



DEPARTMENT OF THE NAVY

NAVAL HOSPITAL
1 PINCKNEY BOULEVARD
BEAUFORT, SOUTH CAROLINA 29902-6148 IN REPLY REFER TO:

6260
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18 Jan 17

From: Commanding Officer, Naval Hospital, Beaufort
To: Commanding Officer, Marine Corps Air Station, Beaufort,
SC 29904

Subj: PERIODIC INDUSTRIAL HYGIENE SURVEY OF MARINE CORPS AIR
STATION, BEAUFORT, SOUTH CAROLINA

Ref: (a) OPNAVINST 5100.23G
(b) MCO 5100.8F

Encl: (1) Industrial Hygiene Survey Report

1. Per references (a) and (b), a periodic Industrial Hygiene Survey was completed on 13 January 2017. The purpose of this survey was to identify and evaluate potential health hazards in the workplace and recommend appropriate controls to ensure the health and safety of personnel.

2. Enclosure (1) contains the Industrial Hygiene Survey report. The Industrial Hygiene Survey report includes an executive summary, a review of Navy Occupational Safety and Health programs, workplace evaluations, recommended medical surveillance, an evaluation of reproductive hazards and proposed workplace monitoring plan.

3. Questions concerning this report may be directed to Esmeraldo Ranches at 843228-6198 or via email at esmeraldo.1.ranches.civ@mail.mil.

A handwritten signature in cursive script that reads "Angela Dean".

A. M. W. DEAN
By direction

Copy to:
Director, MCAS Safety and Standardization
NHB Occupational Health

PERIODIC INDUSTRIAL HYGIENE SURVEY

MARINE CORPS AIR STATION (MCAS) BEAUFORT, SC

JANUARY 2017

Survey Conducted By: E. L. RANCHES
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Enclosure (1)

**PERIODIC INDUSTRIAL HYGIENE SURVEY OF MCAS BEAUFORT SC
JANUARY 2017**

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EXECUTIVE SUMMARY

A periodic and baseline industrial hygiene survey of Marine Corps Air Station DOEHRS Category Two work Centers was conducted on 3 through 13 January 2017 to identify significant changes in health hazards, assess health risks, and recommend controls where needed. No formal response is needed. MCAS Cat 2 shops will receive a periodic Industrial Hygiene (IH) Survey on a biennial basis based on currently identified and evaluated tasks and processes found in this report.

Contact Industrial Hygiene for any significant change in operations, workplace setting, or type or amount of chemicals used so that a thorough re-evaluation can be performed to protect worker health. Contact Industrial Hygiene to review engineering designs, standard operating procedures (SOPs), purchasing transactions, and service contracts relevant to IH or occupational health prior to construction or issuance of SOPs, purchases or contracts. Failure to consult with Industrial Hygiene can result in unnecessary operational costs and increased health and safety risks in the workplace.

The following is a summary of major findings and recommendations:

FINDING: All active duty personnel are in Hearing Conservation Program as per MARADMIN. Civilian personnel are designated to be enrolled in the program according to their occupational exposure to hazardous noise are not up to date on their audiograms.

RECOMMENDATION: Ensure all civilian and active duty workers complete all Hearing Conservation Program (HCP) requirements to include annual training and audiograms and such training is documented.

REFERENCE: MARADMIN 010/12 dtd 06 Jan 12, MCO 6260.1E Marine Corps Hearing Conservation Program.

FINDING: The MCAS Explosive Ordnance Disposal; the Aircraft Recovery HAZMAT and the NREAO eye wash stations, had delinquent maintenance inspection logs. Also, in Aircraft Recovery, there is no expiration date label on the portable eye wash station to indicate when will be the next fluid replenishment (bacteriostatic solution).

RECOMMENDATION: Hard plumbed eyewash stations must be inspected weekly and documented on the maintenance log. Portable units with bacteriostatic solution fluid must be inspected according to manufacturer's guidance. The next maintenance inspection of the portable eyewash station should be listed on the log.

REFERENCE: NAVMC Directive 5100.8 MARCOR OSH Program Manual Chapter 17 Hazardous Material Control.

FINDING: Hazardous Communication Training in most of the shops is incomplete or partially documented. Fall Protection Training is not documented for Base Telephone Shop.

RECOMMENDATION: Ensure required annual safety training is conducted and documented. Contact Base Safety and NREAO training availability.

REFERENCE: NAVMC Directive 5100.8 MARCOR OSH Program Manual Chapter 17 Hazardous Material Control

FINDING: There is a sign in Provost Marshall Office weapons room entrance with instruction use respiratory protection. Respirators are not required for current work operations.

RECOMMENDATION: Remove the sign.

REFERENCE: OPNAVINST 5100.23G Chapters 15 Respiratory Protection; NAVMC Directive 5100.8 MARCOR OSH Program Manual Chapter 13 Personal Protective Equipment

FINDING: A worker in the Hazardous Minimization Work Center has elected voluntary respiratory use which means that respiratory protection is not required and is made available for worker comfort

RECOMMENDATION: Ensure that this worker has appropriate training and fit testing.

REFERENCE: 29 CFR 1910.134 Appendix, 5 Mandatory Information for Employees Using Respirator When Not Required Under the Standard.

NOTICE: At the end of this report is a Customer Satisfaction Survey through which guides our report process through customer feedback.

RECOMMENDATION: Please complete the Customer Satisfaction Survey and forward your comments to IH. Please distribute this survey report through all levels so that supervisors and employees are aware of its contents for work center occupational safety and health recommendations. Industrial Hygiene also has an electronic Interactive Customer Evaluation (ICE) customer service feedback link at http://ice.disa.mil/index.cfm?a=card&sp=124393&s=350&dep=*DoD&sc=11

PERIODIC INDUSTRIAL HYGIENE SURVEY REPORT GUIDE
MARINE CORPS AIR STATION (MCAS) BEAUFORT SC
JANUARY 2017

Ref: (a) MCO 5100.8F Marine Corps Occupational Safety and Health Program Manual
(b) NAVHOSPBFT ltr 6260 Ser 06IH/1520210 Feb 15

1. Introduction. Per reference (a), a periodic Industrial Hygiene Survey was conducted to update information reported in reference (b), and consisted of a site visit, walk-through evaluations of all work areas, a review of the hazardous material inventory, and employee interviews as appropriate to assist in the industrial hygiene assessment.

2. Report Purpose and Use. It is recommended that this report is read by all levels of the MCAS Beaufort SC to use as information to improve the Occupational Safety and Health Program. Questions regarding findings, recommendations or evaluation should be addressed to the servicing Industrial Hygienist for this command.

3. Re-evaluation Schedule and Changes in the Workplace. Please retain this report on file. Industrial Hygiene Services will re-evaluate MCAS Beaufort, SC on a two year basis on Category 2 and every four years on Category 3 shops. However, any significant change in the type of operations performed, workplace setting, or change in the kind or amount of chemicals used will result in a need for a reassessment of the affected area. Industrial Hygiene services should be notified of such changes, per reference (a).

4. Safety and Occupational Health (SOH) Program Assessment. The following table provides a summary of SOH program evaluations as identified in reference (a) for this command:

SAFETY AND OCCUPATIONAL HEALTH PROGRAM ASSESSMENT
MCAS BEAUFORT SC
JANUARY 2017

New or Significantly Modified Work Center Operations/Processes?

- No significant changes in operations/processes were identified this survey period.
- Baseline Industrial Hygiene Survey and no changes would be identified during this survey period.
- New or significantly modified work center operations/processes were found and documented during this survey period.
- Work center personnel have the potential to be deployed and have been advised that operations addressed in this report are applicable to garrison/base operations only.
- Work center personnel have the potential to be loaned to other commands and will be governed by the receiving command appropriate survey.

Comments: The following new or significantly modified work center operations/processes were identified this survey period:

The Station Ordnance replaces all battery operated fork lift with diesel powered units. Industrial Hygiene will discontinue ventilation surveys of the battery charging building.

In HAZMIN Center, one worker has elected to use voluntary respirator use of face filtering respirator during puncturing and disposal of aerosol paint cans in an open air work site.

Visiting Aircraft Line discontinued maintaining an eyewash station in the building. Personnel utilize the eyewash stations located in fuel distribution lines and the nearby facilities in Aircraft Rescue and Firefighting. Ensure personnel know the locations of the eye wash and shower stations.

For purposes of this survey, "*significant changes*" are defined as workplace modifications that could require a change in recommended medical surveillance enrollment, personal protective equipment or exposure control measures (ventilation, etc).

SAFETY AND OCCUPATIONAL HEALTH PROGRAM ASSESSMENT
MCAS BEAUFORT SC
JANUARY 2017

Medical Surveillance Program (MSP)

- No MSP enrollment is required for current work center operations.
- MSP has been recommended by IH.
- Occupational medical exams (OME)/ job specialty exams are required by task/trade.
- No MSP enrollment recommendations/changes from the previous IH Survey.

Comments: If applicable, MSP and OME are annotated in the Shop Hazard Assessments and Medical Surveillance Summary enclosed at the back of this report.

Comments: SECNAV 5100/1 (Rev.4/24/14) is to be used as the referral form for exposure based medical surveillance examinations and work qualification certifications annotated in the Medical Surveillance Summary and in Shop Work Place Hazard Assessments on this report. This form must be presented to the medical service provider (Occupational Health) and returned to the supervisor after completion of the exam. The web link for the form and Navy Safety and Supervisor's Guide to Medical Surveillance is at:

<http://www.public.navy.mil/comnavsafecen/Pages/osh/MedSurv.aspx>

Ensure continued participation of personnel in medical surveillance programs listed in the Summary of Medical Surveillance Program Needs. The individual shop training representatives should keep track and disseminate the updates for physical examinations, certification and audiometric testing schedules through Advanced Skills Management (ASM) (Active duty) or Enterprise Safety Management Systems (ESAMS) program (civilian).

Reference(s): OPNAVINST 5100.23(series) Navy Safety and Occupational Health Program Manual; NAVMC 5100.8 Marine Corps Occupational Safety and Health Program Manual (MARCOR OSH Program Manual); NEHC-TM OM 6260 Medical Surveillance Procedures Manual and Medical Matrix (Latest Edition).

SAFETY AND OCCUPATIONAL HEALTH PROGRAM ASSESSMENT
MCAS BEAUFORT SC
JANUARY 2017

Respiratory Protection Program (RPP):

- Y N N/A: Are respirators required/used to control workplace exposures?
 Y N N/A: Are humanitarian use respirators used by work center personnel?
 Y N N/A: Is an up-to-date Respirator SOP available in the workplace?
 Y N N/A: Is the work center/command RPP effective*?

**An RPP is judged by IH to be effective if personnel utilize respirators correctly for operations that require them.*

Comments: If applicable, specific respiratory hazards and the types of respirators used are listed in the Shop Hazard Assessments found in this report. Be advised that if individuals have been designated for enrollment in the RPP Medical Surveillance Program by Industrial Hygiene, employees must receive annual RPP Training, fit testing and medical certification.

Respirator fit testing ensures user's correct use and wear of respirators. Annual respirator training is to reacquaint the respirator qualified personnel on the knowledge of the numerous aspects of the RPP and must be conducted and documented.

Annual review of the program by IH may not be enough to meet the mandated requirement but provide pertinent information for complete program evaluation.

Voluntary use of respirator requires the approval of the RPPM. When using filtering face pieces respirators (N95) for humanitarian reasons a complete program is not required, provided there is no risk anticipated. However, when worker chooses to wear a respirator other than the filtering face pieces even though the job activity warrants no respiratory protection or any OSHA Standards, then the complete administration of the program must be established.

Reference(s): OPNAVINST 5100.23G Chapter 15 Respiratory Protection; NAVMC Directive 5100.8 MARCOR OSH Program Manual Chapter 13 Personal Protective Equipment; 29 CFR 1910.134 Respiratory Protection

Management of Reproductive Hazards:

- Y N N/A: Are reproductive hazards present in command work center(s)?
 Y N N/A: Any changes in reproductive hazards from previous survey?
 Y N N/A: Command properly addresses both male and female reproductive concerns?
 Y N N/A: Noise is a potential reproductive hazard for command personnel.
 Y N N/A: Heat stress is a potential reproductive hazard for command personnel.
 Y N N/A: Chemical/physical stressors are potential reproductive hazards for command.

Comments: Specific reproductive hazards are listed in the individual work center hazard assessments found in the back of this report. It is advisable if possible, to reduce, minimize or eliminate these hazards or exposure to personnel.

Female Reproductive Hazards. Toxicants that target female reproductive systems can cause variety of adverse health effects. Among the manifestations of reproductive toxicity are changes in sexual behavior, cyclicity, fertility, gestation time as well as premature menopause.

Male Reproductive Hazards. Reproductive hazards that affect male reproductive system can affect sperm count, change and alter sexual behavior or increased infertility.

Reference(s): OPNAVINST 6000.1C - Navy Guidelines Concerning Pregnancy and Parenthood; NMCPHC Reproductive Hazards Tech Manual - 2010 NMCPHC-TM-OEM 6260.01C April 2010

SAFETY AND OCCUPATIONAL HEALTH PROGRAM ASSESSMENT
MCAS BEAUFORT SC
JANUARY 2017

Hazardous Material Control and Management (HMC&M) Program:

- Y N N/A: Authorized User's List (AUL) Available?
 Y N N/A: Accurate AUL?
 Y N N/A: Safety Data Sheets (SDS) Files Available?
 Y N N/A: Accurate SDS File?
 Y N N/A: Personnel are aware of HMC&M hazards and use appropriate personal protective equipment?

Comments:

The Hazardous Communication Training in most of the shops is incomplete or partially documented. For Telephone Office, Fall Protection Training is not documented.

Recommendation: Keep the annual Hazardous Awareness training current and documented. Training must be at the core of every good health and safety program. For management to lead by example, designate personnel to assess shop occupational hazards, and hazards to be controlled or abated, everyone involved must be aware and trained.

Reference(s): OPNAVINST 5100.23(series) Navy Safety and Occupational Health Program Manual; 29 CFR 1910.1200 Hazard Communications; Wing Order P4750.4A Ch 1-Standard Operating Procedures (SOP) For Ground Corrosion Prevention and Control

Noise and Hearing Conservation Program (HCP):

- Y N N/A: Noise hazardous operations/equipment identified in this work center?
 Y N N/A: Noise hazardous areas/equipment properly labeled?
 Y N N/A: Are personnel recommended for HCP enrollment?
 Y N N/A: Are personnel receiving annual audiograms/HCP Training?
 Y N N/A: Are hearing protective devices (HPD) readily available for worker use?
 Y N N/A: Is the correct type/level of HPD available and being used?
 Y N N/A: Personnel perform weapons firing and have been advised to use CAEPs?
 Y N N/A: Is HPD used in noise hazardous areas or when working with noise hazardous equipment?

Comments:

As per MARADMIN 010/12 all active duty Marines must be included in the HCP. Justifications for including all active duty personnel in the HCP is due to undetermined accurate continuous and impulse/impact noise assessment during field training, weapons marksmanship training, and in particular, operational deployments. Civilian personnel in the HCP remained to be exposure based vice administrative policy mandate.

Emphasis is that the leadership takes initiative to lead by example for compliance to the preservation mandate which consist of annual audiometric monitoring, hearing conservation education and proper use of hearing protection devices when anticipating exposure to hazardous noise.

