

DEPARTMENT OF THE NAVY

NAVY MEDICINE READINESS AND TRAINING COMMAND  
2080 CHILD STREET  
JACKSONVILLE, FL 32214-5000

IN REPLY REFER TO:

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7 April 2021

From: Commanding Officer, Navy Medicine Readiness and Training Command Jacksonville  
To: Commanding Officer, Marine Corps Logistics Base Albany, GA

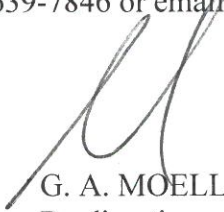
Subj: PERIODIC INDUSTRIAL HYGIENE SURVEY OF THE LOGISTICS SUPPORT  
DIVISION ALBANY, GA

Ref: (a) OPNAVINST 5100.23H of 05 Jun 2020, *Navy Safety and Occupational Health Program*  
(b) OPNAV M-5100.23 of 05 Jun 2020, *Navy Safety and Occupational Health Manual*

Encl: (1) Executive Summary  
(2) Industrial Hygiene Survey Report (AL21010)

1. A Periodic Industrial Hygiene Survey of the Marine Corps Logistics Base (MCLB) Albany, Logistics Support Division (LSD) was conducted on 09 February 2021 as required by references (a) and (b). Enclosures (1) and (2) are provided for your information.

2. Point of contact is Mr. Bryan S. Arwood of the Navy Medicine Readiness and Training Unit Albany, Industrial Hygiene Division, at 229-639-7846 or email [bryan.s.arwood.civ@mail.mil](mailto:bryan.s.arwood.civ@mail.mil).

  
G. A. MOELLER  
By direction

Copy to:  
MCLB Risk Management Office, MCLB Albany  
Director, Logistics Support Division

## EXECUTIVE SUMMARY

A Periodic Industrial Hygiene Survey of the Marine Corps Logistics Base (MCLB) Albany, Logistics Support Division (LSD) 09 February 2021 by Mr. Bryan Arwood, Industrial Hygienist, Navy Medicine Readiness and Training Unit Albany. The purpose of this survey was to identify health hazards present, assess actual health risk, and recommend controls where needed, as well as to assess your Occupational Health program status. No formal response to Industrial Hygiene is needed, although the Safety Manager may specify recommendations made in this report as items for mandatory corrective action. Following is a summary of major findings and recommendations. Detailed findings, observations and recommendations are provided in enclosure (2) and its associated attachments.

**Item:** *Hazard Assessments.* Since the previous industrial hygiene (IH) survey in December 2018, there have been no significant changes to this work center. However, it should be noted that in past reports the process of ‘Weapons Qualification’ was added to each work center that happened to have Marines present. Weapons Qualification, as a work related process, falls under responsibility of the H&S Company as a Battalion responsibility. The Marines assigned to LSD do not conduct this function as part of a routine process within LSD. Weapons Qualification are more appropriately, accurately detailed as a process within the H&S Company Industrial Hygiene Report—to avoid misrepresentation. This survey consisted of a walk-through evaluation of the work areas, sampling as required and employee interviews, as appropriate, to assist in the industrial hygiene assessment.

**Recommended Action:** Please review the individual work center hazard assessments in Attachment (1) for more details on all identified hazards. If there are any changes in work operation from what is described in this report, or if a focused health hazard evaluation of a specific work operation or new project is needed, please contact Mr. Bryan S. Arwood of the Navy Medicine Readiness and Training Unit Albany, Industrial Hygiene Division, at 229-639-7846 or [bryan.s.arwood.civ@mail.mil](mailto:bryan.s.arwood.civ@mail.mil).

**PERIODIC INDUSTRIAL HYGIENE SURVEY  
LOGISTICS SUPPORT DIVISION  
MARINE CORPS LOGISTICS BASE ALBANY, GA  
REPORT NUMBER: AL21010  
FEBUARY 2021**

Ref: (a) OPNAV M-5100.23 of 05 Jun 2020, *Navy Safety and Occupational Health Manual*  
(b) Navy and Marine Corps Public Health Center (NMCPHC) Industrial Hygiene Field Operations Manual (IHFOM)

Att: (1) Periodic Industrial Hygiene Survey: Shop Assessment  
(2) Noise Survey and Hearing Protection Requirements and Personal Noise Sampling Results Summary  
(3) Neutral Posture for Computer Use/Computer Breaks  
(4) Customer Satisfaction Survey

1. **Introduction.** Per reference (a), a Periodic Industrial Hygiene Survey of the Marine Corps Logistics Base (MCLB) Albany, Logistics Support Division (LSD) was conducted on 09 February 2021 by Mr. Bryan Arwood, Industrial Hygienist, Navy Medicine Readiness and Training Unit Albany (NMRTU Albany). This survey consisted of a walk-through evaluation of the work areas, a review of the operations and the hazards associated and employee interviews, as appropriate, to assist in the industrial hygiene assessment.

2. **Report Contents.** Reference (a) requires that each Navy workplace, or naval base supported DOD workplace, be thoroughly evaluated in order to accurately identify and quantify all potential health hazards. This report fulfills that requirement. The updated Periodic Industrial Hygiene Survey: Shop Assessment for surveyed division(s)/workcenter(s), medical surveillance recommendations, and updated exposure monitoring plans are provided in Attachment (1). Attachment (2) Noise Survey and Hearing Protection Requirements and Personal Noise Sampling Results Summary is the Attachment (3), the Neutral Posture for Computer Use/Computer Breaks, can be used for training personnel in utilizing their computer workstations ergonomically. Attachment (4) is a Customer Satisfaction Survey, so that you may critique the services provided.

3. **Design Reviews.** Per reference (a), industrial hygienists should participate in the review of plans and specifications for local projects, standard operating procedures, purchasing transactions, and contracts which involve, or could create, exposure to potential health hazards, such as toxic materials, radiation, noise, or other health hazards. Cognizant facilities management and/or occupational health and safety personnel should ensure that the supporting industrial hygienist is made aware of such plans and specifications and that they are made available for his/her review.

4. **Re-evaluation Schedule and Changes in the Workplace.** Please retain this report on file and post a copy in a common work area for personnel to review. IH surveys had historically been accomplished with an established survey frequency based on the nature of operations at the Activity/Command in accordance with reference (a). Survey periodicity is now scheduled at the

Enclosure (2)

command or shop level in accordance with reference (c). Ratings and associated survey frequency are now listed on individual work center assessment(s) within this report and reflect as High (annual), Moderate (biennial), or Low (quadrennial) hazard category. Shop periodicity will be continually re-assessed during future IH surveys. The following table provides the shop hazard category and re-evaluation schedule for the workcenter(s).

<b>Work Center</b>	<b>Hazard Category<sup>(1)</sup></b>	<b>Current Survey Date (Mon/Yr)</b>	<b>Next Survey Due (Mon/Yr)</b>
LSD-Administrative Support Office (LSD HQ)	3 (Low)	February 2021	February 2025
LSD-Distribution Management Office (DMO)	3 (Low)	February 2021	February 2025
LSD-Garrison Supply Operations	2 (Medium)	February 2021	February 2023
LSD-Garrison Mobile Equipment (GME)	2 (Medium)	February 2021	February 2023
LSD-Armory	2 (Medium)	February 2021	February 2023
LSD-Organic Supply	2 (Medium)	February 2021	February 2023
(1) Hazard categories are based on a consideration of health risk of identified chemical stressors and potential of these stressors to exceed Navy occupational exposure limits, ACGIH Threshold Limit Values, or OSHA substance-specific standards. Hazard category determination protocol is spelled out in reference (b), Chapter 2. Industrial Hygiene has discretion to conduct surveys more often than the minimum frequencies listed above.			

Any significant changes in the type of operations currently performed, current workplace setting, new equipment acquired, or change in the kinds or amounts of chemical used, as identified in the survey, will result in a need for an immediate re-evaluation of the affected area. Industrial Hygiene, NMRTU Albany should be notified in the event of any significant operational changes as described above so that a prompt re-evaluation can be completed.

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**INDUSTRIAL HYGIENE SURVEY**  
**WORKCENTER SPECIFIC EVALUTATIONS FOR**  
**LOGISTICS SUPPORT DIVISION**  
**MARINE CORPS LOGISTICS BASE ALBANY, GA**

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**Periodic Industrial Hygiene Survey: Shop Assessment**

v1.0

**Survey Date:** 09 Feb 2021**Shop Priority:** Low**Command: N67008 /****Shop: LSD-Administrative Support Office (LSD HQ)**

Location: Building 3500

**Industrial Hygienist:** ARWOOD, BRYAN  
bryan.s.arwood.civ@mail.mil**Shop POC:** EADIE-LEVERETTE, Kelly  
kelly.eadie@usmc.mil**This assessment consists of the following sections:**

1. Shop Description
2. Observations and Notes
3. List of Processes
4. Process Information, Controls, and Exposure Assessments
5. Hazards that have Special Notations
6. Medical Surveillance
7. Workplace Monitoring Plan

**1. Shop Description****# of Shop Personnel**

The Logistics Support Division Administrative Support Office includes the Director, Deputy Director, Program Assistant, Fund Administrator, and the Purchasing Agent. Duties are administrative as they maintain the day to day activities for the Logistics Support Division.

