employees are found to be non-compliant in this requirement.
- Assist Supervisors in resolving complaints arising from alleged unsatisfactory PPE.
- Ensure areas have the required signs posted and the signs are visible to all personnel.
- Review or make recommendations for any initial PPE purchased commercially, prior to use.

**Employees are responsible for:**

- Proper care, wear, maintenance, and accountability of PPE to include inspection of their PPE prior to each use.
- Notifying their supervisor/leader of either the lack of or unserviceable PPE, by performing a daily/pre-use check for serviceability of PPE.
- Selecting PPE of the proper size for fit, function and safety.

**NOTE:** If the employee does not like the type of style of PPE available through FSGA/HAAF Garrison the regulations do not preclude the employee from purchasing required PPE from a commercial store at their own expense. However, the Supervisor must approve all commercially purchased PPE item(s) prior to use.

**Local Contractors/Vendors/Visitors will:** Comply with PPE requirements when visiting and/or performing work at FSGA/HAAF Garrison (Reference Garrison SOH SOP, Annex L, Contractor Safety and Occupational Health Program).

**7. Personal Protective Equipment (PPE) Guidelines:**

- Personnel, contractors, subcontractors, and visitors will wear the proper PPE while in areas that have a potential to cause injury.
- Non-safety footwear will not be worn in industrial shops, warehouse areas, or during field work activities. Only approved safety footwear will be worn in these areas.
- As a minimum, employees will be provided safety footwear if they are exposed to a foot hazard area or occupation during their workday for a period of five or more hours per day.
- Employees working in areas considered to be hazardous work sites will wear shirts or blouses with sleeves. Cutoffs or shorts will not be worn. All employees will wear the proper or applicable footwear while on the job.
- Employees working on, maintaining, or operating machinery will wear an approved hair net if their hair is long enough it has the potential to become entangled or caught in the machinery.
- Privately purchased PPE will meet the same standards as those purchased by the Government and must be approved by the Supervisor before use.

- All purchase orders for PPE will be routed through the GSO for review and/or recommendations prior to purchase. Supervisor justifications will be included with the purchase orders.
- PPE will be issued and worn when required by the task assigned.
- Employees may not be within 20 feet of any welding operation unless equipped with approved PPE or the welding operation is adequately guarded with welding shields or curtains.
- Face shields will be kept clean and worn properly so the employees' line of vision is through the shield. Face shields will be worn in conjunction with safety goggles or safety glasses unless otherwise stated by the manufacture.
- Excessively worn or torn garments are not permitted due to the danger of becoming entangled in machinery or moving equipment.
- Do not wear paint, grease, or oil-soaked clothing. Place discarded gloves and clothing in appropriate containers provided for that purpose.
- Personnel working on or near moving/rotating machinery, manually handling materials, or working with electrical circuits will not wear rings, watches, or bracelets to prevent entrapment and potential injury.
- When clothing or dress is considered inadequate, improper, or could result in potentially unsafe or unhealthful conditions for the employee(s), the supervisor will make the final determination as to proper attire.
- Eye and hearing protection must be worn in **ALL** posted eye and hearing hazard areas or when eye and noise hazards have the potential to cause harm.
- Leave PPE at the workplace to prevent the spread of contamination. Never wear gloves, coveralls, or other potentially contaminated PPE to public locations such as eating areas, break rooms, restrooms, offices, or other off-site areas. Follow these guidelines to avoid spreading contaminants:
  - Remove all PPE before leaving the workplace
  - Clean and store PPE as described in the training and manufacturer's instructions
  - Always wash your hands after removing protective equipment and before leaving the work area
  - Do not reuse disposable gloves
  - Have coveralls laundered regularly.

## 8. Hearing Conservation:

- The most desirable hearing conservation measure is reducing noise levels at their source, eliminating harmful health effects. Implementation is generally feasible, if technologically and operationally practicable and cost effective. Procuring new equipment, vehicles or facilities offers the ideal opportunity to implement noise controls. The objective is to review all acoustic specification before purchase to

ensure, if possible, a steady-state level less than 85 dBA at all personnel work locations during normal operations.