Reference(s): MARADMIN 010/12 dtd 06 Jan 12 Hearing Conservation Readiness; MCO 6260.1E Marine Corps Hearing Conservation Program; OPNAVINST 5100.23G Chapter 18, Navy Safety & Occupational Health (SOH) Program Manual.

SAFETY AND OCCUPATIONAL HEALTH PROGRAM ASSESSMENT
MCAS BEAUFORT SC
JANUARY 2017

Ventilation:

- Y N N/A: Are ventilation systems used to control workplace exposures?
 Y N N/A: Are the systems effective and operating properly?

Comments:

The PMO Detention Cells meet the habitability requirement (ventilation) of MCO 1630.3D. In PMO Rifle Issue Room, the nuisance fumes from Clean, Lubrication and Preservation (CLP) solvent can be diminish by using a portable charcoal filtered air circulation device. The room does not have an exhaust ventilation system.

Reference(s): MCO 1630.3D Operation and Administration of Holding Cells and Detention Spaces

SAFETY AND OCCUPATIONAL HEALTH PROGRAM ASSESSMENT
MCAS BEAUFORT SC
JANUARY 2017

Ergonomics:

- Y N N/A: Potential for ergonomic injuries for office/ administrative tasks?
- Y N N/A: Potential for ergonomic injuries for shop tasks?
- Y N N/A: Office equipment/furniture incorporates good ergonomic design?
- Y N N/A: Shop equipment/work center incorporates good ergonomic design?
- Y N N/A: Command has a formal Ergonomics Program which annually reviews ergo-related injuries and seeks to eliminate the potential for ergonomically-related discomfort/strain or injury?

Comments:

Keyboarding and visual focus on VDT is the predominant task performed by employees. During this work routine, fingers, palms wrist and forearms may be pressed on hard or sharp surfaces or strained due to awkward positions and repetitive motions. Under this condition, muscles, tendons, ligaments, nerves and blood vessels can be damaged. Contact stress may affect the nerves and blood vessels because these tissues are close to the skin and underlying bones which restricts the flow of blood when under pressure. With awkward position, muscle groups are fatigued due to exertion in smaller, weaker muscles or preventing large muscle groups to work efficiently during physical activity.

Visual strain can become a problem during prolonged eye contact on the video display terminals (VDT) especially if the monitor is not adjusted to the eye level which may also create neck muscle stress.

A potential exists for back problems for people who spend majority of workday in office chairs. Improper alignment of the spine and appendages can be risk factor for back strain or injury. Supervisors should allow breaks to avoid static posture so that workers can stretch and move freely for few moments. Proper office ergonomic equipment and posture includes correct chair height adjustments, work station and monitor adjustments that assist the employee to obtain neutral posture when performing keyboarding and other administrative work.

Enterprise Safety Application Management System (ESAMS) is an interactive program to enable personnel to direct occupational health and safety concerns. The Base Safety Manager and supervisors have a direct access to these reports, comments and recommendations. With this information and gained knowledge, issues will be promptly addressed and remedial measures expediently implemented.

Naval Facilities Engineering Command provides on-site ergonomic assessments of processes and tasks to assist the command with evaluating hazards and finding cost concession solutions that not only reduce the risk of injury but increase performance by removing the 'waste' from a system. You can request a site visit by completing the Ergonomic Site Visit Request Form found at www.navfac.navy.mil/safety ~ select Hazard Abatement.

NAVFAC can also assist the command by providing you with occupational safety and health survey forms called the Job Requirements and Physical Demands Survey. The JRPD can be distributed to shops or activities in your command for anonymous reporting from the workers as to their degree of exposure to ergonomic risk factor and their frequency and severity of discomfort. The JRPD ranks the shop or process on a scale of one to 9 to evaluate whether or not the shop would benefit from an ergonomic intervention.

Reference(s): OPNAVINST 5100.23G Chapter 23, Navy Safety & Occupational Health (SOH) Program Manual; NAVMC Directive 5100.8 MARCOR OSH Program Manual Chapter 19 Ergonomics Program.

SAFETY AND OCCUPATIONAL HEALTH PROGRAM ASSESSMENT
MCAS BEAUFORT SC
JANUARY 2017

Other Applicable Programs:

- Y N N/A: Lead Control
 Y N N/A: Asbestos Control
 Y N N/A: Carcinogens
 Y N N/A: Heat Stress

Comments:

LEAD: Soldering is seldom performed and short duration (less than five minutes per session). Potential exposure routes from lead soldering can include ingestion of lead due to surface contamination and by failing to wash hands prior to eating or drinking. Soldering may require the use of mixed metal alloys and fluxes. Carefully review the SDS for these materials in order to identify potential health and safety hazards. With the frequency, duration and amount of lead soldering performed; worker enrollment in the Lead Medical Surveillance Program is not required.

CARCINOGEN: Carcinogens are identified in the IH survey. See Individual Hazard Assessment. Appropriate medical surveillance, engineering controls and PPE are in place for worker protection. See Summary of Identified Carcinogens in the Shops.

HEAT STRESS: Personnel can be exposed temperatures outdoors during extreme weather conditions however; workers are able to take breaks as needed in shaded and well ventilated spaces. Hot/Cold weather condition is announced to all hands in Operational Readiness Management (ORM) situational report and heat stress index colored flags are conspicuously displayed base wide. Heat related injury prevention training is conducted annually. The training is provided by the assigned medical personnel to the command which curriculum includes distress recognition, type, immediate care appropriate and prevention of heat stress.

Reference (s): NAVMC Directive 5100.8 MARCOR OSH Program Manual Chapter 16 Lead Safety Program; MCO 6200.1E Marine Corps Heat Injury Prevention Program.

| WORKPLACE HAZARD ASSESSMENT | | DATE: 11 JAN 2017 | | |
|--|--|-------------------------------|---|---|
| RECORDED BY: E. L. RANCHES | INSTALLATION: MARINE CORPS AIR STATION | SUPERVISOR: CW03 JAMISON | PHONE: 228-7338 | TOTAL PERSONNEL: 36 GS: 0 CONIR: 0 |
| BUILDING NUMBER: 74 | SHOP NAME: MCAS AIRCRAFT RECOVERY | MALE: MIL: 34 GS: 0 CONIR: 01 | FEMALE:MIL: 01 GS 0 CONIR: 0 | |
| IH TYPE/DATE: 2 YEAR DOEHS CATEGORY 2 | SHOP OPERATIONS: Responsible for the maintenance and repair of modular arresting gear (E28) including the installation of portable landing strips for expeditionary airfield facilities (EAF). MWSS 273 personnel augment the workforce in this shop. Maintain the mobile van and modular containers of the arresting gears and components of the EAF by conducting routine corrosion control and surface preservation. Minor surface preservation using spray enamel paint is conducted on the EAF equipment and arresting gears. Extensive surface preparation and painting is assigned to NAF Lakehurst, New Jersey. No change in operation. | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
| <p>Weapons Qualification Operations: All Marine AD personnel are required to perform weapons qualifications annually. "The U.S. Army reports M-4 Carbine (5.56 mm) produced peak sound pressure levels (SPLs) as high as 165. Peak noise levels of 160 dB and above are known to cause immediate physical trauma.</p> <p>Workers should be trained to recognize noise sources within the command and to wear appropriate level of Hearing Protective Devices (HPD) in noise hazardous areas.</p> <p>(1) Noise (2) Lead</p> <p>Per Marine Corps Order 6260.3A Marine Corps Hearing Conservation Program 26 Sep 2016, all active duty personnel shall be enrolled in the HCP.</p> | <p>2-4 hrs./day, 1x/ year for rifle qualification for military personnel.</p> <p>1-2 hrs./day, 1x/ year for pistol qualification for military personnel.</p> | 36 | <p>USED/REQUIRED:</p> <p>PPE: Naval Hospital Beaufort Audiologist has recommended that <u>the double-sided combat arms ear plugs (CAEP)</u> are used by range personnel when working inside a 75 ft. radius of the active firing range.</p> <p>ADM: HCP Training; Personal Hygiene (handwashing), Lead Safety Training, HAZCOM Training.</p> | <p>Unacceptable for noise. Based on statistical evaluation of measured noise dosimetry and impulse noise above 140 dB(P) .</p> <p>Acceptable for lead. Based on limited frequency and duration of exposure.</p> <p>Ensure that workers fully participate in the HCP which includes annual HCP training; annual audiograms; labeling of noise hazardous equipment and areas; and the use of appropriate hearing protective devices.</p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Lead is a potential ototoxic which can increase the risk of hearing loss.</u></p> |
| <p>Aircraft/Flightline Operations.</p> <p>Maintenance of expeditionary airfield equipment and modular arresting gears in an active airfield. Replenishing coolant for E28 arresting gear using coolant containing ethylene glycol. Coolant is in a single service pour type container. Uses 2 quarts a week.</p> <p>Representative Noise Dosimetry Results from launch & recovery/aircraft maintenance activities, for VMFA-533, 19 Aug 15; and VMFA-224 16 Jun 15 (Marine Corps Occupational Exposure Level (MCOEL) = 85 dB(A) Time Weighted Average (TWA). SEG -Launch and Recovery Operations: VMFA-533 IH15-0587=89.9 dB(A) VMFA-533 IH15-0588=80.8 dB(A) VMFA-533 IH15-0589=90.5 dB(A) VMFA-533 IH15-0590=92.4 dB(A)</p> <p>(1) Noise (2) Incidental chemical splash</p> | 2-4 hours/day. | 35 | <p>USED/REQUIRED:</p> <p>PPE: Single Hearing Protection (Plugs or Muffs) is required when noise levels are 85-103 dB(A); on flight line during flight operations, Double Hearing Protection (Plugs and Muffs or cranials and plugs) are required when noise levels are at or above 104 dB(A); Nitrile Gloves.</p> <p>DV: Outdoors.</p> <p>ADM: HCP Training; HAZCOM Training.</p> | <p>Unacceptable for noise. SEG Noise dosimetry sampling was above the occupational exposure limit.</p> <p>Acceptable. Limited quantity and duration of use minimize the potential for exposure</p> <p><u>Noise is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Ethylene Glycol is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> |

| | | | | |
|---|-------------------------------------|-----------|--|--|
| <p>Coating /Painting Operations. Cleaning surfaces of arresting gear where corrosion products were removed. With isopropyl alcohol is impregnated in a cleaning cloth.</p> <p>Maintenance of tape for the arresting gear to prevent from further fraying.</p> <p>Maintenance of Fresnel Lens Optical Landing System (FLOS) is touch up painting for corrosion control. Water and soap are used in cleaning the lens covers of the FLOS. Chemical: Toluene, Xylene, Carbon Black, Ethyl Benzene. The material is applied by roller or paint brush.</p> <p>Component of GACO Coating Black (8030-00-182-6460) and Polyurethane thinner. Toluene and Xylene are organic solvents in enamel spray paint for corrosion control.</p> <p>(1) Incidental chemical splash</p> | <p>10 40 minutes/day as needed.</p> | <p>35</p> | <p>USED/REQUIRED:</p> <p><u>DV</u>: Large open areas</p> <p>PPE: Cranials with flight line goggles, Nitrile Gloves.</p> <p>ADM: HCP Training; HAZCOM Training.</p> | <p>Acceptable. Limited quantity, tasks duration minimize the exposure potential.</p> <p><u>Toluene and Xylene are listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Carbon Black is IARC recognized carcinogen.</u></p> |
|---|-------------------------------------|-----------|--|--|

1. USE THE FOLLOWING CONTROL CODES:
 ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION
 DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION
 HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM

2. USE THE FOLLOWING EXPOSURE CODES:
 ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
 UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT.
 UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
 SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD.
 REPRO HAZARD-THE MATERIAL IS A NAVY RECOGNIZED REPRODUCTIVE HAZARD.
 CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.

| WORK SHOP MEDICAL SURVEILLANCE SUMMARY | | | |
|---|------------------------------|------------------------|-----------------------------|
| WORK OPERATION/TASK | RECOMMENDED MEDICAL PROGRAM | MEDICAL PROGRAM NUMBER | ESTIMATED NUMBER OF WORKERS |
| Weapons qualification/Flightline operations | Hearing Conservation Program | 503 | 35 |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 9 JAN 2017 | | |
|---|---|---|---|--|
| RECORDED BY: E. L. RANCHES INSTALLATION: MARINE CORPS AIR STATION BUILDING NUMBER: 1166 SHOP NAME: MCAS AIR TRAFFIC CONTROL (ATC) MAINTIENANCE IH TYPE/DATE 2 YEAR DOEHS CATEGORY 2 | | SUPERVISOR: GYSGT CHASE PHONE: 228-7934 TOTAL PERSONNEL: 21 GS: 6 CONTR: 0 MALE: MIL: 14 GS: 6 CONTR: 0 FEMALE:MIL 01 GS 0 CONTR: 0 | | |
| SHOP OPERATIONS: The work center is responsible for the maintenance and repair of Base Operation's communications, navigational aids, radars, and airfield lights. There are no changes in the shop maintenance procedures. No major changes in shop operation that may affect worker occupational exposures. No significant change in operation from previous survey. | | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
| <p>Weapons Qualification Operations: All Marine AD personnel are required to perform weapons qualifications annually. "The U.S. Army reports M-4 Carbine (5.56 mm) produced peak sound pressure levels (SPLs) as high as 165. Peak noise levels of 160 dBP and above are known to cause immediate physical trauma.</p> <p>Workers should be trained to recognize noise sources within the command and to wear appropriate level of Hearing Protective Devices (HPD) in noise hazardous areas.</p> <p>(1) Noise (2) Lead</p> <p>Per Marine Corps Order 6260.3A Marine Corps Hearing Conservation Program 26 Sep 2016, all active duty personnel shall be enrolled in the HCP.</p> | 2-4 hrs./day, 1x/ year for rifle qualification for military personnel. 1-2 hrs./day, 1x/ year for pistol qualification for military personnel. | 21 | USED/REQUIRED: PPE: Naval Hospital Beaufort Audiologist has recommended that the <u>double-sided combat arms ear plugs (CAEP)</u> are used by range personnel when working inside a 75 ft. radius of the active firing range. ADM: HCP Training; Personal Hygiene (handwashing), Lead Safety Training, HAZCOM Training. | Unacceptable for noise. Based on statistical evaluation of measured noise dosimetry and impulse noise above 140 dB(P) . Acceptable for lead. Based on limited frequency and duration of exposure. Ensure that workers fully participate in the HCP which includes annual HCP training; annual audiograms; labeling of noise hazardous equipment and areas; and the use of appropriate hearing protective devices. <u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u> <u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u> <u>Lead is a potential ototoxic which can increase the risk of hearing loss.</u> |
| <p>Coating/Painting Operations Spray painting for corrosion control of navigational aids, antennas and radar support equipment located in mid airfield. Can contain: Chemical: Toluene, Xylene, Methyl Ethyl Ketone. Organic solvents in enamel paint.</p> <p>Use Isopropyl Alcohol is impregnated in cleaning cloth or Q tips.</p> <p>Use Corrosion control on air traffic control equipment (Radars and NAVAIDS) and support equipment which can contain petroleum distillates. A 16 oz. aerosol can last for 3 weeks. Equipment is inspected every six months for signs of corrosion.</p> <p>(1) Incidental chemical splash</p> | 30 minutes/day. As needed. | 21 | USED/REQUIRED: DV: Outdoors. PPE: Nitrile gloves, Safety glasses. cranials. ADM: HAZMAT Training. | Acceptable. Duration of task and amount of product used. <u>Toluene and Xylene are listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u> |