**5**

\*Military duties (i.e. weapons qualification) are a Battalion responsibility and therefore addressed under the H&S Company survey

**2. Observations and Notes**

02/01/2021

Abbreviations: ADM – Administrative, PPE – Personal Protective Equipment, ISO – Isolation, DV – Dilution Ventilation, ENG – Engineering Controls, and LV – Local Ventilation

Work-related musculoskeletal disorders (WRMD) risk factors: Personnel should ensure that all workstations are set up per attachment of the periodic industrial hygiene survey to help prevent WMSD issues from occurring. Gel pads or wrist rests should be employed in front of the keyboards to help maintain a neutral wrist and keep the wrists off of hard edges of the desk. As chairs are replaced, consideration should be given to purchasing adjustable ergonomic chairs.

**3. List of Processes**

Process Name	# of Process Personnel
Professional/administrative tasks	5

**4. Process Information, Controls, and Exposure Assessments**

Chemical and physical hazards have been assessed for the processes in this shop to determine if the exposure levels are less than Occupational Exposure Limits (OELs). OELs are established to protect workers from the potential health effects due to exposures to chemical substances or physical agents. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are the regulatory OELs to which employers must comply. When appropriate, we recommend alternate, more protective OELs

as a best practice.

Personal Protective Equipment (PPE) listed in the Industrial Hygiene survey is specified for the control of identified occupational health stressors. Additional PPE not specified in the survey report (e.g. safety shoes/boots, fall protection, safety vests, etc.) may be required for personnel. Consult with your cognizant safety representative, PPE hazard assessment or local instruction/Standard Operating Procedure (SOP) for any additional required PPE specific to your worksite.

In the Control Use column, the controls marked as Required are the minimum deemed necessary to protect workers based on the exposure assessment. Controls marked as Recommended are considered best practice to further reduce exposures and those listed as Elective are strictly voluntary.

In the Adequate column, Yes signifies the control is in place and capable of controlling exposures during the process. If Adequate is listed as No, the control is not yet in place or incapable of controlling exposures. Additional details will be provided in the comments below the control.

In the Acceptable column, Yes indicates that it is highly unlikely that the worker is exposed to the hazard at or above the OEL without regard to PPE. If Acceptable is listed as No, additional controls are required, and the shop should investigate the feasibility of reducing/eliminating the hazard. Medical Surveillance may also be required (Section 6). If Yes is listed in the Need More Data column, see the Shop's Workplace Monitoring Plan (Section 7).

When appropriate, special hazard notations are noted in the exposure assessments below. Section 5 provides notation explanations and a summary of these hazards. Exposures to these hazards should be significantly reduced by elimination, substitution, engineering controls, or work practice controls.

## Process: Professional/administrative tasks

Frequency: Daily      Duration: 6-8 hours

Description: Personnel primarily work at a desk performing professional/ administrative tasks. This can include long hours at a desk/ computer.

Hazard:  
Excessive Sitting (Excessive sitting is a NMCPHC listed reproductive/developmental hazard)

WMSD RISK FACTORS: No ergonomic-related injuries/ problems were reported during the survey walkthrough. Any ergonomic related injury should be reported to the command safety officer.

### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Work/Rest Cycle	Static Posture	Recommended	Yes

## 5. Hazards that have Special Notations

The following is a summary of hazards found to be in use in this Shop that have one or more of the following notations: Carcinogen, Reproductive, Sensitizer, Skin, or Ototoxin. These notations are provided next to the hazard names in Section 4, Chemical and Physical Hazards Exposure Assessments. Exposure to these hazards should be significantly reduced by elimination, substitution, or through work practice and engineering controls.

Carcinogen: A Carcinogen is a hazard capable of causing cancer.

None

Reproductive: Hazards identified with the Reproductive notation are those associated with occupational exposures regarding their potential to cause an adverse effect on reproductive health or fetal development. Pregnant workers and/or workers concerned about their future reproductive capacity should seek the advice of their medical provider before working in an environment that contains reproductive hazards.

None

**Sensitizer:** A sensitizer is a hazard with the potential to produce dermal and/or respiratory health effects similar to an allergic reaction or asthma. Worker exposures to sensitizing hazards may evoke severe respiratory or dermal reactions.

None

**Skin:** This notation refers to the potential significant contribution to a worker's overall exposure by the cutaneous route, including mucous membranes and the eyes, by contact with vapors, liquids, and solids. A Skin notation is not applied to chemicals that solely cause dermal irritation.

None

**Ototoxin:** Ototoxic chemicals either cause hearing loss independently, or work synergistically with hazardous noise to damage the inner ear. Regardless of the mechanism, exposure to certain chemicals, either alone or in concert with noise, results in hearing loss.

None

## 6. Medical Surveillance

The following are exposure based medical surveillance program recommendations. Workers are included in medical surveillance programs based on several factors: 1) unacceptable exposure assessments, 2) frequency of exposure, and 3) the availability of surveillance criteria. The decision to include a worker in a program is based on the possibility of exposure at or above a regulatory action level, if OSHA has established one. The decision may also be driven by other exposure standards, policy and guidance from the DoD or Navy. The only certification exam recommended in the IH Survey is for Respirator Users.

No Medical Surveillance Recommended

## 7. Workplace Monitoring Plan

Processes listed below require initial and/or periodic exposure monitoring to determine if levels are controlled to below the Occupational Exposure Limits. In order to fulfill this requirement, your assistance in scheduling monitoring is needed by notifying the Industrial Hygiene Department at least 48 hours in advance of the next operation.

No Workplace Monitoring Requested at this time.



**Periodic Industrial Hygiene Survey: Shop Assessment**

v1.0

**Survey Date:** 09 Feb 2021**Shop Priority:** Low**Command: N67008 /****Shop: LSD-Distribution Management Office (DMO)**

Location: Building 3500

**Industrial Hygienist:** ARWOOD, BRYAN  
bryan.s.arwood.civ@mail.mil**Safety POC:** Clark, Kevin  
kevin.clark2@usmc.mil**This assessment consists of the following sections:**

1. Shop Description
2. Observations and Notes
3. List of Processes
4. Process Information, Controls, and Exposure Assessments
5. Hazards that have Special Notations
6. Medical Surveillance
7. Workplace Monitoring Plan

**1. Shop Description****# of Shop Personnel**

This office includes the transportation assistants that are responsible for processing the paperwork for passports and making the arrangements for moving household goods for government personnel. Work is primarily administrative in nature.

1

**2. Observations and Notes**

02/01/2021

Abbreviations: ADM – Administrative, PPE – Personal Protective Equipment, ISO – Isolation, DV – Dilution Ventilation, ENG – Engineering Controls, and LV – Local Ventilation

Work-related musculoskeletal disorders (WRMD) risk factors: Personnel should ensure that all workstations are set up per attachment of the periodic industrial hygiene survey to help prevent WMSD issues from occurring. Gel pads or wrist rests should be employed in front of the keyboards to help maintain a neutral wrist and keep the wrists off of hard edges of the desk. As chairs are replaced, consideration should be given to purchasing adjustable ergonomic chairs.

**3. List of Processes**

Process Name	# of Process Personnel
Professional/administrative tasks	1

**4. Process Information, Controls, and Exposure Assessments**

Chemical and physical hazards have been assessed for the processes in this shop to determine if the exposure levels are less than Occupational Exposure Limits (OELs). OELs are established to protect workers from the potential health effects due to exposures to chemical substances or physical agents. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are the regulatory OELs to which employers must comply. When appropriate, we recommend alternate, more protective OELs as a best practice.

Personal Protective Equipment (PPE) listed in the Industrial Hygiene survey is specified for the control of identified occupational

health stressors. Additional PPE not specified in the survey report (e.g. safety shoes/boots, fall protection, safety vests, etc.) may be required for personnel. Consult with your cognizant safety representative, PPE hazard assessment or local instruction/Standard Operating Procedure (SOP) for any additional required PPE specific to your worksite.

In the Control Use column, the controls marked as Required are the minimum deemed necessary to protect workers based on the exposure assessment. Controls marked as Recommended are considered best practice to further reduce exposures and those listed as Elective are strictly voluntary.

In the Adequate column, Yes signifies the control is in place and capable of controlling exposures during the process. If Adequate is listed as No, the control is not yet in place or incapable of controlling exposures. Additional details will be provided in the comments below the control.

In the Acceptable column, Yes indicates that it is highly unlikely that the worker is exposed to the hazard at or above the OEL without regard to PPE. If Acceptable is listed as No, additional controls are required, and the shop should investigate the feasibility of reducing/eliminating the hazard. Medical Surveillance may also be required (Section 6). If Yes is listed in the Need More Data column, see the Shop's Workplace Monitoring Plan (Section 7).

When appropriate, special hazard notations are noted in the exposure assessments below. Section 5 provides notation explanations and a summary of these hazards. Exposures to these hazards should be significantly reduced by elimination, substitution, engineering controls, or work practice controls.

### Process: Professional/administrative tasks

Frequency: Daily      Duration: 6-8 hours

Description: Personnel primarily work at a desk performing professional/ administrative tasks. This can include long hours at a desk/ computer.