- Control measures for existing equipment and facilities to reduce steady-state noise levels below 85 dBA and impulse noise levels below 140 dBP should be employed to the maximum extent possible. In some instances, the implementation of engineering controls requires funding which is rank ordered on the installation hazard abatement plan per AR 385-10 and TB MED 503. In other instances, simple maintenance of the equipment, vehicles, or facilities will eliminate or control the hazard. Details for effective maintenance noise-control measures can be found in DA Pam 40-501, para 7-10.
- An industrial hygienist from the Installation Department of Public Health, WACH, can be consulted for engineering control recommendations and follow-up measures.

## **9. Hearing Protectors:**

- All personnel working within or visiting potentially noise-hazardous areas must have hearing protectors with them at all times.
- Hearing protection devices (HPDs) consist of earplugs, noise muffs, ear canal caps, noise-attenuating helmets, or a combination of these. Personnel may select the type of protector desired unless the selection is medically contraindicated or inappropriate for a particular noise-hazardous environment. In-depth descriptions and maintenance recommendations of approved HPDs can be found in DA Pam 40-501, paras 7-14 and 7-16.
- Hearing protection devices (HPDs) are provided at no charge to all personnel working in potentially noise-hazardous areas. An earplug carrying case must also be provided at no charge with each set of preformed earplugs. This case can also be used for hand-formed earplugs.
- Medically certified preformed earplug fittings will be completed by the AHP Section in the Soldier Service Center (Bldg. 253) for military and as required during the Occupational Health Services physical for DoD civilians at WACH.
- Earplugs may be procured through Supply & Acquisition (S&A), Logistics Div, WACH, using a DA Form 2765. The form will need to have the appropriate stock number, document number and price, and be routed through the budget office to get the approval signature prior to turning it in to S&A. Supply personnel can procure stock numbers and pricing from WACH S&A Customer Service. Work centers must provide the correct NSN numbers in appropriate quantities for an average unit.
- Protector Requirements. Civilians and military personnel must wear appropriate hearing protection when working with or around equipment, tactical vehicles or processes that produce hazardous levels of noise. Definitions of hazardous noise are listed below.
  - Steady-state noise levels of 85 dBA (regardless of duration) requires single hearing protection.

- Steady-state noise levels of 103 dBA (regardless of duration) - requires double protection (i.e.; earplugs and noise muffs). Caution: the use of noise muffs precludes the use of most eyewear. Any break of the seal significantly reduces the amount of noise attenuation experienced by the user.
- Steady-state noise exposure > 108 dBA - exposure is not permitted
- Impulse noise levels of 140 dBP - requires single hearing protection.
- Impulse noise levels >165 dBP, require personnel to wear earplugs in combination with noise muff.

## **10. Hearing Readiness and Monitoring Audiometry:**

- Hearing Readiness (HR) specifically focuses on ensuring that Garrison personnel have the required physical capabilities, personal protective equipment (i.e.; HPDs) and medical equipment that are needed to perform their assigned duties. The main component of HR is monitoring audiometry. Monitoring audiometry detects changes in an individual's hearing sensitivity. This information identifies individuals who are highly susceptible to noise-induced 'hearing loss, allows for early identification of and intervention for hearing loss, and evaluates the effectiveness of the AHP. All hearing evaluations are to be saved in DOESHRS-HC and/or AudBase and recorded on DD Forms 2215 (Reference Audiogram) and 2216 (Hearing Conservation Data).
- Reference audiograms for new civilian personnel with a potential for hazardous noise exposure must be performed as soon as possible, but not later than 30 days after initial exposure. Civilians will receive hearing tests administered by the Occupational Health section of WACH upon referral to the HCP. Hearing tests can be scheduled by contacting the Occupational Health Section.
- All noise-exposed and/or auto-toxically exposed civilian personnel must receive reference, annual, and termination audiograms. Follow-up hearing test, 1 and 2, must also be completed, if required. Deaf Civilians working in noise-hazardous areas must have reference and termination audiograms.

## **11. Noise Levels:**

- Though most Garrison employees will not experience exposure to the equipment listed below, there are personnel such as Range Control and Range Safety personnel who may encounter them. The following information is provided for their benefit and other employee awareness.
- The sound levels listed in the Noise Levels of Common Army Equipment Technical Information Paper are the highest typical measured values under normal operation. For most items of equipment there may be several normal operating conditions. Each condition generates a different noise level. For example, there is a 5 to 10 dB difference in noise at the driver position of a truck depending on window closure and auxiliary equipment such as heater fans. There can also be some variation among individual units of the same type of equipment. Different test reports may list somewhat different levels.