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| <p><u>Aircraft/Flightline Operations.</u> Maintenance of air traffic control (ATC) radars, navigational aids, communication equipment in flightline midfield and airfield lights. Routine preventive maintenance of radar equipment, cable ring and radar couplers. Using various oils and greases that contain petroleum.</p> <p>Personnel may be exposed to heat or cold stress during peak weather conditions when working outdoors; Heat Injury prevention training is conducted annually by assigned medical personnel. Document all training in ESAMS. Application and Management Systems (ESAMS) is a base wide media resource to inform management of any incident/complaint of potential or case of occupational injury. All MCAS personnel possess an account for this system.</p> <p>Representative Noise Dosimetry Results from launch & recovery/aircraft maintenance activities, for VMFA-533, 19 Aug 15; and VMFA-224 16 Jun 15 (Marine Corps Occupational Exposure Level (MCOEL) = 85 dB(A) Time Weighted Average (TWA) and calculated SEG exposure is 94.5 dB(A).</p> <p>Bending, stooping, crouching, climbing, bending, reaching and lifting. Lifting toolboxes, gear and line equipment.</p> <p>(1)Noise (2)Incidental chemical splash (3)Dynamic Postures (4)Heat Stress (5)Cold Stress</p> | <p>2-4 hours/day. As needed.</p> | <p>21</p> | <p>USED/REQUIRED:</p> <p>ADM: Hearing Conservation Program training; Supervisor enforcement of use of hearing protection; Annual ergonomics training, team lifting for > 80 lbs., task variety, rest breaks, HAZMAT Training, Heat/Cold Stress Training, Flag System, Hydration, Work Rest Cycles.</p> <p>PPE: BUMEDNOTE 6260 requires the use of double hearing protection (earplugs AND muffs) when sound levels exceed 96 dB(A).</p> <p>ENG: Carts, lift assist devices.</p> | <p>Unacceptable for noise. Based on noise survey results exceeding the Marine Corps Occupational Exposure Limit (MCOEL) of 85 dBA, 8-hour time-weighted average.</p> <p>Acceptable all others. Based on limited duration and quantity of exposure.</p> <p><u>Noise is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Heavy lifting is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a reproductive and/or developmental hazard.</u></p> <p><u>Heat Stress is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a reproductive and/or developmental hazard.</u></p> |
| <p><u>Soldering: Personnel perform lead tin soldering, bonding</u> mother board and cards electrical terminals for ATC equipment.</p> <p>1. Lead 2. Static Posture</p> | <p>5-30 minutes/day, 2/3 times/month.</p> | <p>10</p> | <p>USED/REQUIRED:</p> <p>ENG: local fume extractor hood.</p> <p>ADM: Hand washing, Good Housekeeping, Lead awareness training, HAZMAT Training.</p> | <p>Acceptable. Amount of solder used and limited duration minimize the potential exposure. Soldering is very seldom even during routine maintenance of equipment.</p> <p>Exposure to lead is through hand to mouth ingestion when hands are not washed before eating and drinking.</p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> |
| <p>1. USE THE FOLLOWING CONTROL CODES: ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM</p> <p>2. USE THE FOLLOWING EXPOSURE CODES: ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL. UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT. UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL. SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD. REPRO HAZARD-THE MATERIAL IS A NAVY RECOGNIZED REPRODUCTIVE HAZARD. CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.</p> | | | | |
| <p>WORK SHOP MEDICAL SURVEILLANCE SUMMARY</p> | | | | |
| <p>WORK OPERATION/TASK</p> | <p>RECOMMENDED MEDICAL PROGRAM</p> | <p>MEDICAL PROGRAM NUMBER</p> | <p>ESTIMATED NUMBER OF WORKERS</p> | |
| <p>Small arms firing-outdoors/Flight operations</p> | <p>Hearing Conservation Program</p> | <p>503</p> | <p>21</p> | |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 9 JAN 2017 | | |
|---|---|-----------------------------|--|--|
| RECORDED BY: E. L. RANCHES | SUPERVISOR: DAN DUFFY | PHONE: 228-7287 | | |
| INSTALLATION: MARINE CORPS AIR STATION | TOTAL PERSONNEL: 12 GS: 8 CONTR: 0 | MALE: MIL: 4 GS: 7 CONTR: 0 | | |
| BUILDING NUMBER: BLDG 1075 | FEMALE: MIL 0 GS 1 CONTR: 0 | | | |
| SHOP NAME: MCAS DISTRIBUTION MANAGEMENT OFFICE (BAY 13) | | | | |
| IH TYPE/DATE 2 YEAR DOEHS CATEGORY 2 | | | | |
| SHOP OPERATIONS: Personnel are responsible for construction of shipping crates, pack equipment and band the containers for shipping using woodworking power tools that are capable of generating noise within and above 85 dB(A). Containers are painted with enamel spray paint. Delivers HAZMAT from warehouse to distribution point. Operates 3 diesel-fueled forklift in moving crates and containers in the warehouse. Occasionally uses treated woods in manufacturing shipping crates. | | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
| <p>Weapons Qualification Operations: All Marine AD personnel are required to perform weapons qualifications annually. "The U.S. Army reports M-4 Carbine (5.56 mm) produced peak sound pressure levels (SPLs) as high as 165. Peak noise levels of 160 dBp and above are known to cause immediate physical trauma.</p> <p>Workers should be trained to recognize noise sources within the command and to wear appropriate level of Hearing Protective Devices (HPD) in noise hazardous areas.</p> <p>(1) Noise (2) Lead</p> <p>Per Marine Corps Order 6260.3A Marine Corps Hearing Conservation Program 26 Sep 2016, all active duty personnel shall be enrolled in the HCP.</p> | <p>2-4 hrs/day, 1x/ year for rifle qualification for military personnel.</p> <p>1-2 hrs./day, 1x/ year for pistol qualification for military personnel.</p> | 4 | <p>USED/REQUIRED:</p> <p>PPE: Naval Hospital Beaufort Audiologist has recommended that <u>the double-sided combat arms ear plugs (CAEP)</u> are used by range personnel when working inside a 75 ft. radius of the active firing range.</p> <p>ADM: HCP Training; Personal Hygiene (handwashing), Lead Safety Training, HAZCOM Training.</p> | <p>Unacceptable for noise. Based on statistical evaluation of measured noise dosimetry and impulse noise above 140 dB(P).</p> <p>Acceptable for lead. Based on limited frequency and duration of exposure.</p> <p>Ensure that workers fully participate in the HCP which includes annual HCP training; annual audiograms; labeling of noise hazardous equipment and areas; and the use of appropriate hearing protective devices.</p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C</u> Reproductive And Developmental Hazards.</p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Lead is a potential ototoxic which can increase the risk of hearing loss.</u></p> |
| <p>Supplies/Material Handling: Operation of diesel powered forklifts in the warehouse. Minor potential for Diesel Fumes and Carbon Monoxide as Several floor fans allow the circulation and evacuation of contaminated air in the warehouse. The door gates on both ends of the warehouse are kept open allowing air for cross sectional ventilation.</p> <p>Manual handling of some supplies. Enterprise Safety Application and Management Systems (ESAMS) is a base wide media resource to inform management of any incident/complaint of potential or case of occupational injury. All MCAS personnel possess an account for this system.</p> <p>(1) Noise (2) Forceful Exertion (3) Work/Rate Repetition (4) Particulates (Diesel) (5) Carbon Monoxide</p> | 2-4 hrs/day. | 12 | <p>PPE: Single hearing protection for 85 dBA or greater.</p> <p>ENG: Forklifts, pallet jacks, carts.</p> <p>DV: Floor fans are used to circulate the air in the warehouse.</p> <p>ADM: Forklift Operator Certification, HAZCOM Training, Work/rest cycle and Ergonomics, General Training.</p> | <p>Acceptable. Duration of tasks and regularity of exposure minimize the potential for exposure.</p> <p><u>Heavy (lifting over 25 pounds) and prolonged standing are listed in NMCPHC-TM-OEM 6260.01C April 2010 as developmental Reproductive Hazards.</u></p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C</u> Reproductive And Developmental Hazards.</p> <p><u>Carbon Monoxide is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Carbon monoxide is a potential ototoxic which can increase the risk of hearing loss.</u></p> |
| <p>Coating/Paint Operations: Spray painting labels/markings on shipping crates. This is very seldom conducted anymore but shop maintains adequate painting supplies for as needed use. Product may contain Toluene, Xylene. Painting is conducted in a well ventilated area.</p> <p>(1) Toluene (2) Xylene</p> | 15-30 minutes/day. As needed. | 8 | <p>USED/REQUIRED:</p> <p>ADM: HAZCOM Training</p> <p>DV: Open bays or outdoors</p> <p>PPE: Goggles, Chemical Splash, Nitrile Gloves.</p> | <p>Acceptable. Regularity, amount of material and duration of use minimize the potential for exposure.</p> <p><u>Toluene and Xylene are listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> |

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| <p>Administrative Operations: Office environment (computers and keyboarding) comprise the majority of work evolutions. Personnel have task variety (keyboarding, filing, phone, oversight activities, etc.) No worker performs dedicated data entry operations. The only heavy lifting operations performed are rare supply operations with the heaviest item moved a box of copy paper (~40 lbs.) When new computer equipment is installed or delivered, workers utilize carts to transport such equipment.</p> <p>(1) Static Posture (2) Work/Rate Repetition</p> | <p>1-4 hrs/day keyboarding.</p> | <p>3</p> | <p>USED/REQUIRED:</p> <p><u>ADM:</u> Ergo Training, Task Variety, Breaks.</p> <p><u>ENG:</u> Carts, Hand trucks, Ergo Chairs, Workstations.</p> | <p>Acceptable. No reports of discomfort have been reported for these tasks.</p> <p><u>Heavy (lifting over 25 pounds) and prolonged standing are listed in NIOSH-CDC 6260.01C April 2010 as developmental Reproductive Hazards.</u></p> |
|--|---------------------------------|----------|---|--|

1. USE THE FOLLOWING CONTROL CODES:
ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION
DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION
HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM

2. USE THE FOLLOWING EXPOSURE CODES:
ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT.
UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD.
REPRO HAZARD-THE MATERIAL IS A RECOGNIZED REPRODUCTIVE HAZARD.
CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.

| WORK SHOP MEDICAL SURVEILLANCE SUMMARY | | | |
|--|------------------------------|------------------------|-----------------------------|
| WORK OPERATION/TASK | RECOMMENDED MEDICAL PROGRAM | MEDICAL PROGRAM NUMBER | ESTIMATED NUMBER OF WORKERS |
| Forklift Operations | Forklift Operator | 710 | 8 |
| Woodworking / Weapons and Ordnance | Hearing Conservation Program | 503 | 8 |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 10 JAN 2017 | | | |
|--|--|----------------------------|--|---|--|
| RECORDED BY: E. L. RANCHES | INSTALLATION: MARINE CORPS AIR STATION | BUILDING NUMBER: BLDG 2091 | SHOP NAME: MCAS EXPLOSIVE ORDNANCE DISPOSAL | IH TYPE/DATE: 2 YEAR DOEHS CATEGORY 2 | SUPERVISOR: MSGT DIAZ PHONE: 228-9041 TOTAL PERSONNEL: 8 GS: 0 CONTR: 0 MALE: MIL: 8 GS: 0 CONTR: 0 FEMALE:MIL 0 GS 0 CONTR: 0 |
| <p>SHOP OPERATIONS: No changes from previous survey. The shop is responsible for disposal of ordnance including small arms ammunition, incendiary devices and bombs. Personnel are also first responders to assist the Crash, Fire, and Rescue on any distress call from operating aircraft laden with ordnance. EOD also responds for bomb threats or any emergency on explosion related incident within the surrounding counties and airports. Every 2 months personnel conducts bomb disposal sweep in a bombing range where they retrieve practice bombs and dispose of any unexploded ordnance in a remote bombing range. EOD personnel use radiology in examining bombs and other explosives. There are 3 MWSO 31 personnel attached to MCAS. No changes in operation.</p> | | | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) | |
| <p>Weapons Qualification Operations: All Marine AD personnel are required to perform weapons qualifications annually. "The U.S. Army reports M-4 Carbine (5.56 mm) produced peak sound pressure levels (SPLs) as high as 165. Peak noise levels of 160 dBP and above are known to cause immediate physical trauma.</p> <p>Workers should be trained to recognize noise sources within the command and to wear appropriate level of Hearing Protective Devices (HPD) in noise hazardous areas.</p> <p>(1) Noise (2) Lead</p> <p>Per Marine Corps Order 6260.3A Marine Corps Hearing Conservation Program 26 Sep 2016, all active duty personnel shall be enrolled in the HCP.</p> | <p>2-4 hrs./day, 1x/ year for rifle qualification for military personnel</p> <p>1-2 hrs./day, 1x/ year for pistol qualification for military personnel</p> | 8 | <p>USED/REQUIRED:</p> <p><u>PPE:</u> Naval Hospital Beaufort Audiologist has recommended that the <u>double-sided combat arms ear plugs (CAEP)</u> are used by range personnel when working inside a 75 ft. radius of the active firing range.</p> <p><u>ADM:</u> HCP Training; Personal Hygiene (handwashing), Lead Toxic Hazardous Training, HAZCOM.</p> | <p>Unacceptable for noise. Based on statistical evaluation of measured noise dosimetry and impulse noise above 140 dB (P).</p> <p>Acceptable for lead. Based on limited frequency and duration of exposure.</p> <p>Ensure that workers fully participate in the HCP which includes annual HCP training; annual audiograms; labeling of noise hazardous equipment and areas; and the use of appropriate hearing protective devices.</p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Lead is a potential ototoxic which can increase the risk of hearing loss.</u></p> | |
| <p>Explosive Ordnance Operations: Explosive device detonation to dispose unexploded or aged ordnance usually in a remote area of the bomb range.</p> <p>Operating the burn out barrel for small arms ammunition or conduct soldering for small equipment and electrical circuits for EOD devices/equipment which can contain lead.</p> <p>Radiographic examination of packages with suspected explosive device. Most of radiation exposure is during training. The radiation source for the X-ray unit is mounted in a robotics remotely operated from a secure distance during bomb detection and disposal.</p> <p>Hazardous material (explosive) responder. Wearing the CEOD 9 Bomb Suit and working in an extreme environment Suit is equipped with built in cooling system.</p> <p>Representative Noise Dosimetry Results from launch & recovery/aircraft maintenance activities, for VMFA-533, 19 Aug 15; and VMFA-224 16 Jun 15 (<i>Marine Corps Occupational Exposure Level (MCOEL) = 85 dB(A) Time Weighted Average (TWA) and calculated SEG exposure is 94.5 dB(A).</i></p> <p>(1) Noise (2) Explosive Detonation (3) Lead (4) Heat Stress</p> | <p>2-4 hours/day, 1X/month</p> | 8 | <p>USED/REQUIRED:</p> <p><u>PPE:</u> Single Hearing Protection (Plugs OR Muffs) is required when noise levels are 85-103 dB(A); Full face respirator with organic vapor cartridges and HEPA filter; CEOD 9 Bomb Suit, Ballistic face shield and Kevlar gloves.</p> <p><u>ADM:</u> Explosive Handler's Physical/Motor Vehicle operator, Safety procedures, HAZCOM Training, Work Practices; Procedural, HAZWOPER Certification; Heat Stress Training, Flag System, Hydration, Work Rest Cycles.</p> <p><u>PPE:</u> CEOD 9 Bomb Suit, Ballistic face shield and Kevlar gloves.</p> | <p>Acceptable. Personnel controlling the detonation are at a safe distance from the disposal site.</p> <p>Historical sampling indicates exposures below the occupational exposure limit.</p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Ionizing radiation is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Ionizing radiation is listed in IARC as a group 1 human carcinogen.</u></p> <p><u>Heat Stress is listed in NMCPHC-TM-OEM 6260.01C as a Reproductive Hazard.</u></p> | |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 10 JAN 2017 |
|--|---|-------------------|
| RECORDED BY: E. L. RANCHES INSTALLATION: MARINE CORPS AIR STATION BUILDING NUMBER: BLDG 2091 SHOP NAME: MCAS EXPLOSIVE ORDNANCE DISPOSAL IH TYPE/DATE: 2 YEAR DOEHS CATEGORY 2 | SUPERVISOR: MSGT DIAZ PHONE: 228-9041 TOTAL PERSONNEL: 8 GS: 0 CONTR: 0 MALE: MIL: 8 GS: 0 CONTR: 0 FEMALE: MIL: 0 GS: 0 CONTR: 0 | |