Hazard:  
Excessive Sitting (Excessive sitting is a NMCPHC listed reproductive/developmental hazard)

WMSD RISK FACTORS: No ergonomic-related injuries/ problems were reported during the survey walkthrough. Any ergonomic related injury should be reported to the command safety officer.

#### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Stretch Break	Static Posture	Recommended	Yes

## 5. Hazards that have Special Notations

The following is a summary of hazards found to be in use in this Shop that have one or more of the following notations: Carcinogen, Reproductive, Sensitizer, Skin, or Ototoxin. These notations are provided next to the hazard names in Section 4, Chemical and Physical Hazards Exposure Assessments. Exposure to these hazards should be significantly reduced by elimination, substitution, or through work practice and engineering controls.

Carcinogen: A Carcinogen is a hazard capable of causing cancer.

None

Reproductive: Hazards identified with the Reproductive notation are those associated with occupational exposures regarding their potential to cause an adverse effect on reproductive health or fetal development. Pregnant workers and/or workers concerned about their future reproductive capacity should seek the advice of their medical provider before working in an environment that contains reproductive hazards.

None

Sensitizer: A sensitizer is a hazard with the potential to produce dermal and/or respiratory health effects similar to an allergic reaction or asthma. Worker exposures to sensitizing hazards may evoke severe respiratory or dermal reactions.

None

Skin: This notation refers to the potential significant contribution to a worker's overall exposure by the cutaneous route, including mucous membranes and the eyes, by contact with vapors, liquids, and solids. A Skin notation is not applied to chemicals that solely cause dermal irritation.

None

Ototoxin: Ototoxic chemicals either cause hearing loss independently, or work synergistically with hazardous noise to damage the inner ear. Regardless of the mechanism, exposure to certain chemicals, either alone or in concert with noise, results in hearing loss.

None

## 6. Medical Surveillance

The following are exposure based medical surveillance program recommendations. Workers are included in medical surveillance programs based on several factors: 1) unacceptable exposure assessments, 2) frequency of exposure, and 3) the availability of surveillance criteria. The decision to include a worker in a program is based on the possibility of exposure at or above a regulatory action level, if OSHA has established one. The decision may also be driven by other exposure standards, policy and guidance from the DoD or Navy. The only certification exam recommended in the IH Survey is for Respirator Users.

No Medical Surveillance Recommended

## 7. Workplace Monitoring Plan

Processes listed below require initial and/or periodic exposure monitoring to determine if levels are controlled to below the Occupational Exposure Limits. In order to fulfill this requirement, your assistance in scheduling monitoring is needed by notifying the Industrial Hygiene Department at least 48 hours in advance of the next operation.

No Workplace Monitoring Requested at this time.

**Periodic Industrial Hygiene Survey: Shop Assessment**

v1.0

**Survey Date:** 09 Feb 2021**Shop Priority:** Medium**Command: N67008 /****Shop: LSD-Garrison Supply Operations**

Location: Building 3500, 1260, and 2200

**Industrial Hygienist:** ARWOOD, BRYAN  
bryan.s.arwood.civ@mail.mil**Safety POC:** Clark, Kevin  
kevin.clark2@usmc.mil**This assessment consists of the following sections:**

1. Shop Description
2. Observations and Notes
3. List of Processes
4. Process Information, Controls, and Exposure Assessments
5. Hazards that have Special Notations
6. Medical Surveillance
7. Workplace Monitoring Plan

**1. Shop Description****# of Shop Personnel**

Garrison supply operations focuses primarily on three main services: record management, warehousing, and customer support. Administratively property records are maintained using the DPAS computer system. The Warehousing sections primarily consists interacting with customers on board the installation via ServeMart, HAZMAT Cell, and the tool room issuance point at MDMC. The majority of tasks here deal in stocking, resupply, and issuing goods.

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**2. Observations and Notes**

03/30/2021

Abbreviations: ADM – Administrative, PPE – Personal Protective Equipment, ISO – Isolation, DV – Dilution Ventilation, ENG – Engineering Controls, and LV – Local Ventilation

Work-related musculoskeletal disorders (WRMD) risk factors: Personnel should ensure that all workstations are set up per attachment of the periodic industrial hygiene survey to help prevent WMSD issues from occurring. Gel pads or wrist rests should be employed in front of the keyboards to help maintain a neutral wrist and keep the wrists off of hard edges of the desk. As chairs are replaced, consideration should be given to purchasing adjustable ergonomic chairs.

**3. List of Processes**

Process Name	# of Process Personnel
Professional/administrative tasks	11
Warehouse section-HAZMAT Cell	8
Warehouse section-Tool room issue	7
Warehouse section-Warehousing Operations	6

**4. Process Information, Controls, and Exposure Assessments**

Chemical and physical hazards have been assessed for the processes in this shop to determine if the exposure levels are less than Occupational Exposure Limits (OELs). OELs are established to protect workers from the potential health effects due to exposures to chemical substances or physical agents. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are the regulatory OELs to which employers must comply. When appropriate, we recommend alternate, more protective OELs as a best practice.

Personal Protective Equipment (PPE) listed in the Industrial Hygiene survey is specified for the control of identified occupational health stressors. Additional PPE not specified in the survey report (e.g. safety shoes/boots, fall protection, safety vests, etc.) may be required for personnel. Consult with your cognizant safety representative, PPE hazard assessment or local instruction/Standard Operating Procedure (SOP) for any additional required PPE specific to your worksite.

In the Control Use column, the controls marked as Required are the minimum deemed necessary to protect workers based on the exposure assessment. Controls marked as Recommended are considered best practice to further reduce exposures and those listed as Elective are strictly voluntary.

In the Adequate column, Yes signifies the control is in place and capable of controlling exposures during the process. If Adequate is listed as No, the control is not yet in place or incapable of controlling exposures. Additional details will be provided in the comments below the control.

In the Acceptable column, Yes indicates that it is highly unlikely that the worker is exposed to the hazard at or above the OEL without regard to PPE. If Acceptable is listed as No, additional controls are required, and the shop should investigate the feasibility of reducing/eliminating the hazard. Medical Surveillance may also be required (Section 6). If Yes is listed in the Need More Data column, see the Shop's Workplace Monitoring Plan (Section 7).

When appropriate, special hazard notations are noted in the exposure assessments below. Section 5 provides notation explanations and a summary of these hazards. Exposures to these hazards should be significantly reduced by elimination, substitution, engineering controls, or work practice controls.

### Process: Professional/administrative tasks

Frequency: Daily      Duration: 6-8 hours

Description: Personnel primarily work at a desk performing professional/ administrative tasks. This can include long hours at a desk/ computer.

Hazard:  
Excessive Sitting (Excessive sitting is a NMCPHC listed reproductive/developmental hazard)

WMSD RISK FACTORS: No ergonomic-related injuries/ problems were reported during the survey walkthrough. Any ergonomic related injury should be reported to the command safety officer.

#### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Exercise/Stretching	Static Posture	Recommended	Yes

### Process: Warehouse section-HAZMAT Cell

Frequency: Daily      Duration: 1-2 hours

Description: Personnel are responsible for processing hazardous materials received on base. This includes receiving, tracking, storing, and issuing hazardous material. This can include the use of a forklift as needed when stocking supplies.

#### Engineering

Control Description	Hazards Controlled	Control Use	Adequate
Lift Assist Devices	Forceful Exertion	Recommended	Yes

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**Administrative**

Control Description	Hazards Controlled	Control Use	Adequate
Open Bay Doors	CARBON MONOXIDE	Recommended	Yes
Comments: To reduce potential accumulation of carbon monoxide from occasional use of forklifts.			

**PPE**

Control Description	Hazards Controlled	Control Use	Adequate
Earplugs	NOISE	Required	Yes
Comments: Used to control noise hazards.			

**Exposure Assessment**

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
Warehouse section-HAZMAT Cell	NOISE (Reproductive)	85 dBA 8 hr TWA DoD		Yes	Yes
SEG: LSD-Garrison Supply Operations Rationale: Personnel exposure to noise in excess of the standard is not expected based on the duration of the operation. However further sampling should be conducted to better characterize process.					
Warehouse section-HAZMAT Cell	CARBON MONOXIDE Inhalation (Reproductive) (Ototoxin)	55 mg/m3 8 hr TWA OSHA		Yes	No
SEG: LSD-Garrison Supply Operations Rationale: Forklifts are only used on occasion, with bay doors open. Potential for overexposure is rated negligible.					

**Process: Warehouse section-Tool room issue**

Frequency: Daily      Duration: 6-8 hours
Description: Personnel issue out tools to personnel in building 2200 for the Marine Depot Maintenance Center.

**PPE**

Control Description	Hazards Controlled	Control Use	Adequate
Earplugs	NOISE	Required	Yes
Comments: Used to control noise hazards.			

**Exposure Assessment**

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
Warehouse section-Tool room issue	NOISE (Reproductive)	85 dBA 8 hr TWA DoD		Yes	Yes
SEG: LSD-Garrison Supply Operations Rationale: Personnel exposure to noise in excess of the standard is not expected based on the duration of the operation. However further sampling should be conducted to better characterize process.					