- Section B-1 and B-2. Noise Levels of Common of Common Army Equipment (Technical Information Paper# 51-003-0112) can be located on AKO at: <https://www.us.army.mil/suite/doc/39672001>
- Section B-3. Characteristics of Individual Equipment Noise. The following paragraphs summarize additional noise exposure considerations for common Army equipment:
  - Trucks and High Mobility Multi-wheeled Vehicles (HMMWV). Noise levels increase with increasing speed and, for the HMMWV, with increasing load. The levels are below 85 dBA at low to medium speeds and can be over 100 dBA at top speed for some models. When driven mostly at low speeds with short periods at moderate or high speed trucks and HMMWVs are not hazardous. They can be hearing hazards to unprotected Soldiers if operated for long time periods at high speed.
  - Bradley Fighting Vehicle (BFV) and derivatives. The major noise source is the drive train, particularly the action of the track links as they round over the sprockets, idlers and wheels. For this reason, high noise levels (101 to 115 dBA) occur when the vehicle is in motion. The crew wears the combat vehicle crewman's (CVC) helmet which has integral hearing protectors. A eve with active noise reduction (ANR) providing added noise protection is available on newer models. The passengers (infantry squad) must rely on their own hearing protectors such as earplugs. These are less effective than the eve with ANR. For training, the exposure time in moving carriers is restricted depending on the hearing protectors worn and the speed of the vehicle. The severest restriction is on exposure of passengers wearing the less effective earplugs.
  - M113 Armored Personnel Carrier and derivative vehicles. Among the loudest of Army equipment. Noise sources and hearing protection are similar to the BFV. Levels are very high when moving.
  - Abrams Tank and derivative vehicle (Wolverine and Grizzly).
    - Steady noise levels range from 96 to 117 dBA when moving. The crew wear the eve helmet which has integral hearing protectors.
    - On the tank, impulse noise levels at exterior commander and loader positions are above or just below the limit of hearing protector effectiveness for training depending on caliber (105 or 120 millimeter (mm)), cartridge model, and tube elevation. The drivers hatch should be closed at all times when firing the main gun. Training with crew heads above the hatch plane is not permitted per the user manuals for certain defined conditions. These restrictions are not applicable to battle situations.
  - Helicopters. In flight, helicopter crews wear the helicopter crew helmets which have integral hearing protectors. Passengers must rely on their own hearing protectors such as earplugs or ones supplied by the air operations. Training restrictions on exposure time apply, as discussed for the BFV.

- Generators. Diesel powered generators form the Tactical Quiet Generator (TQG) series are quiet at the operator panel and other close-in areas if the covers are in place. Older generators have been loud with levels above 100 dBA at the panel and above 85 dBA up to several meters away. High levels are generated by TOG if the covers are removed.
- Impulse noise from weapons. All firearms produce impulse noise levels requiring hearing protection at crew positions for training. Some produce levels under certain conditions, which exceed the safe training limit for crews wearing hearing protectors.
  - Small arms (rifles pistols, machine guns, and 40 mm grenades). Noise levels at gunner positions are low to moderate. The hazard can be serious because of the large number of rounds that can be fired by the individual shooter. Noise levels are higher in front and to the side of the muzzle than to the rear. For small arms levels at about 5 feet to the side can be higher than at the shooter position. Except very near the muzzle, all levels are within the mitigation capability of hearing protectors.
  - Mortars. Noise levels range from low to very high because of the wide variation in charge increments and head locations. The requirement to load the cartridge through the muzzle places the head close to the muzzle, which is the source of the impulse. For the top charge on the large ground mount mortars, a safe noise level for training occurs only at 2 meters from the muzzle, no higher than 0.9 meters above ground. Some mortars include a funnel-shaped blast-attenuating device on the muzzle.
  - Howitzers without fighting compartments. For the 155 mm towed and 8-inch self-propelled howitzers the levels are medium to high depending on the charge increment but are below the training exposure limit for protected Soldiers.
  - Howitzers with fighting compartments. For the 155 mm self-propelled howitzers the walls of the fighting compartment tend to attenuate the peak levels but the reverberation within the compartment aggravates the noise exposure. For some higher charges the front, top, and side hatches should be closed during training fire.
  - Tanks. The levels above the turret hatches can be very high for some cartridges and at some tube elevations. For these, training fire with crew heads above the hatch plane is not recommended. Levels below the hatch plane, even with the hatch open, are lower.
  - Rocket launcher vehicles. Impulse noise in the MLRS, Avenger, and FOG-M launchers are low to medium.

## **12. Hazardous Exposure Examples:**

The following provides examples of typical exposures that meet the criteria for enrollment in a comprehensive Hearing Conservation Program:

- Impulse & impact noise >140 decibels peak measurement (dBP):

- All weapons firing (annual or periodic).
- 9-mm through 50-Caliber. Ammunition
- Grenades
- Mortar fire
- Artillery fire
- Armament from all tracked and wheeled combat vehicles
- Demolition with explosives
- Most training rounds and simulators
- TWA of >85 A-weighted decibels (dBA):
  - Operating, occupying or maintenance operations of tactical vehicles that require hearing protection (per TM/FM or operator's manual).
  - Operating, occupying or maintenance operations of aircraft that require hearing protection (per TM/FM or operator's manual).
  - Operating on or around heavy equipment or noisy machinery requiring hearing protection (per TM/FM or operator's manual).
- Known or suspected ototoxins (ear poison):
  - Arsenic
  - Carbon disulfide
  - Carbon monoxide\*
  - Cyanide
  - Lead and derivatives
  - Manganese
  - Mercury and derivatives
  - N-hexane
  - Stoddard solvent
  - Styrene\*
  - Trichlorethylene\*
  - Tolulene\*
  - Xylene\*

\*High-priority ototoxin

## Appendix A - Earplug and Carrying Case Information:

STANDARD ITEMS:			
Type & Size	Nomenclature	NSN	Fitting Requirements
Triple-flange (small)	Earplug, hearing protection, triple-flange 24 ea./package (12 pair)	6515-00-442-4821	Small size fits (~10%) Size fitting REQUIRED (contact fitting POC below)
Quad-flange (regular size - fits most)	Earplug, hearing protection, quad-flange, 100 pair/ box	6515-01-492-0443	Reg size fits most (~90%) Size fitting REQUIRED (contact fitting POC below)
Triple-flange (large)	Earplug, hearing protection, triple-flange 24 ea. I package (12 pair)	6515-00-467-0092	Large size fits (~5%) Size fitting REQUIRED (contact fitting POC below)
Foam Earplugs Hand-formed	Earplug, hearing protection, Foam, 200 pair/ box (orange/green color)	6515-00-137-6345	Orange color must not show after insertion. Disposable "back-up" use
Earplug Carrying Case	Earplug carrying case 20 I package	6515-01-100-1674	

## Appendix B

### CERTIFICATION OF HAZARD ASSESSMENT AND PPE REQUIREMENTS

(The proponent of this form is Installation Safety Office)

1. DIRECTORATE/BRIGADE: \_\_\_\_\_

2. DIVISION/BATTALION: \_\_\_\_\_

3. SECTION/COMPANY: \_\_\_\_\_

4. LOCATION: \_\_\_\_\_

5. PCE TYPE: \_\_\_\_\_

6. REQUIREMENTS: \_\_\_\_\_

7. NAME: \_\_\_\_\_

#### 8. SUPERVISOR/COMMANDER CERTIFICATION:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

#### 9. GARRISON SAFETY DIRECTOR COMMENTS:

APPROVAL:

☐

DISAPPROVAL:

☐

Name:

Title:

Signature:

## **Appendix C – Abbreviations**

AR	Army Regulation
ARIMS	Army Records Information Management System
ASMIS	Army Safety Management Information System
DA Pam	Department of the Army Pamphlet
FM	Field Manual
FSGA	Fort Stewart Garrison
GC	Garrison Commander
GSO	Garrison Safety Office
HAAF	Hunter Army Airfield
HPD	Hearing Protection Device
JHA	Job Hazard Analysis
PPE	Personal Protective Equipment
SOH	Safety and Occupational Health
SOP	Standard Operating Procedure
TB	Technical Bulletin
TM	Technical Manual
TWA	Time Weighted Average (exposure)
WACH	Winn Army Community Hospital

## **APPENDIX D - ANNUAL GSO REVIEWS**

<b>DATE</b>	<b>REVIEWED BY</b>	<b>CHANGES Y/N</b>	<b>SUMMARY OF CHANGES</b>