SHOP OPERATIONS: No changes from previous survey. The shop is responsible for disposal of ordnance including small arms ammunition, incendiary devices and bombs. Personnel are also first responders to assist the Crash, Fire, and Rescue on any distress call from operating aircraft laden with ordnance. EOD also responds for bomb threats or any emergency on explosion related incident within the surrounding counties and airports. Every 2 months personnel conducts bomb disposal sweep in a bombing range where they retrieve practice bombs and dispose of any unexploded ordnance in a remote bombing range. EOD personnel use radiology in examining bombs and other explosives. There are 3 MWSO 31 personnel attached to MCAS. No changes in operation.

| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
|--|-----------------------------|-------------------|--|--|
| <p>Administrative Operations: Office environment (computers and keyboarding) comprise the majority of work evolutions. Personnel have task variety (keyboarding, filing, phone, oversight activities, etc.) No worker performs dedicated data entry operations. The only heavy lifting operations performed are rare supply operations with the heaviest item moved a box of copy paper (~40 lbs.) When new computer equipment is installed or delivered, workers utilize carts to transport such equipment.</p> <p>1. Static Posture 2. Work/Rate Repetition</p> | 1-4 hrs./day keyboarding | 8 | <p>USED/REQUIRED:</p> <p>ADM: Ergonomics, General Awareness, Work/Rest Cycle.</p> <p>ENG: Carts, Hand trucks, Ergo Chairs, Workstations.</p> | <p>Acceptable. No reports of discomfort have been reported for these tasks.</p> <p><u>Heavy (lifting over 25 pounds) and prolonged standing are listed in NMCPHC-IM-OEM 6260.01C April 2010 as developmental Reproductive Hazards.</u></p> |

1. USE THE FOLLOWING CONTROL CODES:
ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION
DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION
HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM

2. USE THE FOLLOWING EXPOSURE CODES:
ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT.
UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD.
REPRO HAZARD-THE MATERIAL IS A RECOGNIZED REPRODUCTIVE HAZARD.
CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.

WORK SHOP MEDICAL SURVEILLANCE SUMMARY

| WORK OPERATION/TASK | RECOMMENDED MEDICAL PROGRAM | MEDICAL PROGRAM NUMBER | ESTIMATED NUMBER OF WORKERS |
|--|------------------------------------|------------------------|-----------------------------|
| Explosives | Explosive Handler | 721 | 8 |
| Explosives transport | Explosive Vehicle Operator | 720 | 8 |
| CBRNE | Respirator User Certification Exam | 716 | 8 |
| Hazardous material (explosive) responder | Hazardous Waste Workers | 711 | 8 |
| Weapons qualification/Flight operations | Hearing Conservation Program | 503 | 8 |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 3 JAN 2017 | | |
|---|--|-------------------|--|--|
| RECORDED BY: E. L. RANCHES INSTALLATION: MARINE CORPS AIR STATION BUILDING NUMBER: BLDG 429/BLDG 1270 SHOP NAME: MCAS HAZARD MINIMIZATION CENTER IH TYPE/DATE: 2 YEAR DOEHR5 CATEGORY 3 | SUPERVISOR: WALTER MCCALL PHONE: 228-6008/7347 TOTAL PERSONNEL: 6 GS: 4 CONTR: 0 MALE: MIL: 2 GS: 3 CONTR: 0 FEMALE: MIL: 0 GS: 1 CONTR: 0 | | | |
| SHOP OPERATIONS: Personnel are responsible for requisition, receipt, storage and minimization of hazmat at MCAS. Receive empty containers and partially used spray paint for final disposal. Review and manages authorization of command Authorized Users List. There is no change in operations during this survey. | | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
| <p>Weapons Qualification Operations: All Marine AD personnel are required to perform weapons qualifications annually. "The U.S. Army reports M-4 Carbine (5.56 mm) produced peak sound pressure levels (SPLs) as high as 165. Peak noise levels of 160 dBp and above are known to cause immediate physical trauma.</p> <p>Workers should be trained to recognize noise sources within the command and to wear appropriate level of Hearing Protective Devices (HPD) in noise hazardous areas.</p> <p>(1) Noise (2) Lead</p> <p>Per Marine Corps Order 6260.3A Marine Corps Hearing Conservation Program 26 Sep 2016, all active duty personnel shall be enrolled in the HCP.</p> | <p>2-4 hrs./day, 1x/ year for rifle qualification for military personnel.</p> <p>1-2 hrs./day, 1x/ year for pistol qualification for military personnel.</p> | 6 | <p>USED/REQUIRED:</p> <p>PPE: Naval Hospital Beaufort Audiologist has recommended that the <u>double-sided combat arms ear plugs (CAEP)</u> are used by range personnel when working inside a 75 ft. radius of the active firing range.</p> <p>ADM: HCP Training; Personal Hygiene (handwashing), Lead Safety Training, HAZCOM Training.</p> | <p>Unacceptable for noise. Based on statistical evaluation of measured noise dosimetry and impulse noise above 140 dB(P).</p> <p>Acceptable for lead. Based on limited frequency and duration of exposure.</p> <p>Ensure that workers fully participate in the HCP which includes annual HCP training; annual audiograms; labeling of noise hazardous equipment and areas; and the use of appropriate hearing protective devices.</p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Lead is a potential ototoxic which can increase the risk of hearing loss.</u></p> |
| <p>Supplies/Material Handling: Operation of diesel powered forklifts in the warehouse. Minor potential for Diesel Fumes and Carbon Monoxide as Several floor fans allow the circulation and evacuation of contaminated air in the warehouse. The door gates on both ends of the warehouse are kept open allowing air for cross sectional ventilation.</p> <p>Manual handling of some supplies. Enterprise Safety Application and Management Systems (ESAMS) is a base wide media resource to inform management of any incident/complaint of potential or case of occupational injury. All MCAS personnel possess an account for this system.</p> <ol style="list-style-type: none"> Noise Forceful Exertion Work/Rate Repetition Diesel Fumes Carbon Monoxide | 2-4 hours a day. | 6 | <p>PPE: Single hearing protection for 85 dBA or greater.</p> <p>ENG: Forklifts, pallet jacks, carts.</p> <p>DV: Floor fans are used to circulate the air in the warehouse.</p> <p>ADM: Forklift Operator Certification, HAZMAT Training, Work/rest cycle and Ergonomics, General Training.</p> | <p>Acceptable. Duration of tasks and regularity of exposure minimize the potential for exposure.</p> <p><u>Heavy (lifting over 25 pounds) and prolonged standing are listed in NMCPHC-TM-OEM 6260.01C April 2010 as developmental Reproductive Hazards.</u></p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Carbon Monoxide is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Carbon monoxide is a potential ototoxic which can increase the risk of hearing loss.</u></p> |
| <p>HAZ Waste Disposal Operations: Processing collected partially used spray paint cans using a self-contained mechanical puncture device. This is an unattended process but the initial activation of the machine releases gas and fumes in minute amount at short duration.</p> <p>One civilian personnel opted to be in Respiratory Protection Program for humanitarian reason.</p> <ol style="list-style-type: none"> Toluene, Xylene Methyl Ethyl Ketone Ethyl benzene | 10 minutes a day, per quarter. | 3 | <p>USED/REQUIRED:</p> <p>DV: Outdoors.</p> <p>PPE: Nitrile gloves, Face shields, Half face respirator.</p> <p>ENG: Enclosed process.</p> | <p>Acceptable. An enclosed mechanical device is used for disposing the partially used aerosol paint cans.</p> <p><u>Toluene, benzene and xylene are listed in NMCPHC-TM-OEM 6260.01C April 2010 as Reproductive Hazards.</u></p> <p><u>Benzene is a known human carcinogen per ACGIH.</u></p> <p><u>Ethyl benzene is a human carcinogen listed by IARC.</u></p> |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 3 JAN 2017 |
|--|---|------------------|
| RECORDED BY: E. L. RANCHES INSTALLATION: MARINE CORPS AIR STATION BUILDING NUMBER: BLDG 429/BLDG 1270 SHOP NAME: MCAS HAZARD MINIMIZATION CENTER IH TYPE/DATE: 2 YEAR DOEHS CATEGORY 3 | SUPERVISOR: WALTER MCCALL PHONE: 228-6008/7347 TOTAL PERSONNEL: 6 GS: 4 CONTR: 0 MALE: MIL: 2 GS: 3 CONTR: 0 FEMALE:MIL 0 GS 1 CONTR: 0 | |

SHOP OPERATIONS: Personnel are responsible for requisition, receipt, storage and minimization of hazmat at MCAS. Receive empty containers and partially used spray paint for final disposal. Review and manages authorization of command Authorized Users List. There is no change in operations during this survey.

| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
|--|-----------------------------|-------------------|---|--|
| <p>Administrative Operations: Office environment (computers and keyboarding) comprise the majority of work evolutions. Personnel have task variety (keyboarding, filing, phone, oversight activities, etc.) No worker performs dedicated data entry operations. The only heavy lifting operations performed are rare supply operations with the heaviest item moved a box of copy paper (~40 lbs.) When new computer equipment is installed or delivered, workers utilize carts to transport such equipment.</p> <p>1. Static Posture 2. Work/Rate Repetition</p> | 1-4 hrs./day keyboarding | 2 | <p>USED/REQUIRED:</p> <p>ADM: Ergo Training, Task Variety, Breaks.</p> <p>ENG: Carts, Hand trucks, Ergo Chairs, Workstations.</p> | <p>Acceptable. No reports of discomfort have been reported for these tasks.</p> <p><u>Heavy (lifting over 25 pounds) and prolonged standing are listed in NMCPHC-TM-OEM 6260.01C April 2010 as developmental Reproductive Hazards.</u></p> |

1. USE THE FOLLOWING CONTROL CODES:
ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION
DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION
HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM

2. USE THE FOLLOWING EXPOSURE CODES:
ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT.
UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD.
REPRO HAZARD-THE MATERIAL IS A RECOGNIZED REPRODUCTIVE HAZARD.
CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.

WORK SHOP MEDICAL SURVEILLANCE SUMMARY

| WORK OPERATION/TASK | RECOMMENDED MEDICAL PROGRAM | MEDICAL PROGRAM NUMBER | ESTIMATED NUMBER OF WORKERS |
|---|--------------------------------|------------------------|-----------------------------|
| Forklift Operation | Forklift Operator | 710 | 3 |
| Supplies/Materials Handling- Puncturing aerosol cans prior to disposal. | Respiratory Protection Program | 716 | 1 |
| Weapons qualification/Flight operations (Active Duty personnel). There are civilian personnel who remain in the program due to manifestation of possibly work related hearing loss and two active duty personnel. | Hearing Conservation Program | 503 | 4 |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 09 JAN 2017 | | |
|---|--|---|--|---|
| RECORDED BY: E. L. RANCHES INSTALLATION: MARINE CORPS AIR STATION BUILDING NUMBER: 1205 SHOP NAME: MCAS NATURAL RESOURCES ENVIRONMENTAL AFFAIRS OFFICE (NREAO) RECYCLING CENTER IH TYPE/DATE 2 YEAR DOEHS CATEGORY 2 | | SUPERVISOR: GARY DUKES PHONE: 228-6461 TOTAL PERSONNEL: 0 GS 8 CONTR: 0 MALE: MIL: 0 GS 8 CONTR: 0 FEMALE:MIL 0 GS 0 CONTR: 0 | | |
| SHOP OPERATIONS: The shop receives prepackaged wet and solid hazardous waste materials and other recyclable materials. The building is close to runway actively used as takeoff and landing area by aircrafts. Personnel are also first responders for HAZMAT spills and clean ups. Operates a bailer for scrap paper products for recycling. No change in operation. | | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
| <p>Recycle Multiple Operations: Processing hazardous waste for final disposal. Operates a bailer for recycled paper products. Work center is in close proximity to aircraft runway where noise reading outside the building was at or above 85 dB during takeoff and landing. NREAO personnel conduct inspection of flightline HAZMAT collection site.</p> <p>Collection and processing of aerosol paint cans containing primer/Isocyanates and organic solvents. An enclosed mechanical device is used for disposing the partially used aerosol paint cans. Paints can contain: Isocyanates, Organic Solvents (MEK, Toluene, and Xylene) and only exposure would be accidental.</p> <p>Inspection of satellite HAZMAT collection site and handling of containers with variety of chemicals and hazardous waste.</p> <p>Representative Noise Dosimetry Results from launch & recovery/aircraft maintenance activities, for VMFA-533, 19 Aug 15; and VMFA-224 16 Jun 15 (<i>Marine Corps Occupational Exposure Level (MCOEL) = 85 dB(A) Time Weighted Average (TWA) and calculated SEG exposure is 94.5 dB(A).</i></p> <p>(1) Noise (2) Incidental chemical splash (3) Dynamic Posture</p> | 10-120 minutes/day, depending on waste processing needs. | 8 | USED/REQUIRED: ENG: Enclosed mechanical device is used for disposing the partially used aerosol paint cans. DV- Natural Ventilation. PPE: Nitrile Gloves, Full Face Shields; Single Hearing Protection (Plugs OR muffs) are required when noise levels are 85-103 dB(A); Double protection when needed. ADM: Ergonomics Training and Work/rest cycle, HAZMAT Training. | Unacceptable for noise. Based on noise survey results exceeding the Marine Corps Occupational Exposure Limit (MCOEL) of 85 dBA, 8-hour time-weighted average. Acceptable all others. Based on limited duration and quantity of exposure. <u>Noise is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u> <u>Heavy lifting is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a reproductive and/or developmental hazard.</u> <u>Toluene and Xylene are listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazards.</u> |
| <p>Environmental Response: Hazardous Waste Spill Response worker. Can be exposed to Benzene, Toluene, Xylene, Kerosene (JP5), and Unidentified Chemical in an Incident.</p> <p>(1) Incidental chemical splash</p> | Incidental. 2-4 hours. | 8 | USED/REQUIRED: PPE: Half face respirator with organic vapor cartridges and HEPA filters, Nitrile gloves, Tyvek suit. | Uncertain: The exposure level when responding to HAZMAT spill is unknown thereby requiring full protection and enrolment in appropriate occupational specialty medical exam. <u>Benzene is recognized as carcinogen.</u> <u>Toluene, benzene and xylene are listed in NMCPHC-TM-OEM 6260.01C April 2010 as Reproductive Hazards.</u> |
| <p>Administrative Operations: Office environment (computers and keyboarding) comprise the majority of work evolutions. Personnel have task variety (keyboarding, filing, phone, oversight activities, etc.) No worker performs dedicated data entry operations. The only heavy lifting operations performed are rare supply operations with the heaviest item moved a box of copy paper (~40 lbs.) When new computer equipment is installed or delivered, workers utilize carts to transport such equipment.</p> <p>(1) Static Posture (2) Work/Rate Repetition</p> | 1-4 hrs./day keyboarding. | 8 | USED/REQUIRED: ADM: Ergo Training, Task Variety, Breaks. ENG: Carts, Hand trucks, Ergo Chairs, Workstations. | Acceptable. No reports of discomfort have been reported for these tasks. <u>Heavy (Lifting over 25 pounds) and prolonged standing are listed in NMCPHC-TM-OEM 6260.01C April 2010 as developmental Reproductive Hazards.</u> |
| 1. USE THE FOLLOWING CONTROL CODES: ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM | | | | |
| 2. USE THE FOLLOWING EXPOSURE CODES: | | | | |

ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
 UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON
 OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT.
 UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
 SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD.
 REPRO HAZARD-THE MATERIAL IS A RECOGNIZED REPRODUCTIVE HAZARD.
 CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.