## Process: Warehouse section-Warehousing Operations

Frequency: Daily      Duration: 6-8 hours

Description: Warehousing operations is responsible for the processing, receiving, and issuing of supplies onboard MCLB Albany. To include event setup and transport of DRMO'd supplies to Warner Robbins for disposal. Work primarily consists of general warehousing functions such as unloading/processing goods, sorting, moving pallets and other equipment/furniture. This can include the use of a forklift as needed.

### Engineering

Control Description	Hazards Controlled	Control Use	Adequate
Lift Assist Devices	Forceful Exertion	Recommended	Yes

### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Open Bay Doors	CARBON MONOXIDE	Recommended	Yes

Comments: To reduce potential accumulation of carbon monoxide from occasional use of forklifts.

### PPE

Control Description	Hazards Controlled	Control Use	Adequate
Earplugs	NOISE	Required	Yes

Comments: Used to control noise hazards.

### Exposure Assessment

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
Warehouse section-Warehousing Operations	NOISE (Reproductive)	85 dBA 8 hr TWA DoD		Yes	Yes
SEG: LSD-Garrison Supply Operations Rationale: Personnel exposure to noise in excess of the standard is not expected based on the duration of the operation. However further sampling should be conducted to better characterize process.					
Warehouse section-Warehousing Operations	CARBON MONOXIDE Inhalation (Reproductive) (Ototoxin)	55 mg/m3 8 hr TWA OSHA		Yes	No
SEG: LSD-Garrison Supply Operations Rationale: Forklifts are only used on occasion, with bay doors open. Potential for overexposure is rated negligible.					

## 5. Hazards that have Special Notations

The following is a summary of hazards found to be in use in this Shop that have one or more of the following notations: Carcinogen, Reproductive, Sensitizer, Skin, or Ototoxin. These notations are provided next to the hazard names in Section 4, Chemical and Physical Hazards Exposure Assessments. Exposure to these hazards should be significantly reduced by elimination, substitution, or through work practice and engineering controls.

Carcinogen: A Carcinogen is a hazard capable of causing cancer.

None

Reproductive: Hazards identified with the Reproductive notation are those associated with occupational exposures regarding their potential to cause an adverse effect on reproductive health or fetal development. Pregnant workers and/or workers concerned about their future reproductive capacity should seek the advice of their medical provider before working in an environment that contains reproductive hazards.

CARBON MONOXIDE

NOISE

Sensitizer: A sensitizer is a hazard with the potential to produce dermal and/or respiratory health effects similar to an allergic reaction or asthma. Worker exposures to sensitizing hazards may evoke severe respiratory or dermal reactions.

None

Skin: This notation refers to the potential significant contribution to a worker's overall exposure by the cutaneous route, including mucous membranes and the eyes, by contact with vapors, liquids, and solids. A Skin notation is not applied to chemicals that solely cause dermal irritation.

None

Ototoxin: Ototoxic chemicals either cause hearing loss independently, or work synergistically with hazardous noise to damage the inner ear. Regardless of the mechanism, exposure to certain chemicals, either alone or in concert with noise, results in hearing loss.

CARBON MONOXIDE

## 6. Medical Surveillance

The following are exposure based medical surveillance program recommendations. Workers are included in medical surveillance programs based on several factors: 1) unacceptable exposure assessments, 2) frequency of exposure, and 3) the availability of surveillance criteria. The decision to include a worker in a program is based on the possibility of exposure at or above a regulatory action level, if OSHA has established one. The decision may also be driven by other exposure standards, policy and guidance from the DoD or Navy. The only certification exam recommended in the IH Survey is for Respirator Users.

No Medical Surveillance Recommended

## 7. Workplace Monitoring Plan

Processes listed below require initial and/or periodic exposure monitoring to determine if levels are controlled to below the Occupational Exposure Limits. In order to fulfill this requirement, your assistance in scheduling monitoring is needed by notifying the Industrial Hygiene Department at least 48 hours in advance of the next operation.

Entry ID	Process Name	Hazard Name	Sampling Task Type	Projected Due Date	Frequency
1748078	Warehouse section-HAZMAT Cell	NOISE	Noise Dosimetry	02/28/2023	One Time
1748078	Warehouse section-Tool room issue	NOISE	Noise Dosimetry	02/28/2023	One Time
1748078	Warehouse section-Warehousing Operations	NOISE	Noise Dosimetry	02/28/2023	One Time



**Periodic Industrial Hygiene Survey: Shop Assessment**

v1.0

**Survey Date:** 09 Feb 2021**Shop Priority:** Medium**Command: N67008 /****Shop: LSD-Garrison Mobile Equipment (GME)**

Location: Building 5400

**Industrial Hygienist:** ARWOOD, BRYAN  
bryan.s.arwood.civ@mail.mil**Safety POC:** Scoggins, Melvin  
melvin.scoggins@usmc.mil**This assessment consists of the following sections:**

1. Shop Description
2. Observations and Notes
3. List of Processes
4. Process Information, Controls, and Exposure Assessments
5. Hazards that have Special Notations
6. Medical Surveillance
7. Workplace Monitoring Plan

**1. Shop Description****# of Shop Personnel**

Garrison Mobile Equipment is responsible for all government owned vehicles on base. GME is broken down into three major sections:

Administrative Section: This includes the Branch Head, Transportation Assistant, Mobile Equipment Inspector, the Training Instructor-Safety Rep and the licensing officer

Support Section: This includes the Auto Mechanic Supervisor, tool room attendant, tire repairer and the Auto mechanics/workers. The tool room attendant is responsible for issuing out tools and supplies and maintaining the hazardous materials. The Tire repairer is responsible for repairing tires and the auto mechanics/workers perform either repairs or perform preventive maintenance on vehicles.

Operation Section: This includes the Transportation Supervisor, dispatcher, taxi driver, and motor vehicle drivers. The motor vehicle drivers drive delivery trucks and a refueler.

Military specific duties (i.e. weapons qualification) are a Battalion responsibility and therefore addressed under the under the H&S Company survey.

**39****2. Observations and Notes**

02/09/2021

Abbreviations: ADM – Administrative, PPE – Personal Protective Equipment, ISO – Isolation, DV – Dilution Ventilation, ENG – Engineering Controls, and LV – Local Ventilation

Work-related musculoskeletal disorders (WRMD) risk factors: Personnel should ensure that all workstations are set up per attachment of the periodic industrial hygiene survey to help prevent WMSD issues from occurring. Gel pads or wrist rests should be employed in front of the keyboards to help maintain a neutral wrist and keep the wrists off of hard edges of the desk. As chairs are replaced, consideration should be given to purchasing adjustable ergonomic chairs.

**3. List of Processes**

Process Name	# of Process Personnel
Mobile quipment inspections	12
Professional/administrative tasks	18

Refueling	16
Tire Repair	14
Touch Up Painting	12
Vehicle Maintenance/Repair	14
Vehicle Operators	17

#### 4. Process Information, Controls, and Exposure Assessments

Chemical and physical hazards have been assessed for the processes in this shop to determine if the exposure levels are less than Occupational Exposure Limits (OELs). OELs are established to protect workers from the potential health effects due to exposures to chemical substances or physical agents. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are the regulatory OELs to which employers must comply. When appropriate, we recommend alternate, more protective OELs as a best practice.

Personal Protective Equipment (PPE) listed in the Industrial Hygiene survey is specified for the control of identified occupational health stressors. Additional PPE not specified in the survey report (e.g. safety shoes/boots, fall protection, safety vests, etc.) may be required for personnel. Consult with your cognizant safety representative, PPE hazard assessment or local instruction/Standard Operating Procedure (SOP) for any additional required PPE specific to your worksite.

In the Control Use column, the controls marked as Required are the minimum deemed necessary to protect workers based on the exposure assessment. Controls marked as Recommended are considered best practice to further reduce exposures and those listed as Elective are strictly voluntary.

In the Adequate column, Yes signifies the control is in place and capable of controlling exposures during the process. If Adequate is listed as No, the control is not yet in place or incapable of controlling exposures. Additional details will be provided in the comments below the control.

In the Acceptable column, Yes indicates that it is highly unlikely that the worker is exposed to the hazard at or above the OEL without regard to PPE. If Acceptable is listed as No, additional controls are required, and the shop should investigate the feasibility of reducing/eliminating the hazard. Medical Surveillance may also be required (Section 6). If Yes is listed in the Need More Data column, see the Shop's Workplace Monitoring Plan (Section 7).

When appropriate, special hazard notations are noted in the exposure assessments below. Section 5 provides notation explanations and a summary of these hazards. Exposures to these hazards should be significantly reduced by elimination, substitution, engineering controls, or work practice controls.

#### Process: Mobile equipment inspections

Frequency: Daily      Duration: 2-4 hours

Description: Personnel are responsible for performing mobile equipment inspections to include the cranes for the entire base to include MDMC area.

#### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Stretch Breaks	Dynamic Posture	Recommended	Yes

#### PPE

Control Description	Hazards Controlled	Control Use	Adequate
Earplug	NOISE	Recommended	Yes
Comments: To control noise hazard.			

**Exposure Assessment**

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
Mobile equipment inspections	NOISE (Reproductive)	85 dBA 8 hr TWA DoD		Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Over exposure to noise is unlikely during this process.					

**Process: Professional/administrative tasks**

Frequency: Daily      Duration: 6-8 hours

Description: Personnel primarily work at a desk performing professional/ administrative tasks. This can include long hours at a desk/ computer.

Hazard:  
Excessive Sitting (Excessive sitting is a NMCPHC listed reproductive/developmental hazard)

WMSD RISK FACTORS: No ergonomic-related injuries/ problems were reported during the survey walkthrough. Any ergonomic related injury should be reported to the command safety officer.

**Administrative**

Control Description	Hazards Controlled	Control Use	Adequate
Stretch Breaks	Static Posture	Recommended	Yes

**Process: Refueling**

Frequency: Daily      Duration: 1-2 hours

Description: Fleet vehicles are refilled on a daily basis using unbranded conventional gasoline and No.2 diesel fuel.

**Engineering**

Control Description	Hazards Controlled	Control Use	Adequate
Fuel Pump	DIESEL FUEL; GASOLINE	Required	Yes
Comments: Used to minimize fuel contact and exposure through limiting contact via transfer and filling.			

**Administrative**

Control Description	Hazards Controlled	Control Use	Adequate
Hand Washing	DIESEL FUEL; GASOLINE	Recommended	Yes
Comments: Used to control exposure to fuels.			

**PPE**

Control Description	Hazards Controlled	Control Use	Adequate
Earplugs	NOISE	Required	Yes
Comments: To control noise hazard.			

**Exposure Assessment**

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
Refueling	NOISE (Reproductive)	85 dBA 8 hr TWA DoD		Yes	Yes
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Over exposure to noise is unlikely during this process, however further sampling should be conducted to provide better characterization.					
Refueling	DIESEL FUEL Inhalation (Skin)	100 mg/m3 8 hr TWA ACGIH Inhalable		Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and duration over exposure is deemed low and acceptable.					
Refueling	DIESEL FUEL Skin and/or Eye Contact (Skin)			Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and implementation of controls contact hazards are deemed low and acceptable.					
Refueling	GASOLINE Inhalation (Carcinogen) (Reproductive)	890 mg/m3 8 hr TWA ACGIH		Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and duration over exposure is deemed low and acceptable.					
Refueling	GASOLINE Skin and/or Eye Contact (Carcinogen) (Reproductive)			Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and implementation of controls contact hazards are deemed low and acceptable.					

## Process: Tire Repair

Frequency: Daily      Duration: 6-8 hours

Description: Personnel use various machines to repair tires to include removing rims, replacing rims and filling tires with air. Personnel can also assist at the MDMC.

### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Work/Rest Cycle	Forceful Exertion	Recommended	Yes

### PPE

Control Description	Hazards Controlled	Control Use	Adequate
Ear Plug	NOISE	Required	Yes
Comments: To control noise hazards.			

### Exposure Assessment

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
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Tire Repair	NOISE (Reproductive)	85 dBA 8 hr TWA DoD	91.6 dBA	No	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: UNACCEPTABLE. Based on personal noise dosimetry sampling. Personnel should remain in the Hearing Conservation Program.					

### Process: Touch Up Painting

Frequency: Special Occasions      Duration: 0-15 minutes

Description: Personnel occasionally label equipment for service using rattle-cans/aerosolized spray.

#### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Hand Washing	CARBON BLACK; TOLUENE; XYLENE	Recommended	Yes
Comments: Used to limit skin contact.			

#### PPE

Control Description	Hazards Controlled	Control Use	Adequate
Nitrile Gloves	CARBON BLACK; TOLUENE; XYLENE	Recommended	Yes
Comments: Used to limit skin contact with hazards.			

#### Exposure Assessment

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
Touch Up Painting	CARBON BLACK Inhalation (Carcinogen)	3.5 mg/m3 8 hr TWA OSHA		Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and duration over exposure is deemed low and acceptable.					
Touch Up Painting	TOLUENE Inhalation (Reproductive) (Ototoxin)	753 mg/m3 8 hr TWA OSHA		Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and duration over exposure is deemed low and acceptable.					
Touch Up Painting	TOLUENE Skin and/or Eye Contact (Reproductive) (Ototoxin)			Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and implementation of controls contact hazards are deemed low and acceptable.					
Touch Up Painting	XYLENE Inhalation (Carcinogen) (Reproductive) (Ototoxin)	435 mg/m3 8 hr TWA OSHA		Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and duration over exposure is deemed low and acceptable.					

Touch Up Painting	XYLENE Skin and/or Eye Contact (Carcinogen) (Reproductive) (Ototoxin)			Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and implementation of controls contact hazards are deemed low and acceptable.					

### Process: Vehicle Maintenance/Repair

Frequency: Daily      Duration: 6-8 hours

Description: Personnel perform various types of vehicle repairs ranging from engine overhauls to routine maintenance. Personnel routinely drain/replace specific fluids from the vehicle before/after repairs or during preventive maintenance. Vehicles and parts may occasionally require the use of fork lifts to move heavy component around in work bay.

#### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Hand Washing	DIESEL FUEL; DL-LIMONENE; GASOLINE	Recommended	Yes
Comments: To limit skin contact.			
Work/Rest Cycle	Forceful Exertion	Recommended	Yes

#### PPE

Control Description	Hazards Controlled	Control Use	Adequate
Chemical Resistant Gloves	DIESEL FUEL; DL-LIMONENE; GASOLINE	Recommended	Yes
Comments: To limit skin contact.			
Earplug	NOISE	Required	Yes
Comments: To control noise hazards.			
Splash Goggles	DIESEL FUEL; DL-LIMONENE; GASOLINE	Recommended	Yes

#### Exposure Assessment

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
Vehicle Maintenance/Repair	NOISE  (Reproductive)	85 dBA 8 hr TWA DoD		No	Yes
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Based off of similar work process, over exposure to noise is likely. Further sampling should be conducted.					
Vehicle Maintenance/Repair	DIESEL FUEL Inhalation (Skin)	100 mg/m3 8 hr TWA ACGIH Inhalable		Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and duration over exposure is deemed low and acceptable.					

Vehicle Maintenance/Repair	DIESEL FUEL Skin and/or Eye Contact (Skin)			Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and implementation of controls contact hazards are deemed low and acceptable.					
Vehicle Maintenance/Repair	DL-LIMONENE Inhalation	167 mg/m3 8 hr TWA AIHA		Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and duration over exposure is deemed low and acceptable.					
Vehicle Maintenance/Repair	DL-LIMONENE Skin and/or Eye Contact			Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and implementation of controls contact hazards are deemed low and acceptable.					
Vehicle Maintenance/Repair	GASOLINE Inhalation (Carcinogen) (Reproductive)	890 mg/m3 8 hr TWA ACGIH		Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and duration over exposure is deemed low and acceptable.					
Vehicle Maintenance/Repair	GASOLINE Skin and/or Eye Contact (Carcinogen) (Reproductive)			Yes	No
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Due to task frequency and implementation of controls contact hazards are deemed low and acceptable.					

## Process: Vehicle Operators

Frequency: Daily      Duration: 6-8 hours

Description: Personnel operate fleet vehicles as required to include Class 4 trucks.

Hazard:  
Excessive Sitting (Excessive sitting is a NMCPHC listed reproductive/developmental hazard)

WMSD RISK FACTORS: No ergonomic-related injuries/ problems were reported during the survey walkthrough. Any ergonomic related injury should be reported to the command safety officer.

### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Work/Rest Cycle	Static Posture	Recommended	Yes

### PPE

Control Description	Hazards Controlled	Control Use	Adequate
Earplug	NOISE	Required	Yes
Comments: To control noise hazards.			

### Exposure Assessment

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
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Vehicle Operators	NOISE (Reproductive)	85 dBA 8 hr TWA DoD		Yes	Yes
SEG: LSD-Garrison Mobile Equipment (GME) Rationale: Over exposure to noise is unlikely during this process, however further sampling should be conducted to provide better characterization.					

## 5. Hazards that have Special Notations

The following is a summary of hazards found to be in use in this Shop that have one or more of the following notations: Carcinogen, Reproductive, Sensitizer, Skin, or Ototoxin. These notations are provided next to the hazard names in Section 4, Chemical and Physical Hazards Exposure Assessments. Exposure to these hazards should be significantly reduced by elimination, substitution, or through work practice and engineering controls.

Carcinogen: A Carcinogen is a hazard capable of causing cancer.

CARBON BLACK (OSHA/NIOSH (Ca)- Carcinogen)

GASOLINE (OSHA/NIOSH (Ca)- Carcinogen)

XYLENE (IARC (1)- Human Carcinogen)

Reproductive: Hazards identified with the Reproductive notation are those associated with occupational exposures regarding their potential to cause an adverse effect on reproductive health or fetal development. Pregnant workers and/or workers concerned about their future reproductive capacity should seek the advice of their medical provider before working in an environment that contains reproductive hazards.

GASOLINE

NOISE

TOLUENE

XYLENE

Sensitizer: A sensitizer is a hazard with the potential to produce dermal and/or respiratory health effects similar to an allergic reaction or asthma. Worker exposures to sensitizing hazards may evoke severe respiratory or dermal reactions.

None

Skin: This notation refers to the potential significant contribution to a worker's overall exposure by the cutaneous route, including mucous membranes and the eyes, by contact with vapors, liquids, and solids. A Skin notation is not applied to chemicals that solely cause dermal irritation.

DIESEL FUEL

Ototoxin: Ototoxic chemicals either cause hearing loss independently, or work synergistically with hazardous noise to damage the inner ear. Regardless of the mechanism, exposure to certain chemicals, either alone or in concert with noise, results in hearing loss.

TOLUENE

XYLENE

## 6. Medical Surveillance

The following are exposure based medical surveillance program recommendations. Workers are included in medical surveillance programs based on several factors: 1) unacceptable exposure assessments, 2) frequency of exposure, and 3) the availability of surveillance criteria. The decision to include a worker in a program is based on the possibility of exposure at or above a regulatory action level, if OSHA has established one. The decision may also be driven by other exposure standards, policy and guidance from the DoD or Navy. The only certification exam recommended in the IH Survey is for Respirator Users.



SEG Name	Process Name	Med Surv Program	# Process Personnel
LSD-Garrison Mobile Equipment (GME)	Tire Repair	Audiometric Testing	14
LSD-Garrison Mobile Equipment (GME)	Vehicle Maintenance/Repair	Audiometric Testing	14

## 7. Workplace Monitoring Plan

Processes listed below require initial and/or periodic exposure monitoring to determine if levels are controlled to below the Occupational Exposure Limits. In order to fulfill this requirement, your assistance in scheduling monitoring is needed by notifying the Industrial Hygiene Department at least 48 hours in advance of the next operation.

Entry ID	Process Name	Hazard Name	Sampling Task Type	Projected Due Date	Frequency
1747404	Vehicle Maintenance/Repair	NOISE	Noise Dosimetry	03/30/2023	One Time
1747653	Vehicle Operators	NOISE	Noise Dosimetry	03/30/2023	One Time
1747655	Vehicle Maintenance/Repair	NOISE	Noise Dosimetry	03/30/2023	One Time
1747656	Refueling	NOISE	Noise Dosimetry	03/30/2023	One Time

**Periodic Industrial Hygiene Survey: Shop Assessment**

v1.0

**Survey Date:** 09 Feb 2021**Shop Priority:** Medium**Command: N67008 /****Shop: LSD-Armory**

Location: Unmarked Cantonment behind MCLBA PD

**Industrial Hygienist:** ARWOOD, BRYAN  
bryan.s.arwood.civ@mail.mil**Safety POC:** Clark, Kevin  
kevin.clark2@usmc.mil**This assessment consists of the following sections:**

1. Shop Description
2. Observations and Notes
3. List of Processes
4. Process Information, Controls, and Exposure Assessments
5. Hazards that have Special Notations
6. Medical Surveillance
7. Workplace Monitoring Plan

**1. Shop Description****# of Shop Personnel**

The Armory is responsible for maintaining weapons for the base. This includes storing and issuing out weapons and ammunition to the Marines stationed and/or performing weapons qualifications on base. This also includes storing and issuing historical weapons used for performances. Military specific duties (i.e. weapons qualification) are a Battalion responsibility and therefore addressed under the under the H&S Company survey.

7

**2. Observations and Notes**

None

**3. List of Processes**

Process Name	# of Process Personnel
Ammo Handling	7
Minor weapons repair	7
Professional/administrative tasks	7

**4. Process Information, Controls, and Exposure Assessments**

Chemical and physical hazards have been assessed for the processes in this shop to determine if the exposure levels are less than Occupational Exposure Limits (OELs). OELs are established to protect workers from the potential health effects due to exposures to chemical substances or physical agents. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are the regulatory OELs to which employers must comply. When appropriate, we recommend alternate, more protective OELs as a best practice.

Personal Protective Equipment (PPE) listed in the Industrial Hygiene survey is specified for the control of identified occupational health stressors. Additional PPE not specified in the survey report (e.g. safety shoes/boots, fall protection, safety vests, etc.) may be required for personnel. Consult with your cognizant safety representative, PPE hazard assessment or local instruction/Standard

Operating Procedure (SOP) for any additional required PPE specific to your worksite.

In the Control Use column, the controls marked as Required are the minimum deemed necessary to protect workers based on the exposure assessment. Controls marked as Recommended are considered best practice to further reduce exposures and those listed as Elective are strictly voluntary.

In the Adequate column, Yes signifies the control is in place and capable of controlling exposures during the process. If Adequate is listed as No, the control is not yet in place or incapable of controlling exposures. Additional details will be provided in the comments below the control.

In the Acceptable column, Yes indicates that it is highly unlikely that the worker is exposed to the hazard at or above the OEL without regard to PPE. If Acceptable is listed as No, additional controls are required, and the shop should investigate the feasibility of reducing/eliminating the hazard. Medical Surveillance may also be required (Section 6). If Yes is listed in the Need More Data column, see the Shop's Workplace Monitoring Plan (Section 7).

When appropriate, special hazard notations are noted in the exposure assessments below. Section 5 provides notation explanations and a summary of these hazards. Exposures to these hazards should be significantly reduced by elimination, substitution, engineering controls, or work practice controls.

### Process: Ammo Handling

Frequency: Special Occasions      Duration: 30-60 minutes

Description: Personnel are responsible for collecting spent ammunition and distribution of ammo for firing.

#### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Wash hands	LEAD	Recommended	Yes
Comments: Used to control hazard exposure.			
*Lead is a NMCPHC listed reproductive/developmental hazard.			

#### PPE

Control Description	Hazards Controlled	Control Use	Adequate
Ear Plugs	NOISE	Required	Yes
Comments: To control noise hazards.			
Nitrile Gloves	LEAD	Recommended	Yes
Comments: Comments: Used to control hazard exposure.			
*Lead is a NMCPHC listed reproductive/developmental hazard			

#### Exposure Assessment

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
Ammo Handling	LEAD Inhalation (Carcinogen) (Reproductive) (Ototoxin)	0.05 mg/m3 8 hr TWA OSHA		Yes	No
SEG: LSD-Armory Rationale: Workers potentially exposed to airborne lead at any level are required to be informed of the content of Appendices A and B of 29 CFR 1910.1025 (OSHA Lead standard)."					
Ammo Handling	LEAD Skin and/or Eye Contact (Carcinogen) (Reproductive) (Ototoxin)			Yes	No

SEG: LSD-Armory

Rationale: Due to task frequency and implementation of controls exposure risk is low and acceptable.

Ammo Handling	NOISE (Reproductive)	85 dBA 8 hr TWA DoD		Yes	No
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SEG: LSD-Armory

Rationale: Personnel exposure to noise in excess of the standard is not expected based on the duration and frequency of the operation.

**Process: Minor weapons repair**

Frequency: Special Occasions      Duration: 15-30 minutes

Description: Personnel may perform minor weapons repairs to include replacing parts or fixing jams. This may include the use of solvent cleaners.

**Administrative**

Control Description	Hazards Controlled	Control Use	Adequate
Wash hands	LEAD	Recommended	Yes

Comments: Used to control hazard exposure.

\*Lead is a NMCPHC listed reproductive/developmental hazard.

**PPE**

Control Description	Hazards Controlled	Control Use	Adequate
Ear Plugs	NOISE	Required	Yes

Comments: To control noise hazards.

**Exposure Assessment**

Process Name	Hazard Name	OEL	Exposure Level	Acceptable	Need More Data
Minor weapons repair	LEAD Skin and/or Eye Contact (Carcinogen) (Reproductive) (Ototoxin)			Yes	No

SEG: LSD-Armory

Rationale: Due to task frequency and implementation of controls exposure risk is low and acceptable.

Minor weapons repair	NOISE (Reproductive)	85 dBA 8 hr TWA DoD		Yes	No
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SEG: LSD-Armory

Rationale: Personnel exposure to noise in excess of the standard is not expected based on the duration and frequency of the operation.

**Process: Professional/administrative tasks**

Frequency: Daily      Duration: 6-8 hours

Description: Personnel primarily work at a desk performing professional/ administrative tasks. This can include long hours at a desk/ computer.

Hazard:

Excessive Sitting (Excessive sitting is a NMCPHC listed reproductive/developmental hazard)

WMSD RISK FACTORS: No ergonomic-related injuries/ problems were reported during the survey walkthrough. Any ergonomic related injury should be reported to the command safety officer.

#### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Stretch Breaks	Static Posture	Recommended	Yes

## 5. Hazards that have Special Notations

The following is a summary of hazards found to be in use in this Shop that have one or more of the following notations: Carcinogen, Reproductive, Sensitizer, Skin, or Ototoxin. These notations are provided next to the hazard names in Section 4, Chemical and Physical Hazards Exposure Assessments. Exposure to these hazards should be significantly reduced by elimination, substitution, or through work practice and engineering controls.

Carcinogen: A Carcinogen is a hazard capable of causing cancer.

LEAD (IARC (2B)- Possible Human Carcinogen)

Reproductive: Hazards identified with the Reproductive notation are those associated with occupational exposures regarding their potential to cause an adverse effect on reproductive health or fetal development. Pregnant workers and/or workers concerned about their future reproductive capacity should seek the advice of their medical provider before working in an environment that contains reproductive hazards.

LEAD

NOISE

Sensitizer: A sensitizer is a hazard with the potential to produce dermal and/or respiratory health effects similar to an allergic reaction or asthma. Worker exposures to sensitizing hazards may evoke severe respiratory or dermal reactions.

None

Skin: This notation refers to the potential significant contribution to a worker's overall exposure by the cutaneous route, including mucous membranes and the eyes, by contact with vapors, liquids, and solids. A Skin notation is not applied to chemicals that solely cause dermal irritation.

None

Ototoxin: Ototoxic chemicals either cause hearing loss independently, or work synergistically with hazardous noise to damage the inner ear. Regardless of the mechanism, exposure to certain chemicals, either alone or in concert with noise, results in hearing loss.

LEAD

## 6. Medical Surveillance

The following are exposure based medical surveillance program recommendations. Workers are included in medical surveillance programs based on several factors: 1) unacceptable exposure assessments, 2) frequency of exposure, and 3) the availability of surveillance criteria. The decision to include a worker in a program is based on the possibility of exposure at or above a regulatory action level, if OSHA has established one. The decision may also be driven by other exposure standards, policy and guidance from the DoD or Navy. The only certification exam recommended in the IH Survey is for Respirator Users.

No Medical Surveillance Recommended

## 7. Workplace Monitoring Plan

Processes listed below require initial and/or periodic exposure monitoring to determine if levels are controlled to below the Occupational Exposure Limits. In order to fulfill this requirement, your assistance in scheduling monitoring is needed by notifying the Industrial Hygiene Department at least 48 hours in advance of the next operation.

No Workplace Monitoring Requested at this time.

**Periodic Industrial Hygiene Survey: Shop Assessment**

v1.0

**Survey Date:** 09 Feb 2021**Shop Priority:** Medium**Command: N67004 / MCLB ALBANY GA****Shop: LSD-Organic Supply**

Location: Building 1351

**Industrial Hygienist:** ARWOOD, BRYAN  
bryan.s.arwood.civ@mail.mil**Safety POC:** Clark, Kevin  
kevin.clark2@usmc.mil**This assessment consists of the following sections:**

1. Shop Description
2. Observations and Notes
3. List of Processes
4. Process Information, Controls, and Exposure Assessments
5. Hazards that have Special Notations
6. Medical Surveillance
7. Workplace Monitoring Plan

**1. Shop Description****# of Shop Personnel**

Organic Supply is responsible for issuing gear for the Marines on base. This includes storing, staging, and issuing out personal protective equipment for range and field supplies.

8

**2. Observations and Notes**

02/09/2021

Abbreviations: ADM – Administrative, PPE – Personal Protective Equipment, ISO – Isolation, DV – Dilution Ventilation, ENG – Engineering Controls, and LV – Local Ventilation

Work-related musculoskeletal disorders (WRMD) risk factors: Personnel should ensure that all workstations are set up per attachment of the periodic industrial hygiene survey to help prevent WMSD issues from occurring. Gel pads or wrist rests should be employed in front of the keyboards to help maintain a neutral wrist and keep the wrists off of hard edges of the desk. As chairs are replaced, consideration should be given to purchasing adjustable ergonomic chairs.

**3. List of Processes**

Process Name	# of Process Personnel
Administrative Duties	8

**4. Process Information, Controls, and Exposure Assessments**

Chemical and physical hazards have been assessed for the processes in this shop to determine if the exposure levels are less than Occupational Exposure Limits (OELs). OELs are established to protect workers from the potential health effects due to exposures to chemical substances or physical agents. The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PELs) are the regulatory OELs to which employers must comply. When appropriate, we recommend alternate, more protective OELs as a best practice.

Personal Protective Equipment (PPE) listed in the Industrial Hygiene survey is specified for the control of identified occupational health stressors. Additional PPE not specified in the survey report (e.g. safety shoes/boots, fall protection, safety vests, etc.) may be

required for personnel. Consult with your cognizant safety representative, PPE hazard assessment or local instruction/Standard Operating Procedure (SOP) for any additional required PPE specific to your worksite.

In the Control Use column, the controls marked as Required are the minimum deemed necessary to protect workers based on the exposure assessment. Controls marked as Recommended are considered best practice to further reduce exposures and those listed as Elective are strictly voluntary.

In the Adequate column, Yes signifies the control is in place and capable of controlling exposures during the process. If Adequate is listed as No, the control is not yet in place or incapable of controlling exposures. Additional details will be provided in the comments below the control.

In the Acceptable column, Yes indicates that it is highly unlikely that the worker is exposed to the hazard at or above the OEL without regard to PPE. If Acceptable is listed as No, additional controls are required, and the shop should investigate the feasibility of reducing/eliminating the hazard. Medical Surveillance may also be required (Section 6). If Yes is listed in the Need More Data column, see the Shop's Workplace Monitoring Plan (Section 7).

When appropriate, special hazard notations are noted in the exposure assessments below. Section 5 provides notation explanations and a summary of these hazards. Exposures to these hazards should be significantly reduced by elimination, substitution, engineering controls, or work practice controls.

## Process: Administrative Duties

Frequency: Daily      Duration: 6-8 hours

Description: Personnel work at desks conducting inventory of supplies, recording equipment supplied to Marines on base, and maintaining supplies to be used for field training.

Hazard:  
Excessive Sitting (Excessive sitting is a NMCPHC listed reproductive/developmental hazard)

WMSD RISK FACTORS: No ergonomic-related injuries/ problems were reported during the survey walkthrough. Any ergonomic related injury should be reported to the command safety officer.

### Administrative

Control Description	Hazards Controlled	Control Use	Adequate
Stretch Break	Static Posture	Recommended	Yes

## 5. Hazards that have Special Notations

The following is a summary of hazards found to be in use in this Shop that have one or more of the following notations: Carcinogen, Reproductive, Sensitizer, Skin, or Ototoxin. These notations are provided next to the hazard names in Section 4, Chemical and Physical Hazards Exposure Assessments. Exposure to these hazards should be significantly reduced by elimination, substitution, or through work practice and engineering controls.

Carcinogen: A Carcinogen is a hazard capable of causing cancer.

None

Reproductive: Hazards identified with the Reproductive notation are those associated with occupational exposures regarding their potential to cause an adverse effect on reproductive health or fetal development. Pregnant workers and/or workers concerned about their future reproductive capacity should seek the advice of their medical provider before working in an environment that contains reproductive hazards.

None

Sensitizer: A sensitizer is a hazard with the potential to produce dermal and/or respiratory health effects similar to an allergic reaction or asthma. Worker exposures to sensitizing hazards may evoke severe respiratory or dermal reactions.

None



Skin: This notation refers to the potential significant contribution to a worker's overall exposure by the cutaneous route, including mucous membranes and the eyes, by contact with vapors, liquids, and solids. A Skin notation is not applied to chemicals that solely cause dermal irritation.

None

Ototoxin: Ototoxic chemicals either cause hearing loss independently, or work synergistically with hazardous noise to damage the inner ear. Regardless of the mechanism, exposure to certain chemicals, either alone or in concert with noise, results in hearing loss.

None

## 6. Medical Surveillance

The following are exposure based medical surveillance program recommendations. Workers are included in medical surveillance programs based on several factors: 1) unacceptable exposure assessments, 2) frequency of exposure, and 3) the availability of surveillance criteria. The decision to include a worker in a program is based on the possibility of exposure at or above a regulatory action level, if OSHA has established one. The decision may also be driven by other exposure standards, policy and guidance from the DoD or Navy. The only certification exam recommended in the IH Survey is for Respirator Users.

No Medical Surveillance Recommended

## 7. Workplace Monitoring Plan

Processes listed below require initial and/or periodic exposure monitoring to determine if levels are controlled to below the Occupational Exposure Limits. In order to fulfill this requirement, your assistance in scheduling monitoring is needed by notifying the Industrial Hygiene Department at least 48 hours in advance of the next operation.

No Workplace Monitoring Requested at this time.

**NOISE SURVEY WITH HEARING PROTECTION REQUIREMENTS  
AND PERSONAL NOISE SAMPLING RESULTS SUMMARY  
LOGISTICS SUPPORT DIVISION  
MARINE CORPS LOGISTICS BASE ALBANY  
REPORT NUMBER: AL21010  
FEBRUARY 2021**

1. The following table identifies spaces, work tasks and equipment that require the use of hearing protection. These measurements were taken during the current and previous Industrial Hygiene (IH) surveys. All personnel working in the area or performing the identified tasks that are exposed to sound pressure (noise) levels at or above **85 dBA** or **140 dBP** must use single hearing protection. Personnel exposed to sound pressure (noise) levels at or above **104 dBA** or **165 dBP** require the use of double hearing protection, as indicated by the word “Double” in the “Level of Hearing Protection Required” column. The hearing protective devices used must be capable of attenuating worker noise exposure below an 8-hour Time-Weighted Average (TWA) of 85 dBA.

<b>IDENTIFIED NOISE HAZARD AREA, OPERATIONS AND EQUIPMENT</b>					
<b>SHOP/ WORKCENTER</b>	<b>SPACE</b>	<b>WORK TASK AND/OR CONDITIONS</b>	<b>RANGE OF MEASURED SOUND PRESSURE LEVELS (dBA)</b>	<b>NOISE RADIUS (FT)</b>	<b>HEARING PROTECTION REQUIRED</b>
LSD-Garrison Mobile Equipment (GME)	Vehicle Maintenance	Vehicle Maintenance- Milwaukee 9inch grinder	100	10	<b>Single</b>
		Vehicle Maintenance- Metabo 4.5 inch electric cutting tool	99.5	10	<b>Single</b>
		Vehicle Maintenance- Milwaukee Chop saw	101.3	12	<b>Single</b>
		Vehicle Maintenance-Baldor grinder	98	8	<b>Single</b>
		Vehicle Maintenance- Jet drill press	75	N/A	None
		Vehicle Maintenance- Milwaukee band saw	93-97	6	<b>Single</b>
		Vehicle Maintenance- Pneumatic impact tool	97	6	<b>Single</b>
		Vehicle Maintenance- Die grinder	100	10	<b>Single</b>
		Vehicle Maintenance-Air wrench	92-95	6	<b>Single</b>
		Doosan Forklift	86.8	4	<b>Single</b>
		Akita Cleaning Systems Model 530	91	5	<b>Single</b>
		Vehicle Maintenance-Tire Repair-Rim clamp	90-91	5	<b>Single</b>

2. The personal sample results listed below indicated personnel have had exposures that have exceeded the occupational exposure limit (OEL). Personal exposure to noise in excess of the OEL may occur. Personnel should remain in the command's Hearing Conservation Program.

<b>PERSONNEL NOISE SAMPLING RESULTS</b> <b>LSD-Garrison Mobile Equipment (GME)</b>				
<b>DATE SAMPLE #</b>	<b>ACTIVITY</b>	<b>EXPOSURE LIMIT</b>	<b>MEASURED TWA EXPOSURE</b>	<b>RESULT</b>
20 Aug 15 ND15064	Support section-Tire repair	85	91.2	<b>Above the OEL</b>

3. At the discretion of Industrial Hygiene, additional noise measurements (sound level surveys) may be obtained in work centers or noise dosimetry (personal monitoring on individuals) performed to resolve compliance issues such as the posting of hazardous noise areas, the adequacy of hearing protection devices already in use, or implementing administrative controls to bring the effective exposure to less than the DoD OEL.

4. The hearing protection devices currently in use (listed below) are capable of attenuating worker noise exposure below the OEL unless otherwise stated. It is recommended that the shop re-emphasize the need for wearing appropriate hearing protection continually when in designated noise hazard areas and it should be ensured that hearing protection use is strictly enforced throughout the shop. The shop should also consider any means available to minimize or eliminate noise wherever possible in order to reduce potential worker exposures. All noise hazardous areas/equipment should remain labeled with appropriate noise hazard stickers/signs. Should tasks change such that worker noise exposures are affected, notify Industrial Hygiene so that another assessment can be conducted.

**Hearing protection in use:**

3M Classic Earplugs Uncorded (*NRR 29dB, adjusted NRR 11dB*)

3M Ultrafit Earplugs (*NRR 25dB, adjusted NRR 9dB*)

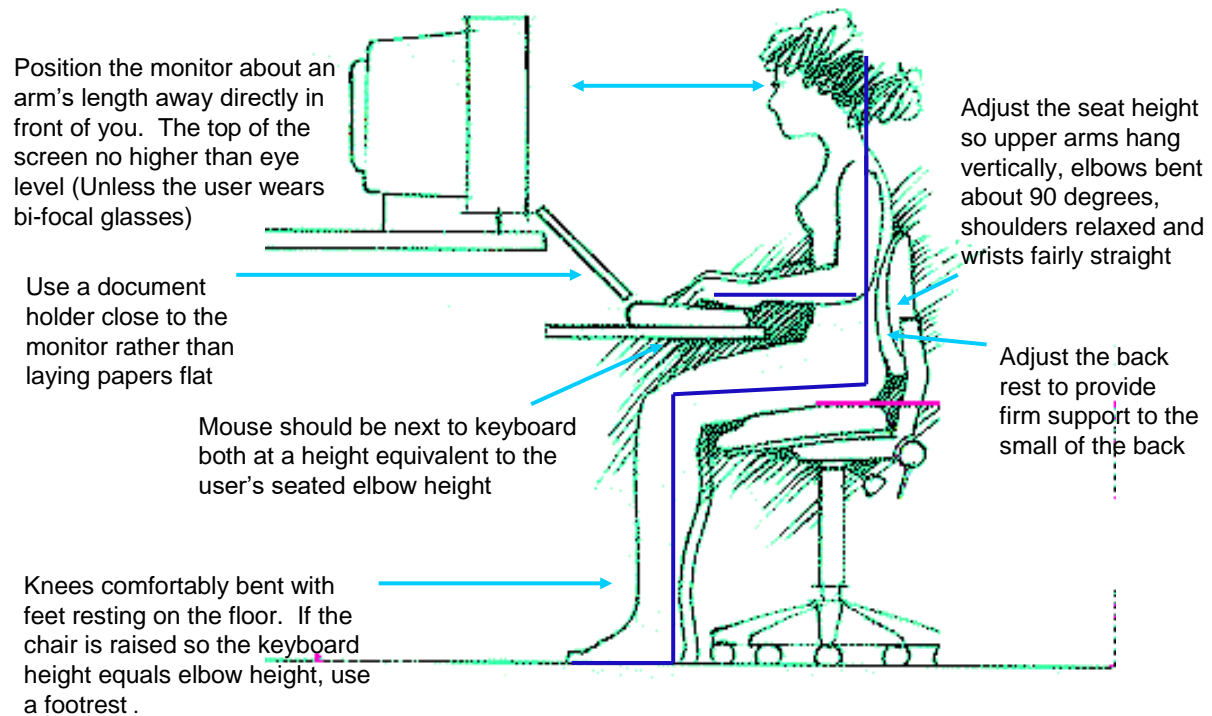
Tasco Tri-Fit silicone earplugs (*NRR 25dB, adjusted NRR 9dB*)

Howard Leight Thunder 29 earmuffs (*NRR 29dB, adjusted NRR 11dB*)

3M Peltor Optime 95 earmuffs (*NRR 21, adjusted NRR 7dB*)

5. The original sample results discussed in this attachment are on file with the Industrial Hygiene office. The worker has been notified of their sample results and the results have been recorded in their individual medical record. At this time there are no additional recommendations to be made.

# Neutral Posture for Computer Use



# TIME TO TAKE A COMPUTER BREAK

For every 20 minutes of computer use,  
look at an object 20 feet away for  
20 seconds. This reduces eyestrain.

Move your eyes side-to-side and  
top to bottom. This helps moisten  
your eyes and reduces eyestrain.

Cup your eyes with your hands  
and close your eyes. Do not put  
any direct pressure on your eyes.  
This relaxes your face and  
moistens your eyes.

Rotate your ankle. This promotes  
blood circulation in your legs.

While seated, elongate your back  
by pretending there is a cable  
attached to your head that is slowly  
pulling upwards. This will promote  
good posture and relieve some  
low back pain.

Slowly pull your arms back as far as  
you can, trying to touch your shoulder  
blades together. This will reduce  
upper back stress.

Close your eyes and gradually  
lower your head. This relaxes  
your eyes and neck.

Extend your arms and fingers  
and rotate. This reduces stress  
on the upper extremities.

With your arms at your sides,  
shake your fingers. This  
relaxes your arms, hands  
and fingers.

Shrug your shoulders. This eliminates  
stress from the shoulders and upper back.

**Tip:** Taking 20 second micro-breaks throughout the day to refocus your eyes will reduce fatigue at the end of the day. 20/20 rule: for every 20 minutes of work, rest the eyes 20 seconds.

# CUSTOMER SATISFACTION SURVEY

Industrial Hygiene Department  
Navy Medicine Readiness and Training Unit Albany Georgia

Command: \_\_\_\_\_ Date: \_\_\_\_\_

Please rate this survey and report by indicating the numbers below that reflect your level of satisfaction:

	Level of Satisfaction				
	Low				High
	1	2	3	4	5
1. Coordination and/or response to request					
2. Courtesy and professionalism of IH personnel					
3. IH personnel's ability to communicate clearly and openly					
4. Clarity of Report					
5. Usefulness of Report					
6. Exposure Monitoring (if applicable)					
7. Timeliness of Report					

8. How can we improve the services we are providing?

9. What other services would you like Industrial Hygiene Services to provide?

10. Additional Comments (add a separate sheet if necessary):

Name: \_\_\_\_\_ Position: \_\_\_\_\_ Shop/Codes: \_\_\_\_\_

PLEASE RETURN THIS SURVEY TO:

Industrial Hygiene Department  
Navy Medicine Readiness and Training Unit Albany  
[bryan.s.arwood.civ@mail.mil](mailto:bryan.s.arwood.civ@mail.mil)



Attachment (4)