WORK SHOP MEDICAL SURVEILLANCE SUMMARY

| WORK OPERATION/TASK | RECOMMENDED MEDICAL PROGRAM | MEDICAL PROGRAM NUMBER | ESTIMATED NUMBER OF WORKERS |
|---------------------------------|------------------------------------|-------------------------------|------------------------------------|
| Forklift operation | Forklift Operator | 710 | 8 |
| Hazardous waste spill responder | Hazardous Waste Workers | 711 | 8 |
| Hazardous waste spill responder | Respirator User Certification Exam | 716 | 8 |
| Flightline operations | Hearing Conservation Program | 503 | 8 |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 11 JAN 2017 | |
|---------------------------------------|---|---------------------------------------|---------------------------------|
| RECORDED BY: E. L. RANCHES | INSTALLATION: MARINE CORPS AIR STATION | SUPERVISOR: MAJOR BUTTERS | PHONE: 228-7321 |
| BUILDING NUMBER: BLDG 584 | SHOP NAME: MCAS PROVOST MARSHALL OFFICE | TOTAL PERSONNEL: 236 GS: 88 CONIR: 27 | MALE: MIL: 121 GS: 86 CONIR: 17 |
| IH TYPE/DATE: 2 YEAR DOEHS CATEGORY 2 | | FEMALE: MIL: 27 GS: 2 CONIR: 10 | |

SHOP OPERATIONS: Personnel are responsible for enforcing civilian and military regulations that promote order and peace to the station and MCRD Parris Island. Designated as first responders for emergencies.

| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
|---|--|-------------------|---|---|
| <p>Weapons Qualification Operations: All Marine AD personnel are required to perform weapons qualifications annually. The U.S. Army reports M-4 Carbine (5.56 mm) produced peak sound pressure levels (SPLs) as high as 165. Peak noise levels of 160 dB and above are known to cause immediate physical trauma.</p> <p>Workers should be trained to recognize noise sources within the command and to wear appropriate level of Hearing Protective Devices (HPD) in noise hazardous areas.</p> <p>(1) Noise (2) Lead</p> <p>Per Marine Corps Order 6260.3A Marine Corps Hearing Conservation Program 26 Sep 2016, all active duty personnel shall be enrolled in the HCP.</p> | <p>2-4 hrs./day, 1x/ year for rifle qualification for military personnel.</p> <p>1-2 hrs./day, 1x/ year for pistol qualification for military personnel.</p> | 236 | <p>USED/REQUIRED:</p> <p>PPE: Naval Hospital Beaufort Audiologist has recommended that the <u>double-sided combat ams ear plugs (CAEP)</u> are used by range personnel when working inside a 75 ft. radius of the active firing range.</p> <p>ADM: HCP Training; Personal Hygiene (handwashing), Lead Safety Training, HAZCOM Training.</p> | <p>Unacceptable for noise. Based on statistical evaluation of measured noise dosimetry and impulse noise above 140 dB(P).</p> <p>Acceptable for lead. Based on limited frequency and duration of exposure.</p> <p>Ensure that workers fully participate in the HCP which includes annual HCP training; annual audiograms; labeling of noise hazardous equipment and areas; and the use of appropriate hearing protective devices.</p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Lead is a potential ototoxic which can increase the risk of hearing loss.</u></p> |
| <p>Administrative Operations: Office environment (computers and keyboarding) comprise the majority of work evolutions. Personnel have task variety (keyboarding, filing, phone, oversight activities, etc.) No worker performs dedicated data entry operations. The only heavy lifting operations performed are rare supply operations with the heaviest item moved a box of copy paper (~40 lbs.) When new computer equipment is installed or delivered, workers utilize carts to transport such equipment.</p> <p>(1) Static Posture (2) Work/Rate Repetition</p> | 1-4 hrs./day keyboarding. | 236 | <p>USED/REQUIRED:</p> <p>ADM: Ergonomics, General Awareness. Task Variety, Breaks.</p> <p>ENG: Carts, Hand trucks, Ergo Chairs, Workstations.</p> | <p>Acceptable. No reports of discomfort have been reported for these tasks.</p> <p><u>Heavy (lifting over 25 pounds) and prolonged standing are listed in NMCPHC-TM-OEM 6260.01C April 2010 as developmental Reproductive Hazards.</u></p> |

| | | | | |
|--|--|--------------------------------------|---|--|
| <p>Protective Service Operations. Watch standing at sentry gates to the base and flightline or patrolling the base perimeter. Hazardous noise is intermittent in intensity and duration during flight operations. Normal flight operations start at 0900 to 1700.</p> <p>Representative Noise Dosimetry Results from launch & recovery/aircraft maintenance activities, for VMFA-533, 19 Aug 15; and VMFA-224 16 Jun 15 (<i>Marine Corps Occupational Exposure Level (MCOEL) = 85 dB(A) Time Weighted Average (TWA) and calculated SEG exposure is 94.5 dB(A).</i></p> <p>Working outside during extreme temperatures. Personnel are able to take breaks as desired in an air conditioned or shaded space. Heat Injury prevention training is conducted annually with topics such as recognition, type, treatment and prevention of heat stress provided by medical personnel.</p> <p>Watch standers are rotated every 7 hours.</p> <p>(1) Static Posture (2) Work/Rate Repetition (3) Noise (4) Heat Stress (5) Cold Stress</p> | <p>8-10 hours/day</p> <p>For Military Personnel-2 days on which is preceded by two days off.</p> <p>For Civilian -6 days (80 hours) duty in two weeks.</p> | <p>236</p> | <p>USED/REQUIRED:</p> <p>PPE: <u>Single Hearing Protection</u> (Plugs OR Muffs) is required when noise levels are 85-103 dB(A) on flightline and hangar area during flight operations.</p> <p>ADM: Ergonomics, General Awareness, Heat /Cold Stress Training.</p> | <p>Unacceptable for noise. The resultant data indicate exposures below the NOEL; however, Hearing Conservation Program enrolment is required for the job specialty as per NMCPHC.</p> <p>Acceptable for all others. Based on limited frequency and duration of exposure.</p> <p><u>Noise is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Heat Stress is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Heavy lifting is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a reproductive and/or developmental hazard.</u></p> |
| <p>Environmental Response: First responder response worker. Can be incidentally exposed to Benzene, Toluene, Xylene, Kerosene (JP5), and Unidentified Chemical in an Incident.</p> <p>(1) Incidental chemical splash</p> | <p>Incidental. 2-4 hours.</p> | <p>236</p> | <p>USED/REQUIRED:</p> <p>PPE: Half face respirator with organic vapor cartridges and HEPA filters, Nitrile gloves, Tyvek suit.</p> | <p>Uncertain: The exposure level when responding to HAZMAT spill is unknown thereby requiring full protection and enrolment in appropriate occupational specialty medical exam.</p> <p><u>Benzene is recognized as carcinogen.</u></p> <p><u>Toluene and Xylene are listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> |
| <p>Weapons & Ordnance Training Operations. Handling of explosives/munitions during working dog training.</p> <p>(1) Explosive Detonation.</p> | <p>Rare, as needed.</p> | <p>3</p> | <p>USED/REQUIRED:</p> <p>ADM: Explosive Handler's Physical/Motor Vehicle operator, Safety procedures.</p> | <p>Uncertain: This is a non-exposure based medical examination.</p> <p>The medical examination is ensuring physical qualifications for the occupational specialty.</p> |
| <p>1. USE THE FOLLOWING CONTROL CODES:</p> <p>ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM</p> <p>2. USE THE FOLLOWING EXPOSURE CODES:</p> <p>ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL. UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT. UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL. SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD. REPRO HAZARD-THE MATERIAL IS A RECOGNIZED REPRODUCTIVE HAZARD. CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.</p> | | | | |
| <p>WORK SHOP MEDICAL SURVEILLANCE SUMMARY</p> | | | | |
| <p>WORK OPERATION/TASK</p> | <p>RECOMMENDED MEDICAL PROGRAM</p> | <p>MEDICAL PROGRAM NUMBER</p> | <p>ESTIMATED NUMBER OF WORKERS</p> | |
| <p>Protective Service</p> | <p>Respirator User Certification Exam</p> | <p>716</p> | <p>236</p> | |
| <p>Emergency responder</p> | <p>Blood and/or Body Fluids Medical Surveillance Program</p> | <p>178</p> | <p>236</p> | |
| <p>Weapons & Ordnance/Explosive detection training</p> | <p>Explosive Handler</p> | <p>721</p> | <p>3</p> | |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 6 JAN 2017 | | |
|--|--|-------------------|--|---|
| RECORDED BY: E. L. RANCHES INSTALLATION: MARINE CORPS AIR STATION BUILDING NUMBER: BLDG 1007 SHOP NAME: MCAS STATION FUELS/FUEL LAB IH TYPE/DATE: 2 YEAR DOEHS CATEGORY 2 | SUPERVISOR: CWO ENNO PHONE: 228-7448/6384 TOTAL PERSONNEL: 34 GS: 10 CONTR: 0 MALE: MIL: 20 GS: 9 CONTR: 0 FEMALE: MIL 4 GS 1 CONTR: 0 | | | |
| SHOP OPERATIONS: Personnel are responsible for storage and distribution of fuels. Task includes delivering fuels in the flight line. Test fuels collected from aircrafts and fuel stations. JP 5 is tested before transfer to tank farms from the fuel barge. Personnel augment the first responders during fuel spills. | | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
| <p>Weapons Qualification Operations: All Marine AD personnel are required to perform weapons qualifications annually. "The U.S. Army reports M-4 Carbine (5.56 mm) produced peak sound pressure levels (SPLs) as high as 165. Peak noise levels of 160 dB and above are known to cause immediate physical trauma.</p> <p>Workers should be trained to recognize noise sources within the command and to wear appropriate level of Hearing Protective Devices (HPD) in noise hazardous areas.</p> <p>(1)Noise (2)Lead</p> <p>Per Marine Corps Order 6260.3A Marine Corps Hearing Conservation Program 26 Sep 2016, all active duty personnel shall be enrolled in the HCP.</p> | <p>2-4 hrs./day, 1x/ year for rifle qualification for military personnel.</p> <p>1-2 hrs./day, 1x/ year for pistol qualification for military personnel.</p> | 34 | <p>USED/REQUIRED:</p> <p>PPE: Naval Hospital Beaufort Audiologist has recommended that the <u>double-sided combat arms ear plugs (CAEP)</u> are used by range personnel when working inside a 75 ft. radius of the active firing range.</p> <p>ADM: HCP Training; Personal Hygiene (handwashing), Lead Safety Training, HAZCOM Training.</p> | <p>Unacceptable for noise. Based on statistical evaluation of measured noise dosimetry and impulse noise above 140 dB (P).</p> <p>Acceptable for lead. Based on limited frequency and duration of exposure.</p> <p>Ensure that workers fully participate in the HCP which includes annual HCP training; annual audiograms; labeling of noise hazardous equipment and areas; and the use of appropriate hearing protective devices.</p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Lead is a potential ototoxic which can increase the risk of hearing loss.</u></p> |
| <p>Administrative Operations: Office environment (computers and keyboarding) comprise the majority of work evolutions. Personnel have task variety (keyboarding, filing, phone, oversight activities, etc.) No worker performs dedicated data entry operations. The only heavy lifting operations performed are rare supply operations with the heaviest item moved a box of copy paper (~40 lbs.) When new computer equipment is installed or delivered, workers utilize carts to transport such equipment.</p> <p>Enterprise Safety Application and Management Systems (ESAMS) is a base wide media resource to inform management of any incident/ complaint of potential or case of occupational injury. All MCAS personnel possess an account for this system.</p> <p>Majority of work station that has no water fall edge features on work table top. Sharp edges may cause contact stress while typing. Most of the chairs are adjustable with adequate lumbar support.</p> <p>Procurement of furniture and works station should specify the ergonomic design features.</p> <p>(1) Static Posture (2) Work/Rate Repetition</p> | 2 hours/day. | 34 | <p>USED/REQUIRED:</p> <p>ADM: Ergonomics, General Awareness, Task Variety, Breaks.</p> <p>ENG: Carts, Hand trucks, Ergo Chairs, Workstations.</p> | <p>Acceptable. No complaint of any cumulative stress injury.</p> <p><u>Heavy (Lifting over 25 pounds) and prolonged standing are listed in NMCPHC-TM-OEM 6260.01C April 2010 as developmental Reproductive Hazards.</u></p> |

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|---|--------------|----|---|--|
| <p>Fuel Lab Operations. Incidental exposure to fuels which can contain Benzene, Toluene, Xylene (JP5) during Fuel analysis in laboratory.</p> <p>(1) Kerosene (2) Benzene (3) Toluene (4) Xylene (5) (JP5)</p> | 2 Hours/day. | 23 | <p>USED/REQUIRED:</p> <p><u>ENG:</u> DV, Fume Ventilation Hood, Emergency eyewash stations.</p> <p><u>PPE:</u> Nitrile Gloves, splash goggles, Rubber aprons.</p> | <p>Acceptable: Limited duration and dilution ventilation minimize the exposure potential.</p> <p><u>Toluene/Xylene is listed in NIOSH-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Benzene is IARC recognized carcinogen.</u></p> |
|---|--------------|----|---|--|

1. USE THE FOLLOWING CONTROL CODES:
ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION
DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION
HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM

2. USE THE FOLLOWING EXPOSURE CODES:
ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT.
UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD.
REPRO HAZARD-THE MATERIAL IS A RECOGNIZED REPRODUCTIVE HAZARD.
CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.

WORK SHOP MEDICAL SURVEILLANCE SUMMARY

| WORK OPERATION/TASK | RECOMMENDED MEDICAL PROGRAM | MEDICAL PROGRAM NUMBER | ESTIMATED NUMBER OF WORKERS |
|---|--|------------------------|-----------------------------|
| HAZMAT spill responder | Hazardous Waste Workers/Emergency Responders | 711 | 23 |
| Weapons qualification/Flight operations | Hearing Conservation Program | 503 | 23 |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 10 JAN 2017 | | | |
|---|--|-----------------------|---|---|---|
| RECORDED BY: E. I. RANCHES | INSTALLATION: MARINE CORPS AIR STATION | BUILDING NUMBER: 2091 | SHOP NAME: MCAS STATION ORDNANCE | IH TYPE/DATE: 2 YEAR DOEHS CATEGORY 2 | SUPERVISOR: CWO HARRINGTON PHONE: 228-9032 TOTAL PERSONNEL: 15 GS: 0 CNTR: 0 MALE: MIL: 13 GS: 1 CNTR: 0 FEMALE:MIL 01 GS 0 CNTR: 0 |
| SHOP OPERATIONS: The shop is responsible for receipt, storage and issue of assorted ordnance including small arms ammunition and hand delivered pyrotechnics. Conduct an occasional spray painting making labels and minor corrosion control of ammunition cans and containers. No changes in operation. | | | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT(2) | |
| <p>Weapons Qualification Operations: All Marine AD personnel are required to perform weapons qualifications annually. "The U.S. Army reports M-4 Carbine (5.56 mm) produced peak sound pressure levels (SPLs) as high as 165. Peak noise levels of 160 dBP and above are known to cause immediate physical trauma.</p> <p>Workers should be trained to recognize noise sources within the command and to wear appropriate level of Hearing Protective Devices (HPD) in noise hazardous areas.</p> <p>(1)Noise (2)Lead</p> <p>Per Marine Corps Order 6260.3A Marine Corps Hearing Conservation Program 26 Sep 2016, all active duty personnel shall be enrolled in the HCP.</p> | <p>2-4 hrs./day, 1x/ year for rifle qualification for military personnel.</p> <p>1-2 hrs./day, 1x/ year for pistol qualification for military personnel.</p> | 15 | <p>USED/REQUIRED:</p> <p>PPE: Naval Hospital Beaufort Audiologist has recommended that <u>the double-sided combat arms ear plugs (CAEP)</u> are used by range personnel when working inside a 75 ft. radius of the active firing range.</p> <p>ADM: HCP Training; Personal Hygiene (handwashing), Lead Safety Training, HAZCOM Training.</p> | <p>Unacceptable for noise. Based on statistical evaluation of measured noise dosimetry and impulse noise above 140 dB(P) .</p> <p>Acceptable for lead. Based on limited frequency and duration of exposure.</p> <p>Ensure that workers fully participate in the HCP which includes annual HCP training; annual audiograms; labeling of noise hazardous equipment and areas; and the use of appropriate hearing protective devices.</p> <p><u>Noise is listed as a fetal developmental hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Lead is a potential ototoxic which can increase the risk of hearing loss.</u></p> | |
| <p>Weapons & Ordnance Operations. Receipt, transport, issue of ordnance during flight operations.</p> <p>Working in base magazines and delivery of ordnance to flight line receiving/delivery point during extreme temperatures. Individuals are trained of self-diagnosis (signs, symptoms and treatment) of heat stress injuries and avail of well-ventilated shaded area or air conditioned space in any sign of heat related stress.</p> <p>Representative Noise Dosimetry Results from launch & recovery/aircraft maintenance activities, for VMFA-533, 19 Aug 15; and VMFA-224 16 Jun 15 (<i>Marine Corps Occupational Exposure Level (MCOEL) = 85 dB(A) Time Weighted Average (TWA) and calculated SEG exposure is 94.5 dB(A).</i></p> <p>Lifting, stooping and handling ammo. Dynamic Posture, Forceful Exertion, Work/Rate Repetition</p> <p>(1) Explosion (2) Noise (3) Heat (4) Cold (5) Dynamic Posture (6) Forceful Exertion (7) Work/Rate Repetition</p> | 2-4 hours/day. | 15 | <p>USED/REQUIRED:</p> <p>ADM: Procedural, Explosive Handler's Exam.</p> <p>PPE: Single Hearing Protection (Plugs OR Muffs) are required when noise levels are 85-103 dB(A); on flightline and hangar area during flight operations.</p> <p>ADM: Heat/Cold Stress Training, work/rest cycle, and physical conditioning; Ergonomic Awareness Training, Work/Rest Cycle; HVAC, Shade,</p> <p>ENG: Use of forklifts, carts and other weight bearing equipment minimize the potential for back injury.</p> | <p>Unacceptable for noise. Based on noise survey results exceeding the Marine Corps Occupational Exposure Limit (MCOEL) of 85 dBA, 8-hour time-weighted average.</p> <p>Acceptable all others. Based on limited duration and quantity of exposure.</p> <p><u>Noise is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Heavy lifting is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a reproductive and/or developmental hazard.</u></p> <p><u>Heat Stress is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a reproductive and/or developmental hazard.</u></p> | |

| | | | | |
|---|--|-----------|--|--|
| <p>Coating/Painting Operations. Paint products may contain: Acetone, Methyl Ethyl Ketone, and Toluene. Spray painting labels on ammo cans and containers for demilitarization. A can of 16 oz. So Sure aerosol paint will last for a week.</p> <p>Stooping, bending and lifting Corrosion control and labeling of ammunition can and equipment containers. Enterprise Safety Application and Management Systems (ESAMS) is a base wide media resource for reporting occupational injuries. All MCAS personnel possess an account for this system.</p> <p>(1) Acetone (2) Methyl Ethyl Ketone (3) Toluene (4) Dynamic Posture Work (5) Rate Repetition</p> | <p>10 Minutes/day, 3 times a week.</p> | <p>15</p> | <p>USED/REQUIRED:</p> <p>ENG: Use of forklifts, carts and other weight bearing equipment minimize the potential for back injury.</p> <p>PPE: Nitrile gloves, Splash goggles.</p> <p>ADM: Ergonomic, General Awareness, Work/Rest Cycle, HAZCOM Training.</p> | <p>Acceptable. Limited quantity, irregularity of process and task duration with adequate ventilation minimizes the potential exposure.</p> <p><u>Toluene is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Heavy lifting is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a reproductive and/or developmental hazard.</u></p> |
|---|--|-----------|--|--|

1. USE THE FOLLOWING CONTROL CODES:
ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION
DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION
HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM

2. USE THE FOLLOWING EXPOSURE CODES:
ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT.
UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD.
REPRO HAZARD-THE MATERIAL IS A RECOGNIZED REPRODUCTIVE HAZARD.
CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.

WORK SHOP MEDICAL SURVEILLANCE SUMMARY

| WORK OPERATION/TASK | RECOMMENDED MEDICAL PROGRAM | MEDICAL PROGRAM NUMBER | ESTIMATED NUMBER OF WORKERS |
|---|------------------------------|------------------------|-----------------------------|
| Forklift operation | Forklift Operator | 710 | 15 |
| Ordnance Handling | Explosive Handler | 721 | 15 |
| Transport of ordnance | Explosive Vehicle Operator | 720 | 15 |
| Weapons qualification/Flightline operations | Hearing Conservation Program | 503 | 15 |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 10 JAN 2017 | | |
|--|--|-----------------------------------|--|---|
| RECORDED BY: E. L. RANCHES | INSTALLATION: MARINE CORPS AIR STATION | SUPERVISOR: CWO STEPHENSON | | |
| BUILDING NUMBER: BLDG 599 | SHOP NAME: MCAS TELEPHONE OFFICE | PHONE: 228-6158 | | |
| IH TYPE/DATE: 2 YEAR DOEHS CATEGORY 2 | | TOTAL PERSONNEL: 9 GS: 4 CONTR: 0 | | |
| | | MALE: MIL: 5 GS: 2 CONTR: 0 | | |
| | | FEMALE: MIL: 0 GS: 2 CONTR: 0 | | |
| SHOP OPERATIONS: The shop plans for MILCOON communication projects. Office personnel receive incoming trouble calls and work request, and prepare billing documents. Technicians maintain telephone switches and distribution lines. | | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
| <p>Weapons Qualification Operations: All Marine AD personnel are required to perform weapons qualifications annually. "The U.S. Army reports M-4 Carbine (5.56 mm) produced peak sound pressure levels (SPLs) as high as 165. Peak noise levels of 160 dB and above are known to cause immediate physical trauma.</p> <p>Workers should be trained to recognize noise sources within the command and to wear appropriate level of Hearing Protective Devices (HPD) in noise hazardous areas.</p> <p>(1) Noise (2) Lead</p> <p>Per Marine Corps Order 6260.3A Marine Corps Hearing Conservation Program 26 Sep 2016, all active duty personnel shall be enrolled in the HCP.</p> | <p>2-4 hrs./day, 1x/ year for rifle qualification for military personnel.</p> <p>1-2 hrs./day, 1x/ year for pistol qualification for military personnel.</p> | 5 | <p>USED/REQUIRED:</p> <p>PPE: Naval Hospital Beaufort Audiologist has recommended that <u>the double-sided combat arms ear plugs (CAEP)</u> are used by range personnel when working inside a 75 ft. radius of the active firing range.</p> <p>ADM: HCP Training; Personal Hygiene (handwashing), Lead Safety Training, HAZCOM Training.</p> | <p>Unacceptable for noise. Based on statistical evaluation of measured noise dosimetry and impulse noise above 140 dB(P).</p> <p>Acceptable for lead. Based on limited frequency and duration of exposure.</p> <p>Ensure that workers fully participate in the HCP which includes annual HCP training; annual audiograms; labeling of noise hazardous equipment and areas; and the use of appropriate hearing protective devices.</p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Lead is a potential ototoxic which can increase the risk of hearing loss.</u></p> |
| <p>Administrative Operations: Office environment (computers and keyboarding) comprise the majority of work evolutions. Personnel have task variety (keyboarding, filing, phone, oversight activities, etc.) No worker performs dedicated data entry operations. The only heavy lifting operations performed are rare supply operations with the heaviest item moved a box of copy paper (~40 lbs.) When new computer equipment is installed or delivered, workers utilize carts to transport such equipment.</p> <p>(1) Static Posture (2) Work/Rate Repetition</p> | 1-4 hrs./day keyboarding. | 3 | <p>USED/REQUIRED:</p> <p>ADM: Ergonomics, General Awareness, Task Variety, Breaks.</p> <p>ENG: Carts, Hand trucks, Ergo Chairs, Workstations.</p> | <p>Acceptable. No reports of discomfort have been reported for these tasks.</p> <p><u>Heavy (lifting over 25 pounds) and prolonged standing are listed in NMCPHC-TM-OEM 6260.01C April 2010 as developmental Reproductive Hazards.</u></p> |

| | | | | |
|---|---|----------|---|---|
| <p>Communications Operations: Incidental noise exposure from aircraft taking off and landing during installation of communication landlines at flightline transmission sites.</p> <p>Accessing tight and hard to reach areas during wire installation of communication equipment. Enterprise Safety Application and Management Systems (ESAMS) is a base wide media resource to inform management of any incident/complaint of potential or case of occupational injury. All MCAS personnel possess an account for this system.</p> <p>Working on elevated platforms and climbing telephone poles and confined space entry. Telecommunication lineman's body belts, safety straps and lanyards must meet the requirement of OSHA 1910.268(g) (2). Confined space in Permit required confined space entry such a manholes and voids.</p> <p>Working in confined spaces and outdoors during extreme weather temperature.</p> <p>Working on power source for communications (Telephone, Community Antennae and Television (CATV) and Fiber Optics).</p> <p>(1) Noise (2) Dynamic Posture (3) Work/Rate Repetition (4) Physical Exertion (5) Slip (6) Trip (7) Fall (8) Oxygen Deficiency (9) Heat Stress (10) Cold Stress (11) Electric Shock</p> | <p>2-4 hours, 2-3 X a month and as needed.</p> | <p>8</p> | <p>USED/REQUIRED:</p> <p>EPE: Single Hearing Protection for noise >85 dB (A) .</p> <p>ADM: Work/Rest Cycle, Ergonomics, General Awareness, Fall Protection Program Training, Gas free engineering, Confined Space Training and Regulated area, HAZCOM Training; Heat Stress Training, Flag System, Hydration, Work Rest Cycles, Lock Out/Tag Out.</p> <p>ENG: Personnel have access to well ventilate and temperature controlled area.</p> | <p>Acceptable. Short duration of landline maintenance in hazardous noise and frequency of the activity.</p> <p><u>Noise is listed as a fetal developmental Hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Heavy lifting is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a reproductive and/or developmental hazard.</u></p> <p><u>Heat Stress is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a reproductive and/or developmental hazard.</u></p> |
|---|---|----------|---|---|

1. USE THE FOLLOWING CONTROL CODES:
ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION
DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION
HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM

2. USE THE FOLLOWING EXPOSURE CODES:
ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT.
UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL.
SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD.
REPRO HAZARD-THE MATERIAL IS A NAVY RECOGNIZED REPRODUCTIVE HAZARD.
CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.

| WORK SHOP MEDICAL SURVEILLANCE SUMMARY | | | |
|---|------------------------------|------------------------|-----------------------------|
| WORK OPERATION/TASK | RECOMMENDED MEDICAL PROGRAM | MEDICAL PROGRAM NUMBER | ESTIMATED NUMBER OF WORKERS |
| Weapons qualification/Flight operations | Hearing Conservation Program | 503 | 5 |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 10 JAN 2017 | | |
|--|--|-------------------|--|--|
| RECORDED BY: E. L. RANCHES INSTALLATION: MARINE CORPS AIR STATION BUILDING NUMBER: BLDG 860 SHOP NAME: MCAS VISITING AIRCRAFT LINE IH TYPE/DATE: 2 YEAR DOEHS CATEGORY 2 | SUPERVISOR: SSGT CORRIGAN PHONE: 228-7110 TOTAL PERSONNEL: 6 GS: 3 CONTR: 0 MALE: MIL: 3 GS: 3 CONTR: 0 FEMALE: MIL: 0 GS: 0 CONTR: 0 | | | |
| SHOP OPERATIONS: No changes in shop operations. Personnel are responsible for sweeping the flight line using a mechanical sweeper. Assist in recovery and launching all visiting airplane and assist in hot pit refueling of aircraft. | | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
| <p>Weapons Qualification Operations: All Marine AD personnel are required to perform weapons qualifications annually. "The U.S. Army reports M-4 Carbine (5.56 mm) produced peak sound pressure levels (SPLs) as high as 165. Peak noise levels of 160 dBp and above are known to cause immediate physical trauma.</p> <p>Workers should be trained to recognize noise sources within the command and to wear appropriate level of Hearing Protective Devices (HPD) in noise hazardous areas.</p> <p>(1) Noise (2) Lead</p> <p>Per Marine Corps Order 6260.3A Marine Corps Hearing Conservation Program 26 Sep 2016, all active duty personnel shall be enrolled in the HCP.</p> | <p>2-4 hrs./day, 1x/ year for rifle qualification for military personnel</p> <p>1-2 hrs./day, 1x/ year for pistol qualification for military personnel</p> | 3 | <p>USED/REQUIRED:</p> <p>PPE: Naval Hospital Beaufort Audiologist has recommended that <u>the double-sided combat arms ear plugs (CAEP)</u> are used by range personnel when working inside a 75 ft. radius of the active firing range</p> <p>ADM: HCP Training; Personal Hygiene (handwashing), Lead Safety Training, HAZCOM Training</p> | <p>Unacceptable for noise. Based on statistical evaluation of measured noise dosimetry and impulse noise above 140 dB(P).</p> <p>Acceptable for lead. Based on limited frequency and duration of exposure.</p> <p>Ensure that workers fully participate in the HCP which includes annual HCP training; annual audiograms; labeling of noise hazardous equipment and areas; and the use of appropriate hearing protective devices.</p> <p><u>Noise is listed as a fetal developmental hazard in NMCPHC-TM-OEM 6260.1C Reproductive And Developmental Hazards.</u></p> <p><u>Lead is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Lead is a potential ototoxic which can increase the risk of hearing loss.</u></p> |
| <p>Aircraft/Flightline Operations. Ground support of visiting aircraft. Assist in hot pit refueling of aircraft. Incidental exposure to JP5 which may contain Benzene, Kerosene, Toluene, Xylene.</p> <p>Flightline grounds maintenance. Use the blower of the truck instead of vacuum as this is more efficient to disperse FOD from the tamac surfaces to the side of the runway. Personnel are able to access well-ventilated areas and temperature controlled spaces during extreme heat/cold weather conditions. Most of the vehicles used for ground support are air conditioned. Bending, stooping and lifting are required for fueling and ground maintenance.</p> <p>Representative Noise Dosimetry Results from launch & recovery/aircraft maintenance activities, for VMFA-533, 19 Aug 15; and VMFA-224 16 Jun 15 (<i>Marine Corps Occupational Exposure Level (MCOEL) = 85 dB(A) Time Weighted Average (TWA)</i>). SEG -Launch and Recovery Operations: Statistical average is calculated to be 94.5 dB(A).</p> <p>1. Noise 2. Incidental chemical splash 3. Respirable Dust 4. Heat Stress 5. Cold Stress 6. Dynamic Posture 7. Work/Rate Repetition</p> | 2-4 hours/day, as needed | 6 | <p>USED/REQUIRED:</p> <p>ADM: HAZCOM Training, Heat Stress Training, Flag System, Hydration, Work Rest Cycles; Ergonomics General Awareness Training, Work/rest cycle</p> <p>PPE: Plugs and Muffs are required when on flightline during flight operations; Safety Glasses, Leather gloves, Coveralls Flame Retardant</p> <p>DV: Natural ventilation.</p> <p>ENG: Enclosed Air conditioned cab</p> | <p>Unacceptable for noise. Based on representative sampling exceeded the occupational exposure limit.</p> <p><u>Noise is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Toluene and Xylene are listed in NMCPHC-TM-OEM 6260.01C April 2010 as a Reproductive Hazard.</u></p> <p><u>Benzene is a recognized carcinogen.</u></p> <p><u>Heat Stress is listed in NMCPHC-TM-OEM 6260.01C April 2010 as a reproductive and/or developmental hazard.</u></p> <p><u>Jet fuels contain potential autotoxins which can increase the risk of hearing loss.</u></p> |

| WORKPLACE HAZARD ASSESSMENT | | DATE: 10 JAN 2017 | | |
|---|--|-----------------------------------|------------------------|-----------------------------|
| RECORDED BY: E. L. RANCHES | INSTALLATION: MARINE CORPS AIR STATION | SUPERVISOR: SSGT CORRIGAN | | |
| BUILDING NUMBER: BLDG 860 | SHOP NAME: MCAS VISITING AIRCRAFT LINE | PHONE: 228-7110 | | |
| IH TYPE/DATE: 2 YEAR DOEHS CATEGORY 2 | | TOTAL PERSONNEL: 6 GS: 3 CONTR: 0 | | |
| | | MALE: MIL: 3 GS: 3 CONTR: 0 | | |
| | | FEMALE:MIL 0 GS 0 CONTR: 0 | | |
| SHOP OPERATIONS: No changes in shop operations. Personnel are responsible for sweeping the flight line using a mechanical sweeper. Assist in recovery and launching all visiting airplane and assist in hot pit refueling of aircraft. | | | | |
| PROCESS/OPERATIONS AND STRESSOR/HAZARD | DURATION/ FREQUENCY | NUMBER OF WORKERS | CONTROLS (1) | EXPOSURE ASSESSMENT (2) |
| <p>1. USE THE FOLLOWING CONTROL CODES: ADM - ADMINISTRATIVE CONTROLS PPE - PERSONAL PROTECTIVE EQUIPMENT ISO - ISOLATION DV - DILUTION VENTILATION ENG - ENGINEERING CONTROLS LV - LOCAL VENTILATION HCP - HEARING CONSERVATION PROGRAM SEG - SIMILARLY EXPOSED GROUP RPP -RESPIRATORY PROTECTION PROGRAM</p> <p>2. USE THE FOLLOWING EXPOSURE CODES: ACCEPTABLE-ONE WHERE THE IH WILL NOT EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL. UNCERTAIN-ADDITIONAL DATA NEED TO BE COLLECTED TO CLARIFY THE EXPOSURE ASSESSMENT. THE IH SHOULD MAKE AN INTERIM EXPOSURE ASSESSMENT BASED ON OBSERVATION OF THE PROCESS AND/OR PROFESSIONAL JUDGEMENT. UNACCEPTABLE-ONE WHERE THE IH WILL EXPECT THE SEG, ON AVERAGE, TO BE EXPOSED ABOVE THE SELECTED OEL. SKIN-THE MATERIAL POSES A SKIN ABSORPTION HAZARD. REPRO HAZARD-THE MATERIAL IS A NAVY RECOGNIZED REPRODUCTIVE HAZARD. CARCINOGEN-THE MATERIAL CONTAINS >0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN.</p> | | | | |
| WORK SHOP MEDICAL SURVEILLANCE SUMMARY | | | | |
| WORK OPERATION/TASK | RECOMMENDED MEDICAL PROGRAM | | MEDICAL PROGRAM NUMBER | ESTIMATED NUMBER OF WORKERS |
| Weapons qualification/Flight operations | Hearing Conservation Program | | 503 | 6 |

**MCAS BEAUFORT SC
Workplace Monitoring Plan 2017**

| Work Center | Operation to be sampled | Type | Vent Description | Hazard/ Stressor | # Samples | Method | Location of Sample | Frequency |
|--|---|-------------|-------------------------|-------------------------|------------------|------------------------|---------------------------|------------------|
| MCAS EXPLOSIVE AND ORDNANCE DISPOSAL | SOLDERING ROOM | VENT | EXHAUST HOOD | LEAD | 1 | DIRECT READING | LOCAL EXHAUST | ANNUAL |
| MCAS PROVOST MARSHALL OFFICE (MCAS/MCRD) | VENTILATION (Room): Holding Cells | VENT | ROOM SUPPLY AND EXHAUST | | 1 (Each Cell) | DIRECT READING / SMOKE | GA-GENERAL AREA | BIENNIAL |
| MCAS PROVOST MARSHALL OFFICE (MCAS/MCRD) | LIGHTING: Holding Cells | LIGHT | NA | NA | 1 (Each Cell) | DIRECT | GA-GENERAL AREA | BIENNIAL |
| MCAS STATION FUELS/ FUEL LAB | VENTILATION: JP 5 Ventilation survey on the air foil hood | VENT | DEDICATED | FUELS | 1 | DIRECT READING / SMOKE | GA-GENERAL AREA | ANNUAL |
| MCAS STATION FUELS/ FUEL LAB | VENTILATION: JP 5 Ventilation survey on laboratory spaces | VENT | LABORATORY HOOD | FUELS | 1 | DIRECT READING / SMOKE | GA-GENERAL AREA | ANNUAL |

**SUMMARY OF MEDICAL SURVEILLANCE NEEDS FOR
MCAS BEAUFORT, SC
January 2017**

| WORK CENTER / SHOP | STRESSOR: OPERATION | CONTROLS | RECOMMENDED MEDICAL SURVEILLANCE PROGRAM | ESTIMATED PERSONNEL |
|--|---|---|---|----------------------------|
| MCAS Air Traffic Control | Noise: weapons firing, flightline, pneumatic tools, etc. | Hearing protective devices, signage, double hearing protection (plugs & muffs), CAEPS (Combat arms ear plugs) | 503 - HCP- Hearing Conservation Program | 21 |
| MCAS Aircraft Recovery | Noise: Maintenance of arresting gears | Hearing protective devices, signage, administrative controls, cranials, double hearing protection (plugs & muffs) | 503 - HCP- Hearing Conservation Program | 36 |
| MCAS Distribution Management Office | Noise: Weapons Firing | Hearing protective devices, signage, double hearing protection (plugs & muffs), CAEPS (Combat arms ear plugs) | 503 - HCP- Hearing Conservation Program | 4 |
| MCAS Distribution Management Office | Driving Forklifts | ADM: Training, Licensure, Work practices | 710 - Forklift Operator Occupational Medical Exam (OME) Certification | 8 |
| MCAS Explosive Ordnance Disposal (EOD) | Noise: Weapons Firing and rare conducting bomb disposal | Hearing protective devices, signage, double hearing protection (plugs & muffs), CAEPS (Combat arms ear plugs) | 503 - HCP- Hearing Conservation Program | 8 |
| MCAS Explosive Ordnance Disposal (EOD) | Hazardous Waste/ Explosive/ CBRNE | PPE: Single Hearing Protection (Plugs OR Muffs) is required when noise levels are 85-103 dB(A); Full face respirator with organic vapor cartridges and HEPA filter; CEOD 9 Bomb Suit, Ballistic face shield and Kevlar gloves | 711 - Hazardous Waste Worker and Emergency Responders Explosive Handlers and Driver Occupational Medical Exam (OME) | 8 |
| MCAS Explosive Ordnance Disposal (EOD) | CBRNE/HAZMAT | Full Face respirator w organic vapor and P100 filters, gloves, dilution ventilation | 716- Respiratory Protection Program Respirator User Certification Exam | 8 |
| MCAS Explosive Ordnance Disposal (EOD) | Driving with explosives and handling explosives | ADM: Training and certification | 720 - EH- Explosive Handlers and Driver Occupational Medical Exam (OME) | 8 |
| MCAS Explosive Ordnance Disposal (EOD) | Explosive handling | ADM: Training and certification | 721- Explosive Handler Occupational Medical Exam (OME) | 8 |
| MCAS Hazard Minimization Center | Noise: Weapons Firing | Hearing protective devices, signage, double hearing protection (plugs & muffs), CAEPS (Combat arms ear plugs) | 503 - HCP- Hearing Conservation Program | 4 |
| MCAS Hazard Minimization Center | Driving Forklifts | ADM: Training, Licensure, Work practices | 710 - Forklift Operator Occupational Medical Exam (OME) Certification | 3 |
| MCAS Hazard Minimization Center | Disposal of partially used spray cans | Half Face respirator | 716 Respiratory protection Program | 1 |
| MCAS Hazard Minimization Center | CBRNE/HAZMAT | Full Face respirator w organic vapor and P100 filters, gloves, dilution ventilation | 716- Respiratory Protection Program Respirator User Certification Exam | 1 |
| MCAS Natural Resources Environmental Affairs Office (NREAO) Recycling Center | Noise: Flightline and aircraft noise and cardboard bailer | Hearing protective devices, signage, administrative controls, cranials, double hearing protection (plugs & muffs) | 503 - HCP- Hearing Conservation Program | 8 |
| MCAS Natural Resources Environmental Affairs Office (NREAO) Recycling Center | Forklift operations | ADM: Training, Licensure, Work practices | 710 - Forklift Operator Occupational Medical Exam (OME) Certification | 8 |
| MCAS Natural Resources Environmental Affairs Office (NREAO) Recycling Center | CBRNE/HAZMAT | PPE: Half Face respirator, Tyveks, Splash Goggles ADM: Training | 711 - Hazardous Waste Worker and Emergency Responders Explosive Handlers and Driver Occupational Medical Exam (OME) | 8 |

**SUMMARY OF MEDICAL SURVEILLANCE NEEDS FOR
MCAS BEAUFORT, SC
January 2017**

| WORK CENTER / SHOP | STRESSOR: OPERATION | CONTROLS | RECOMMENDED MEDICAL SURVEILLANCE PROGRAM | ESTIMATED PERSONNEL |
|--|--|---|---|----------------------------|
| MCAS Natural Resources Environmental Affairs Office (NREAO) Recycling Center | Hazardous Waste Operations (Rare) | Half Face respirator | 716 Respiratory protection Program | 8 |
| MCAS Provost Marshall Office | BBP: incidental to patient care activities | ADM: Universal precautions; Training; PPE: Gloves | 178 - BBP- Bloodborne Pathogens Occupational Medical Exam (OME) | 236 |
| MCAS Provost Marshall Office | Noise: Flightline and aircraft noise | Hearing protective devices, signage, administrative controls, cranials, double hearing protection (plugs & muffs) | 503 - HCP- Hearing Conservation Program | 236 |
| MCAS Provost Marshall Office | Driving military vehicles | ADM: Training, Licensure, Work practices | 712 - Motor Vehicle Operator (Other than DOT) Occupational Medical Exam (OME) | 209 |
| MCAS Provost Marshall Office | Police and Security | ADM: Training | 714 - Police/Security Occupational Medical Exam (OME) | 209 |
| MCAS Provost Marshall Office | Hazardous Waste Operations (Rare)/ CBRNE | Half Face respirator | 716- Respiratory Protection Program Respirator User Certification Exam | 236 |
| MCAS Provost Marshall Office | Driving with explosives and handling ordnance | ADM: Training and certification | 720 - EH- Explosive Handlers and Driver Occupational Medical Exam (OME) | 209 |
| MCAS Provost Marshall Office | Explosive Ordnance Disposal and handling | ADM: Training and certification | 721- Explosive Handler Occupational Medical Exam (OME) | 3 |
| MCAS Station Fuels/Fuel Lab | Noise: weapons firing, flightline, pneumatic tools, etc. | Hearing protective devices, signage, double hearing protection (plugs & muffs), cranials; CAEPS (Combat arms ear plugs) | 503 - HCP- Hearing Conservation Program | 23 |
| MCAS Station Fuels/Fuel Lab | CBRNE/HAZMAT | PPE: Half Face respirator, Tyveks, Splash Goggles ADM: Training | 711 - Hazardous Waste Worker and Emergency Responders Explosive Handlers and Driver Occupational Medical Exam (OME) | 23 |
| MCAS Station Ordnance | Noise: weapons firing, flightline, pneumatic tools, etc. | Hearing protective devices, signage, double hearing protection (plugs & muffs), CAEPS (Combat arms ear plugs) | 503 - HCP- Hearing Conservation Program | 18 |
| MCAS Station Ordnance | Forklift operations | ADM: Training, Licensure, Work practices | 710 - Forklift Operator Occupational Medical Exam (OME) Certification | 18 |
| MCAS Station Ordnance | Driving with explosives and handling explosives | ADM: Training and certification | 720 - EH- Explosive Handlers and Driver Occupational Medical Exam (OME) | 18 |
| MCAS Station Ordnance | Explosive handling | ADM: Training and certification | 721- Explosive Handler Occupational Medical Exam (OME) | 18 |
| MCAS Telephone Office | Noise: weapons firing, flightline, pneumatic tools, etc. | Hearing protective devices, signage, double hearing protection (plugs & muffs), CAEPS (Combat arms ear plugs) | 503 - HCP- Hearing Conservation Program | 5 |
| MCAS Visiting Aircrafts Line | Noise: weapons firing, flightline, pneumatic tools, ground support equipment, etc. | Hearing protective devices, signage, double hearing protection (plugs & muffs), CAEPS (Combat arms ear plugs) | 503 - HCP- Hearing Conservation Program | 6 |

NOTE: Explanation of Medical Surveillance/Certification Recommendations.

1. Recommendation for inclusion in a hazard-based medical surveillance program for employees involved in a given operation is based on the industrial hygienist's professional judgment, either through observation or knowledge of the process or representative sampling, that these employees will be routinely exposed to workplace concentrations at or above the Action Level which is 50% of applicable OSHA standards or action levels established by Navy instruction or Federal regulation. Medical certification is required by specific Navy or Federal directive where a certain degree of

physical fitness has been judged as necessary for a component of the job (i.e. respirator use) or the job itself (i.e. firefighters or forklift operators). All personnel involved in weapons and explosive handling should receive annual Explosive Handler screenings or special exam as needed.

2. The Occ Hlth Provider will make the final determination for enrolment in the Blood borne Pathogen Medical Surveillance Program for potentially exposed personnel using federal regulations and local instruction for exposure control plan as guidance.

3. The potential for reproductive hazards exposure should not be construed as an automatic removal from the job or billet. The Care Provider should consult with Occ. Hlth. and must provide the medical decision appropriate for the working condition of the pregnant service women. OPNAVINST 6000.1C - Navy Guidelines Concerning Pregnancy and Parenthood provides the policy and procedures regarding management of pregnant servicewomen.

4. HCP medical surveillance recommendations in this report are based solely on "in garrison" work day exposure assessments and do not incorporate personnel noise exposure incurred during deployment(s), which should be carefully considered prior to HCP removal.

**MCAS BEAUFORT SC
Summary of Sample Results 2017**

| Sample Number | Bldg./ Room/Shop | Activity/ Worker | Stressor | Measured Results | Exposure Criteria | Evaluation |
|----------------------|---|---------------------------|-----------------|-------------------------|--------------------------------|-------------------|
| IH17-0056 | Bldg. 584/ PMO Detection Cell Room 128A | Holding Cell for Detainee | Ventilation | 640 cfm | MCO 1630.3d 10 cfm/Detainee | Acceptable |
| IH17-0057 | Bldg. 584/ PMO Detection Cell Room 128B | Holding Cell for Detainee | Ventilation | 658 cfm | MCO 1630.3d 10 cfm/Detainee | Acceptable |
| IH17-0058 | Bldg. 584/ PMO Detection Cell Room 128A | Holding Cell for Detainee | Illumination | 7.7 FC | MCO 1630.3d 20 FC/Detainee | Unacceptable |
| IH17-0059 | Bldg. 584/ PMO Detection Cell Room 128B | Holding Cell for Detainee | Illumination | 8.3 FC | MCO 1630.3d 20 FC/Detainee | Unacceptable |

**SUMMARY OF IDENTIFIED CARCINOGENS AT MCAS BEAUFORT CATEGORY 2 SHOPS
2017**

| Work Centers/Shop | Carcinogen | Process | Organization and Classification Listing. |
|--------------------------------------|-------------------|---|---|
| MCAS Fuels/Fuel Lab | Benzene | Fueling/Defueling Aircraft, Fuel Testing | TLV -A1 IARC -1 NT - K |
| MCAS HAZMIN Center | | Processing partially used spray can for disposal. | |
| MCAS NREAO | | | |
| MCAS Visiting Aircraft Line | | Hot pit refueling of aircraft | |
| Explosive Ordnance Disposal | Lead | Burn out pit -small arms ammo disposal | TLV -A3 IARC -2A |
| MCAS Air Traffic Control Maintenance | | Soldering | |

Exposure assessments for the stressor listed above are included in the Industrial Hygiene Survey report. Carcinogen should be eliminated or substituted with safer products.

Carcinogens are classified by International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), and the American Conference of Governmental Industrial Hygienist (ACGIH). The Federal Occupational Safety and Health Administration also list cancer causing materials.

Classification by Listing Organization:

ACGIH TLV

- A1- Confirmed human carcinogen
- A2- Suspected human carcinogen
- A3- Confirmed animal carcinogen with unknown relevance to humans

NTP

- K- Known to be human carcinogen
- R- Reasonably anticipated to be a human carcinogen

IARC

- Group 1 - Agent or mixture is carcinogenic to humans
- Group 2A- Agent or mixture is probably carcinogenic to humans
- Group 2B- Agent or mixture is possibly carcinogenic to humans

RESPIRATORY PROTECTION PROGRAM PERIODIC REVIEW 2017

| References: * OPNAVINST 5100.23G * 29 CFR 1910.134 2017 | | Command POC: MIKE GIESE MCAS BEAUFORT SC | |
|--|------------|---|--|
| Standard | Yes | No | Comments/Notes |
| <u>Respiratory Protection Program Manager (RPPM)</u> Has the CO appointed a RPPM in writing? Has the RPPM completed the required course work? | X | | |
| <u>Program Audit</u> Does the respiratory protection program provide for an annual audit by the RPPM of the Respiratory Protection Program? | X | | Record of annual audit is maintained in the MCAS Department of Safety and Standardization (DSS) RPPM . |
| <u>Respirator Use</u> Are employees with beards prohibited from wearing all respirators except positive pressure supplied-air hoods or loose fitting powered air purifying respirators? | X | | |
| <u>Respirator Use For Humanitarian/Morale (Voluntary) Purposes:</u> In areas where respirators are not required, but voluntary use of respiratory protection is allowed, are respirators issued and controlled by the RPPM? Are NIOSH (National Institute of Occupational Safety and Health)-approved filtering face pieces (dust masks) issued (medical screening and fit testing not required)? Are individuals trained in the use and limitations of the respirator they are issued? | | | N/A |
| <u>Breathing Air</u> Does the breathing air meet the specified requirements for Grade D breathing air? <ul style="list-style-type: none"> • Is the quality of the breathing air monitored at least quarterly? Are air compressor systems equipped with either high temperature or continuous carbon monoxide monitor and alarm systems or both, to monitor carbon monoxide levels? | X | | The Fire Dept. Aircraft Rescue and Firefighting conduct the sample collection and send to third party analysis lab. Grade D certificates are posted in the conspicuous space of the compressors. |
| <u>Facilities and Standard Operating Procedures (SOPs)</u> Is there a centrally located facility staffed to maintain and issue respirators? | X | | The Base Safety and Standardization maintains the copy of the SOPs for the Fire Dept. (FD) and Aircraft Rescue and Firefighting (ARFF). |
| Is the inspection, cleaning, repair, etc. of respirators performed at the respirator facility by personnel who have received training approved by the RPPM? | X | | FD and ARFF Program Managers inspect the monthly cleaning and maintenance of individually assigned respirators and properly document with copy provided to the DSS RPPM. |

| Standard | Yes | No | Comments/Notes |
|---|---------|----|----------------|
| Does the command have SOPs governing the selection, care, issue and use of respirators? Is emergency and rescue guidance included in the SOPs? | X | | |
| Has the command written and posted specific worksite SOPs in the general area of work requiring respirators? | X | | |
| <u>Training</u> Do all respirator users and their supervisors receive initial and annual refresher training? | X | | |
| Does the respiratory training include as a minimum: <ul style="list-style-type: none"> • The nature and degree of respiratory hazards? • Respirator selection? • How to inspect, put on and remove, use and check the seals of the respirator? • The maintenance and storage of the respirator? • Wearing of contact lenses in contaminated atmosphere with respiratory protection equipment? • The use and limitations of respirators? • How to use the respirator effectively in emergency situations? • Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective fit of the respirator? • How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators? • When to change chemical cartridges/canisters according to the established change out schedule? • The general requirements of the respiratory standard? | All YES | | |
| <u>Fit Testing</u> Are all personnel required to wear respirators with tightly fitting face pieces given a fit test at the time of initial fitting and annually thereafter? | X | | |
| Is respirator fit testing documented by: <ul style="list-style-type: none"> • Respirator make, model, style, size and model? • The method of test, test results and test date? • Strip chart recording or other recording of test results for quantitative fit test? • The name of the instructor/fit tester? • | X | | |

| Standard | Yes | No | Comments/Notes |
|--|-----|----|--|
| Has each respirator user, prior to initial use, completed a questionnaire which describes: <ul style="list-style-type: none"> • The general health status with emphasis on respiratory problems and operations/conditions respirator is to be worn? | X | | |
| Has the cognizant health professional reviewed the questionnaires (except in the case of humanitarian use) to determine whether a medical evaluation is necessary? | X | | Reviewed prior to Respirator User certification exam by Occ. Hlth, NAVHOSP Beaufort. |
| <u>Medical</u> Does the command ensure that respirator wearers are evaluated medically to ensure they are physically able to perform their assigned tasks while wearing their respirators? | X | | Respirator User certification exam by Occ. Hlth, NAVHOSP Beaufort. |
| Does the command ensure that there is a medical statement for each user, noting whether the respirator user is qualified, qualified with restrictions, or not qualified to wear respirators? | X | | |
| <u>Medical Audit</u> Has the command provided the RPPM an annual written evaluation on the effectiveness of the program based on occupational medicine and industrial hygiene reviews? | X | | |
| Additional Comments: Mission capable. | | | |

Glossary

Action Level - Usually one-half the PEL or TLV.

Acute - An illness with a sudden onset, or a short-term exposure.

Administrative Control - Limiting exposures by controlling the work schedule.

Ambient - Normal conditions outside a confined or enclosed space.

ANSI - American National Standards Institute, a standard developing group.

Audiogram - A graph or table showing hearing threshold levels by frequency.

Audiometer - Instrument used to measure a person's hearing threshold.

A-Weighted Sound Level - Measured sound level that reflects our ear's reduced sensitivity to low frequency sounds. Expressed as dB(A).

Capture Velocity - The velocity of air necessary to capture a contaminant.

Ceiling Limit - An exposure to toxic materials that may never be exceeded.

Chronic - Persistent, prolonged, repeated.

Concentration - Quantity of a substance per unit volume. Examples include: mg/m³- milligrams per cubic meter. For vapors, gases, fumes, or dusts. ppm - parts per million (used for vapors and gases), fibers/cc - fibers per cubic centimeter (used for asbestos)

Confined Space - A space with restricted entry or exit and not designed for routine occupancy but large enough that a person can enter to perform work.

Cumulative Trauma Disorders (CTDs) - Health disorders arising from repeated biomechanical stress. CTD involve damage to the tendons, tendon sheaths, and related bones, muscles, and nerves of the hands, wrists, elbows, shoulders, neck, and back. Disorders include carpal tunnel syndrome, tennis elbow, tendonitis, tenosynovitis, and low back pain.

Decibel-dB - A unit used to express sound pressure levels.

Detector Tube - A glass tube filled with a chemical that produces a color change when contaminated air is drawn through the tube.

Dosimeter - A device for measuring a cumulative exposure to an individual.

Dust - Small particles created during crushing, grinding, or explosion.

Ergonomics - Field concerned with workplace design to reduce fatigue, error, unsafe acts or injuries such as CTD's.

ESAMS- Enterprise Safety Application Management System

Excursion Limit - Temporary exposure in excess of a PEL or TLV.

Frequency - Vibration or cycles per second, usually referred to as Hertz (Hz).

Fumes - Small particles (< 1.0 micron in diameter) formed when a vaporized metal solidifies. The vapor often reacts with oxygen to form an oxide.

Gas - Diffuse, formless fluid normally in a gaseous state.

Hazardous Material - A material meeting one or more of the following: (a) flashpoint <200°F, (b) TLV < 1000 ppm for gases and vapors or < 500 mg/m³ for fumes, (c) a single oral dose which will cause 50 percent fatalities to test animals in doses <500 mg per kilogram of test animal weight, (d) strong oxidizing or reducing agent, (e) causes first degree burns to skin or toxic by skin contact, (f) may produce particulates, vapors or gases with one or more of the above characteristics, (g) sensitizing or irritating effects, (h) radioactive, or (i) special characteristics which could cause harm if improperly used or stored.

Hazardous Material Information System (HMIS) - A computer database of MSDS for hazardous materials used throughout the DOD.

High-Efficiency Particulate Air Filter (HEPA) - A filter capable of trapping and retaining at least 99.97 percent of 0.3 micrometer diameter particles.

Immediately Dangerous to Life or Health (IDLH) - Atmosphere immediately hazardous to life or producing immediate irreversible harmful health effects.

Imminent Danger - A condition that may immediately cause the loss of life, serious injury, or illness of an employee.

Impulse or Impact Noise - Sound of short duration, usually < one second.

Material Safety Data Sheet (MSDS) - Used by manufacturers to communicate hazardous properties of products. Includes: name; address; emergency contact;

hazardous ingredients; physical, chemical, fire, explosion, reactivity, and health hazard data; safe handling, use, and control precautions.

Medical Surveillance - Medical evaluation of the health of workers exposed to chemical, physical or biological agents in the workplace.

NAVOSH - Navy Occupational Safety and Health. Navy safety and health standards are referred to as NAVOSH standards and are \geq OSHA standards.

NIOSH - National Institute for Occupational Safety and Health.

NIOSH/MSHA Certified Equipment - Safety equipment that has been tested by NIOSH or MSHA and meets minimum requirements for hazard protection.

Occupational Health - Field of medicine involving prevention and treatment of illness in the workplace. Includes: occupational medicine, occupational health nursing, toxicology, audiology, and industrial hygiene.

OSHA - Occupational Safety and Health Administration.

Oxygen Deficient Atmosphere - An atmosphere with an oxygen concentration below 19.5 percent. The normal oxygen level is 21.5%.

PEL - Permissible Exposure Limit. The maximum concentration of a chemical or physical agent (usually an 8-hour average) allowed by OSHA.

Radiofrequency Radiation (RFR) - Electromagnetic radiation from 10 kHz to 300 GHz.

Smoke - Carbon or soot particles less than 0.1 micrometer in size.

Solvent - A substance used to dissolve another substance.

TLV - Threshold Limit Value - Exposure limits established by ACGIH.

Toxic Substance or Harmful Physical Agent - Chemical, biological, or physical agents which are regulated by NAVOSH or Federal standards.

TWA - Time-Weighted Average. Average concentration of airborne material over a standard time period, usually 8 hours.

Vapor - Gaseous form of materials normally in the solid or liquid state.

Industrial Hygiene Customer Satisfaction Survey

In order to improve our Services, Industrial Hygiene would like to have feedback from all of our valued customers. Please return this questionnaire to the Industrial Hygiene Division via Guardmail or at the following address:

Naval Hospital Beaufort
 Industrial Hygiene Code 5JIH
 1 Pinckney Blvd
 Beaufort SC 29902-6148

Survey/Date: **MCAS BEAUFORT**

Department: Position:

Name: Phone:

| Industrial Hygienist (IH): <i>(Please use the comment block below to list comments or concerns)</i> | Yes | No | NA |
|---|--------------------------|--------------------------|--------------------------|
| Did the IH conduct their service in a professional manner? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the IH responsive and helpful during the survey walk-through and with any related follow-up questions/concerns? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the IH knowledgeable about the potential health hazards associated with this work area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments:

| Industrial Hygiene Survey Report/Correspondence: <i>(Please use the comment block below to list comments or concerns)</i> | Yes | No | NA |
|--|--------------------------|--------------------------|--------------------------|
| Was the information in the executive summary appropriate for senior leadership? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the report clear, concise and easy to understand? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the report layout and format easy to use and disseminate throughout your work centers? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Were any personnel omitted from medical surveillance programs that you think should be enrolled? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Were all work processes/concerns addressed? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Were specific safety and health programs such as lead, hearing conservation, and reproductive hazards reviewed as appropriate for various work activities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Comments:

Please comment on what you thought were the best aspects of our services:

Please comment on how we may improve the services we provided to you: