



DEPARTMENT OF THE NAVY  
NAVAL HOSPITAL  
937 FRANKLIN AVE.  
LEMOORE, CALIFORNIA 93246-5004

IN REPLY REFER TO:

6260  
G1A/0176  
18 Apr 12

From: Commanding Officer, Naval Hospital, Lemoore  
To: Commanding Officer, Naval Support Activity, Monterey,  
271 Stone Road, Monterey CA 93943

Subj: TWO-YEAR INDUSTRIAL HYGIENE SURVEY, NAVAL SUPPORT  
ACTIVITY, MONTEREY, POLICE/SECURITY FORCE DEPARTMENT

Ref: (a) OPNAVINST 5100.23G, Chapter 8

Encl: (1) Industrial Hygiene Survey Report 61014-12

1. As required by reference (a), a two-year industrial hygiene survey of the Naval Support Activity, Monterey, Police/Security Force Department was conducted from 18 January to 17 April 2012 by the Naval Hospital, Lemoore, Monterey area Industrial Hygienist. The survey required more time than usual to complete because of the departmental Training Officer's intermittent availability due to several other lengthy commitments and the Industrial Hygienist's office move in March.

2. There were 8 Formal Findings identified during the survey, the majority of which involved the CBRNE Respiratory Protection Program. **Please provide a response to these Findings to the Industrial Hygienist within 60 days from the date of this cover letter. Note that the activity's Respiratory Protection Program Manager, and not the Police/Security Force Department, needs to provide a response to two of these Findings since they involve the program's administration.**

3. Further clarification or consultation with respect to this report is available from S. Eric Thurston, Industrial Hygienist, at (831) 656-1074, e-mail sethurst@nps.edu.

W. H. CHO  
By direction

Copy to:  
NSAM Sec Offr  
NSAM NAVOSH Inst Dir  
NHL IH Dept

Industrial Hygiene Survey  
of  
**Naval Support Activity, Monterey**  
**Police/Security Force Department**  
61014-12  
18 January to 17 April 2012

Survey Conducted by: S. Eric Thurston,  
Industrial Hygienist

Survey Reviewed and Approved by: Michael Puckett, MPH, REHS  
Supervisory Industrial  
Hygienist

## TABLE OF CONTENTS

Table of Contents	Page 1
Executive Summary	Page 2
Discussion, Findings and Recommendations	Page 4
Appendix A, IH Exposure Assessment/Monitoring Plans	Page 12
Appendix B, Historical Air Sampling Results	Page 15
Appendix C, Measured Equipment Noise Levels	Page 16
Appendix D, Field Noise Survey Forms	Page 17
Appendix E, Local Exhaust Ventilation System Evaluation	Page 19
Appendix F, Respiratory Protection Program Matrix	Page 20
Appendix G, Medical Surveillance Matrix	Page 21
Appendix H, Training Matrix	Page 22
Appendix I, Glossary	Page 23
Appendix J, Change of Operation Notification Form	Page 25

## EXECUTIVE SUMMARY

61014-12

1. A two-year industrial hygiene survey of the Naval Support Activity, Monterey's Police/Security Force Department was recently conducted to assess the occupational health portion of the department's NAVOSH Program. Only a two-year review of this department is required.

2. There were several survey points of contact and they all provided outstanding support. Their cooperation and assistance was greatly appreciated.

3. The following is a summary of the highlights of this report:

- the department needs to ensure that Police Officers wearing the CBRNE respirators are schedule for required annual respirator training and age-based respirator medical exams.
- Hazardous materials training needs to be expanded to include the hazards from use of and a discussion of the MSDS's for the cleaner/lubrication products and a variety of paints.
- minor corrections and additions to the departmental CBRNE respirator SOPS (PPR-7) are recommended for both accuracy and clarity.
- use and control of dust masks worn on an elective basis, as well as provision of required information from the Federal Respirator Standard to their users, needs to be coordinated with the activity's Respirator Program Manager.
- Forklift operators need to start wearing hearing protection.
- a change in the Navy's occupational health medical surveillance manual now requires annual rather than age-based medical exams for all Police/Security Force personnel (except for purely administrative personnel) as part of the Police/Security Guard (Code 714) Program.

3. Overall, the occupational health portion of the department's NAVOSH Program is Satisfactory.

## DISCUSSION, FINDINGS, AND RECOMMENDATIONS

- References:
- (a) OPNAVINST 5100.23G
  - (b) NMCPHC-TM OM 6260 (Edition 11) of Jul 11
  - (c) 29 CFR 1910.1025
  - (d) 29 CFR 1910.134(k)
  - (e) 29 CFR 1910.134(h) (3) (i) (b) and (iv)
  - (f) 29 CFR 1910.134 Appendix D
  - (g) 29 CFR 1910,134(l) (1)
  - (h) 29 CFR 1910.1030(c) (1)
  - (i) 29 CFR 1910.1030(c) (1) (iv)
  - (j) 29 CFR 1910.1030(d) (3)
  - (k) 29 CFR 1910.1030(d) (4) (iii) (B) (1)

As required by Chapter 8 and stipulated by Appendix 8-B of reference (a), a two-year industrial hygiene survey was conducted of the Naval Support Activity, Monterey (NSAM), Police/Security Force Department from 18 January to 17 April 2012. The primary purpose of this survey was to identify and assess exposure to occupational hazards, review the occupational health portions of the NAVOSH program, and update the Exposure Monitoring Plan.

The organization of the report is as follows:

- Discussion, Findings and Recommendations
- IH Exposure Assessment/Monitoring Plans, Appendix A
- Historical Air Sampling Results, Appendix B
- Measured Equipment Noise Levels, Appendix C
- Field Noise Survey Forms, Appendix D
- Local Exhaust Ventilation System Evaluation, Appendix E
- Respiratory Protection Program Matrix, Appendix F
- Medical Surveillance Matrix, Appendix G
- Training Matrix, Appendix H
- Standardized IH Glossary, Appendix I
- Change of Operation Notification Form, Appendix J

### A. HAZARDOUS MATERIAL CONTROL AND MANAGEMENT PROGRAM:

WD-40 and Break Free CLP are currently used by Police Officers to maintain their own firearms. The weapons cleaning and preservation process using small dip tanks noted during the previous survey is currently dormant since the outside contract to provide this service was not renewed; this process is expected to resume when one civilian Navy (WG) employee position is filled. Aerosol cans of different brands and colors of spray paints and athletic field/traffic marking paint are used for occasional stencilling of containers/equipment and marking of traffic accident sites. During the survey, a current hazardous materials inventory list and MSDSs were available for the few hazardous materials on hand.

A. HAZARDOUS MATERIAL CONTROL AND MANAGEMENT PROGRAM  
(continued):

Since the previous survey, the ESAMS Hazardous Materials User training module is no longer available. The departmental Training Officer provides hazardous materials training using a Powerpoint presentation, which focuses on hazardous materials potentially encountered during CBRNE incidents.

**FINDING 61014-12-1:** The hazardous materials training does not address the cleaning/lubricant products used during weapons cleaning and other general lubrication tasks, and the variety of paints.

**RECOMMENDATION 61014-12-1:** Expand the training to discuss the hazards from use of and MSDS's for the cleaner/lubricant products and the paints as required by reference (a), Chapter 6, Appendix 6-B. Retraining would be needed whenever new types of chemical products are introduced into the workplace.

B. HEARING CONSERVATION PROGRAM: Exposure to hazardous noise is limited to biannual firearms qualification at the Laguna Seca outdoor firing range for the Police Officers and operation of forklifts borrowed from the local Public Works Tool Room by select departmental personnel.

All Police Officers require enrollment in the Police/Security Guard medical surveillance program outlined in reference (b), whose protocol has changed since the previous survey to include annual rather than periodic hearing tests (audiograms) as in the past.

Previous dosimetry indicates that the 8-hour average noise exposures of the 3 Rangemasters who supervise the weapons qualification process exceed the NOEL of 84 dBA outlined in reference (a), Chapter 18, paragraph 1803a. Since their noise exposures are significant, the Rangemasters require annual hearing conservation training as required by reference (a), Chapter 18, Section 1808. Calculated 8-hour average noise exposures of all other departmental personnel qualifying on weapons are insignificant due to brief exposure times, and therefore they do not require this training. All departmental personnel other than those purely administrative need to continue wearing hearing protection during weapons qualification as required by reference (a), Chapter 18, paragraph 1807c.

The calculated 8-hour average noise exposures of forklift operators are insignificant due to brief operation times, and they also do not require formal hearing conservation training.

B. HEARING CONSERVATION PROGRAM (continued):

**FINDING 61014-12-2:** Recent measurements of the two new forklifts borrowed from the local Public Works Tool Room indicate that they are noisy enough to require the use of hearing protection during their operation; this is a new requirement since the previous forklifts did not generate hazardous noise levels.

**RECOMMENDATION 61014-12-2:** Start wearing hearing protection (either ear plugs or muffs) during forklift operation as required by reference (a), Chapter 18, paragraph 1807c.

C. PERSONAL PROTECTIVE EQUIPMENT (PPE): The following PPE is currently worn for protection against potential health hazards found in the workplace:

PPE	PROCESS/PURPOSE
Peltor S-6 Tactical Active Volume ear muffs or North Deci 4240 disposable ear plugs	Weapons qualification.
Powderless latex or N-Dex nitrile rubber exam gloves	Potential exposure to blood/body fluids or chemical products.

All PPE were found to be clean, serviceable, and properly stored.

The new requirement to wearing either ear plugs or muffs during forklift operation is outlined in the Hearing Conservation Program discussion above. Since all Police Officers are required to wear hearing protection during weapons qualifications they need to complete PPE training as required by reference (a), Chapter 20, Section 2012 and as outlined in Appendix H of this report.

D. LEAD EXPOSURE HAZARD CONTROL PROGRAM: The only potential lead exposure encountered in this department is from dust/fumes generated during weapons qualification, which as discussed above is performed at the Laguna Seca outdoor firing range. Previous monitoring data indicates exposures are below the Action Level outlined in reference (a), Chapter 21, paragraph 2103b, and therefore most requirements of the Lead Hazard Control Program do not need to be implemented. The Federal Lead Standard, reference (c), is available for review by accessing the command Safety Office's intranet home page. Personnel wash their hands in the nearby restrooms at the range after weapons firing prior to eating, drinking, chewing gum, use of tobacco products or cosmetics application as appears in the pre-weapons qualification process brief sheet and as required by reference (a), Chapter 21, paragraph 2104f(4).

E. RESPIRATORY PROTECTION PROGRAM:

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, NUCLEAR, AND EXPLOSIVE AGENTS (CBRNE) RESPIRATORY PROTECTION PROGRAM: The Naval Postgraduate School/Naval Support Activity, Monterey campus/base would receive primary support from the city of Monterey, Monterey County, and/or Presidio of Monterey Hazmat/CBRNE teams during a CBRNE incident. The NSAM Police Department Police Officers are required to be qualified to wear respirators and serve as primary CBRNE incident responders only where personnel are injured and/or are under life-threatening conditions and the 3 teams mentioned above are unable to respond in sufficient time to render aid. Per the activity's Emergency Management Officer, the Police Officers would provide support to the teams above as secondary responders for all other CBRNE incidents, and would only be stationed in Cold Zones, where respirators are not required.

Elements of the CBRNE Respiratory Protection Program are included in departmental SOP PPR-7 of 15 June 2011. Personnel are to receive their medical qualifications to wear respirators from the Presidio of Monterey's Army Medical Clinic, Occupational Health Department. Respirator fit testing is performed by the NSAM Respiratory Protection Program Manager (RPPM), Mr. Martin Catanese. CBRNE respirator training responsibility has been assigned to the departmental Training Officer and not the RPPM as is the usual custom. Except as noted in Findings/Recommendations 61014-12-1 through -3 below, all departmental elements of this program comply with applicable requirements.

**FINDING 61014-12-3:** The departmental Training Officer indicates that Police Officers are currently not receiving the required respirator training.

**RECOMMENDATION 61014-12-3:** Ensure that all Police Officers wearing the CBRNE respirators receive annual respirator training as required by both reference (a), Chapter 15, paragraph 1511 and reference (d).

**FINDING 61014-12-4:** A spot check of three individuals randomly selected on ESAMS indicates that two were not current for annual (CBRNE) respirator fit testing.

**RECOMMENDATION 61014-12-4:** Ensure that all personnel wearing the CBRNE respirators are scheduled with the NSAM RPPM for annual respirator facepiece fit testing as required by reference (a), Chapter 15, Sections 1508 and 1509.

E. RESPIRATORY PROTECTION PROGRAM (continued):

**FINDING 61014-12-5:** The following elements of department's PPR-7 instruction do not fully comply with OSH requirements:

- lack of discussion that personnel with conditions such as facial hair, deep facial scarring, etc., in the facepiece sealing area will not be allowed to wear (or be fit-tested for) the (tight-fitting) CBRNE respirator facepiece as outlined in reference (a), Chapter 15, paragraph 1503e.
- SCBA's are incorrectly specified as the type of respirator to be worn for level C protection.
- discussion is present that CBRNE respirators are not to be worn in oxygen-deficient atmospheres, but the conditions that constitute such an environment are absent as outlined in reference (a), Chapter 15, paragraph 2606c(2)(b).
- discussion is present that CBRNE respirators are not permitted for use beyond 8 hours after initial exposure to chemical warfare agents, but the stipulation that they also shall not be worn for more than 2 hours if exposed to liquid chemical warfare agents as appears in reference (a), Chapter 15, paragraph 2606c(2)(b) is absent.
- the stipulation that respirators be inspected on a monthly basis as required by reference (e) is absent.

**RECOMMENDATION 61014-12-5:** The following amendments to PPR-7 are recommended:

- include the facial hair policy.
- state that air-purifying respirators, and not SCBA's, are to be worn for level C exposure conditions.
- define oxygen-deficient environments as those having less than 19.5% oxygen present.
- include the 2-hour CBRNE respirator cartridge use limitation for exposure to liquid chemical warfare agents.
- include the requirement for monthly respirator inspections.

ELECTIVE USE OF DUST MASKS: In addition to the CBRNE respirators, the department also stocks disposable Moldex Model 2200 N95 Particulate and Gerson Model 1740 N95 (respirator) dust masks for use on an elective basis during such jobs as housecleaning and brief outdoor use of aerosol paint cans for touchup of painted riot gear and for stenciling of containers/equipment.

E. RESPIRATORY PROTECTION PROGRAM (continued):

**FINDING 61014-12-6:** The Moldex dust masks were procured without the knowledge and control of the RPPM. Although most elements of the Navy's Respiratory Protection Program do not apply to elective use of dust masks, their issue and use needs to be controlled and authorized by the activity's RPPM as required by reference (a), Chapter 15, paragraph 1503g. Users need to be annually provided with reference (f), which is information from the Federal Respirator Standard concerning voluntary use of respirators, but there is no evidence that this information is being provided annually to dust mask users.

**RECOMMENDATION 61014-12-6:** Contact the NSAM RPPM to coordinate issue and control of the dust masks as required by. Annual provision of the required information also needs to be coordinated with the RPPM and properly documented as required by reference (a), Chapter 15, paragraph 1503g(1).

PROGRAM ADMINISTRATION: The NSAM RPPM is responsible for managing and administering the department's program. Mr. Catanese attended and successfully completed OSHA Training Institute Course 222 in November 2009.

**FINDING 61014-12-7:** The NSAM RPPM has not been appointed in writing as either the activity's (general) RPPM or the CBRNE Program's RPPM as required by both Chapter 15, Section 1513a and Chapter 26, Section 2606a of reference (a). **This is a repeat Finding from the previous survey report.**

**RECOMMENDATION 61014-12-7:** A letter signed by the NSAM Commanding Officer assigning these duties to Mr. Catanese needs to be prepared and issued to document these appointments.

**FINDING 61014-12-8:** During Calendar Year 2011, the NSAM RPPM performed the annual audit of the Respiratory Protection Program as required by reference (a), Chapter 15, paragraph 1513a(8). The format prescribed the Navy Region Southwest (NRSW) for the assessment of the entire Safety and Occupational Health Program, where 5 elements are selected for focus, was used. However, the review was inadequate since it did not address all elements of the program. Reference (g) requires that the evaluations are to be conducted to ensure that all aspects of the written program are being effectively implemented.

**RECOMMENDATION 61014-12-8:** The audit prescribed by the NRSW needs to be supplemented so that all program elements are evaluated each year.

F. BLOODBORNE PATHOGENS PROGRAM: Potential exposure to bloodborne pathogens (BBP) occurs when personnel respond to a vehicle accident, investigate crime scenes, or during arrests. No such exposure has occurred since the previous survey. An exposure control plan (ECP) has been developed as required by reference (h) to outline proper procedures to follow during such situations. The ECP has been adopted as departmental SOP PPR-3 (formerly designated SOP 37), and the latest version was issued on 13 June 2011. Therefore, **the annual administrative review required by reference (i) is not due until June 2012.** Latex or nitrile exam gloves, and red biohazard bags, required by references (j) and (k), are stocked in departmental vehicles for use by patrol personnel. Contaminated gloves and other waste are placed inside biohazard bags and given to paramedics or county coroner personnel for proper disposal. Personnel receive BBP training through the ESAMS training module and/or training presented by the departmental Training Officer (using a Powerpoint presentation).

G. OCCUPATIONAL REPRODUCTIVE HAZARDS CONTROL PROGRAM: Per reference (a), Chapter 29, the reproductive hazards encountered in this department include:

LOCATION	HAZARD/TYPE	PRODUCT/PROCESS	EXPOSURE ASSESSMENT
Firing Range	Lead: M,F,D	Weapons qualification	Negative-monitoring data
Firing Range	Noise: PF	Weapons qualification	Positive- Range-masters based on monitoring data, Negative-all others based on calculated 8 hour exposures
Gear touchup, stencilling, traffic accident scenes	Toluene: D, Xylenes: F	Aerosol paint cans	Negative-minimal usage, dilution with outdoor air
Base access gates	Carbon monoxide: D	Gate sentry duty (from vehicle exhaust)	Negative-dilution with outdoor air

**NOTES:** M = male hazard, F = female hazard, PF = pregnant females  
D = developmental hazard (hazard to the fetus)

The two (female) departmental administrative support personnel do not qualify on weapons, use chemical products, or stand gate sentry duty, and therefore are not exposed to reproductive hazards.

H. ENGINEERING CONTROLS: No engineering controls are in use by departmental personnel during performance of their tasks.

I. ERGONOMICS: Departmental personnel, including the two administrative support workers, do not regularly type for long periods of time that would cause repetitive stress injury, and personnel in the department do not perform unassisted lifting of items over 40 pounds.

J. MEDICAL SURVEILLANCE: Refer to Appendix G, the Medical Surveillance Matrix, for guidance on personnel enrollment in occupational health medical surveillance programs based on exposure assessment conducted by the Industrial Hygienists during the survey. Note that enrollment in additional surveillance programs may be prescribed separately by the NSAM Safety and Occupational Health Office based on their inspections and safety-related requirements.

K. TRAINING: Appendix H, the Training Matrix, which provides guidance for required training, is once again based on exposure assessments conducted by the Industrial Hygienist. Additional training may be identified separately by the NSAM Safety and Occupational Health Office, once again based on their inspections and safety-related requirements, or as automatically prescribed by ESAMS, currently used to satisfy OSH training requirements, when each individual user logs onto his or her account.

**APPENDIX A**

<b>IH EXPOSURE ASSESSMENT/MONITORING PLAN</b>		
<b>WORKPLACE INFORMATION</b>		
<b>Organization:</b> Naval Support Activity, Monterey	<b>Dept:</b> Police/Security Force	
<b>Location:</b> Bldg 436	<b>Supervisor:</b> Security Officer Ken Bench	<b>Phone:</b> 831-656-2556
<b>Workers:</b> Police Officers: 21, Admin: 2	<b>Male:</b> Police Officers: 21	<b>Female:</b> Admin: 2
<p><b>Operations:</b> This department is responsible for law enforcement, traffic control, complaint investigations, gate access, and emergency response. Note that the city of Monterey, Monterey County, and/or Presidio of Monterey CBRNE/Hazmat teams would provide primary response for CBRNE incidents occurring on the Naval Postgraduate School campus/Naval Support Activity, Monterey (NSAM) base, with the NSAM Police/Security Force personnel providing (secondary) support. The only instance where this department's Police Officers would serve as primary CBRNE responders would involve scenarios where personnel are injured and/or are under life-threatening conditions and the 3 teams mentioned above were unable to respond in sufficient time. Also note that since the previous survey all military Security Force positions, as well as the 3 civilian contract position personnel who performed all weapons cleaning and preservation using dip tanks located on the building's loft area, have been eliminated. A (civilian) WG position has been established to conduct this function, but it was not filled at the time of the survey.</p> <p>-WD-40 in aerosol cans, and Break Free CLP is used by Police Officers when cleaning and preserving their weapons.</p> <p>-Aerosol paint cans from different manufacturers and colors are occasionally used to touch up riot gear helmets and stencil containers/equipment.</p> <p>-Aerosol cans of marking paint stocked in patrol vehicles are used to mark traffic accident sites.</p> <p>-Very occasionally licensed departmental personnel borrow forklifts from the local Public Works Tool Room to load portable barricades onto and off flat bed trucks when they need to be positioned at base entry gates.</p> <p>-Personnel qualify on their firearms every 6 months, with 3 Rangemasters administering the qualifications.</p>		
<p><b>* = reproductive hazard</b></p>		

**IH EXPOSURE ASSESSMENT/MONITORING PLAN**

**WORKPLACE INFORMATION**

**Organization:** Naval Support Activity, Monterey | **Dept:** Police/Security Force

WORK TASK	POTENTIAL HAZARD	WORKERS INVOLVD	FREQUENCY/DURATION	MONITORING RECOMMENDED?
Sentry duty	*Carbon monoxide	21	Daily, 10-12 hrs	No-EA Chem
Emerg respnse	BB Pathogens	21	Unplanned event	No-EA Biol
Weapons maint	Pet dists, solvents	21	8 ounces/month	No-EA Chem
Aerosol paint	*Xyl, *tol, solvnts	21	Rare, 2 ozs/time	No-EA Chem
Marking paint	*Toluene, solvents	21	Unplannd, 5 mins	No-EA Chem
Forklifts	*Noise, *Carb Mon	4	Unplanned, 10mins	No-EA Noise, Chem
Rangemasters	*Lead, copper, *Noise	3	Monthly, 8 hrs	No-EA-Noise, Chem
Weapons qual	*Lead, copper, *Noise	21	Biannaul, 10 mins	No-EA-Noise, Chem

**IH EXPOSURE ASSESSMENT (EA)**

**NOISE\*:** Historical noise dosimetry indicates that the 8-hour TWA noise exposures of the 3 Rangemasters will exceed the NOEL.

-The calculated 8-hr TWA noise exposures of all others qualifying on weapons use will not exceed the NOEL based on very brief weapons firing time.

-The calculated noise exposures from operation of either forklift borrowed from the local Public Works Tool Room do not exceed the NOEL based on measured noise levels and brief duration of use.

**CHEMICALS:** -Petroleum distillate and other solvent exposure during lubrication of firearms is not expected to exceed the OELs based on small amounts of lubricant used per time; skin contact is prevented by use of gloves during the cleaning/lubrication process.

-\*Xylene, \*toluene and other solvent exposures during use of aerosol paint cans will not exceed the OELs based on minimal usage and dilution with outdoor air.

-\*Carbon monoxide levels for personnel standing sentry duty or operating forklifts are not expected to exceed the OELs based on dilution of vehicle exhaust with outdoor air.

-Previous monitoring data collected of the Rangemasters indicates that their \*lead exposures do not exceed the AL and PEL, and that their copper dust and fume exposures do not exceed the MSALs and OELs; since the exposure times of personnel firing the weapons during the qualification process are considerably shorter, their exposures are also expected to be well below these exposure standards.

**\* = reproductive hazard**

**WORKPLACE INFORMATION**

**Organization:** Naval Support Activity, Monterey | **Dept:** Police/Security Force

**IH EXPOSURE ASSESSMENT (EA) (continued)**

**BIOLOGICAL AGENTS:** Exposure to bloodborne pathogens (BBP) is not expected to occur if proper PPE is worn and proper control procedures outlined in the department's Exposure Control Plan (PPR-3) are followed.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):** -Ear muffs or plugs during weapons qualification.

-Latex or nitrile exam gloves during use of Break Free CLP, WD-40 or wherever the potential to bloodborne pathogens exists.

**RESPIRATORY PROTECTION:** Not required during operations listed above. Elective use of disposable Moldex Model 2200 N95 Particulate or Gerson Model 1740 N95 (respirator) dust masks during such activities as housecleaning and applying spray paint outdoors.

**ENGINEERING CONTROLS:** Not applicable.

**MONITORING PLAN**

POTENTIAL HAZARD	NUMBER OF MEASUREMENTS	METHOD OF MEASUREMENT 1	METHOD OF MEASUREMENT 2	FREQUENCY (per year)	MAN-HOURS (per year)
None					

Use the following codes: not applicable.

Signature: **Signed/**  
S. Eric Thurston, Industrial Hygienist

Date: 18 January 2012

**APPENDIX B  
HISTORICAL AIR  
SAMPLING RESULTS**

<u>DATE</u>	<u>JOB</u>	<u>STRESSOR</u>	<u>RESULTS</u>	<u>CRITERION</u>
1Sep99	(Outdoor) Rangemaster	Lead	0.005 mg/m3	AL = 0.03 mg/m3, PEL = 0.05 mg/m3
		Copper	0.0006 mg/m3	Dust PEL = 1 mg/m3, Fume PEL = 0.1 mg/m3
		Noise	98 dBA	NOEL = 84 dBA

**APPENDIX C  
MEASURED EQUIPMENT  
NOISE LEVELS**

The following noise measurements of forklifts borrowed from the local Public Works Tool Room were collected during the 2012 Public Works industrial hygiene survey:

<u>LOCATION</u>	<u>SOURCE</u>	<u>READING,</u> <u>dBA</u>	<u>HAZARD</u> <u>RADIUS, ft</u>
Bldg 426,	Hyster Forklift 13-98056	92	12
PW Tool Room	Hyster Forklift 13-98055	93	12

**APPENDIX D  
FIELD NOISE SURVEY FORMS**

The following noise measurements of the forklifts borrowed from the local Public Works, Monterey were collected during 2012 Public Works industrial hygiene survey:

<b>INDUSTRIAL HYGIENE NOISE SURVEY FORM</b>		
Date: <u>6 Apr 12</u> IH UIC: <u>39162</u> Activity: <u>NAVFAC SW Detachment, Monterey</u>		
Activity UIC: <u>45210</u> Shop: <u>Public Works, Tool Room</u>		
Location: <u>Bldg 426, Inside and Outside Public Works Compound</u>		
Area Posted: <input type="checkbox"/> Yes ( <input type="checkbox"/> Single or <input type="checkbox"/> Double) <input checked="" type="checkbox"/> No		
Hearing Protection In Use: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
<b>Sound Level Meter Results</b>		
Item #	#1	#2
Source Description	Hyster Gasoline Forklift	Hyster Gasoline Forklift
Machine#/USN#	13-98056	13-98055
Noise Pattern C = Continuous IN = Intermittent IM = Impulse/Impact	<b>XC</b> IN IM	<b>XC</b> IN IM
Noise Source Labeled	Yes <b>XNo</b>	Yes <b>XNo</b>
Noise Radius (ft)	N/A	N/A
Meter Response F = Fast S = Slow I = Impulse/Impact	F <b>XS</b> I	F <b>XS</b> I
Results	92 dBA	93 dBA
Comments: Use of single hearing protection (either ear plug or muffs) is needed when operating either forklift.		

SOUND LEVEL METER		MICROPHONE		CALIBRATOR	
Mfg: Quest		Mfg:		Mfg: SKC	
Model: 2400	Serial #: JN4040124	Model:	Serial #:	Model: QC-10	Serial #: QIH090060
Last Electro- acoustic Cal Date: 12 Jul 11	Next Electro- acoustic Cal Date: 12 Jul 12	Last Electro- acoustic Cal Date:	Next Electro- acoustic Cal Date:	Last Electro- acoustic Cal Date: 28 Jun 11	Next Electro- acoustic Cal Date: 28 Jun 12
Field Calibration: Pre Cal Date: <u>6 April 2012</u> Post Cal Date: <u>6 April 2012</u>					
Field Calibration OK: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Field Calibrated By: <u>Eric Thurston</u>					
Measurements Obtained: <input checked="" type="checkbox"/> Indoors <input checked="" type="checkbox"/> Outdoors					
Wind Screen: <input checked="" type="checkbox"/> Used <input checked="" type="checkbox"/> Not Used					
Sampler: <u>Eric Thurston</u>			Date Completed: <u>6 Apr 12</u>		
Reviewing IH: <u>Michael J. Puckett</u>			Date Reviewed: <u>24 Apr 12</u>		
Data Entered By: <u>Eric Thurston</u>			Date Entered: <u>6 Apr 12</u>		

**APPENDIX E**  
**LOCAL EXHAUST VENTILATION**  
**SYSTEM EVALUATION**

Local exhaust ventilation systems are not present in departmental spaces.

**APPENDIX F**  
**RESPIRATORY PROTECTION PROGRAM MATRIX**

<b>WORK TASK</b>	<b>REQUIRED RESPIRATOR</b>
CBRNE primary responder tasks and training	MSA full facepiece air-purifying respirator with NIOSH-approved CBRNE Agent cartridges

Additionally, disposable Moldex Model 2200 N95 Particulate or Gerson Model 1740 N95 (respirator) dust masks are worn on an elective basis during such activities as housecleaning and applying spray paint outdoors.

**APPENDIX G  
MEDICAL SURVEILLANCE MATRIX**

COMMAND: Naval Support Activity, Monterey DATE: April 2012  
DEPARTMENT: Police/Security Force

DESIGNATED PERSONNEL	MEDICAL SURVEILLANCE PROGRAM
Police Officers	Police/Security Guard (Code 714), Bloodborne Pathogens (Code 178), Respirator User Certification (Code 716)
Forklift Operators	Forklift Operator (Code 710)

1. The point of contact for scheduling occupational health exams is Anne Mountain, Occupational Health Technician at 831-242-4532, [anne.k.mountain@nps.edu](mailto:anne.k.mountain@nps.edu). **The Occupational Health Department's policy is for the supervisor(s) to contact them for scheduling exams instead of individual workers scheduling themselves.**

2. Only a baseline (initial) **Bloodborne Pathogens** exam is required. Additional evaluations would be necessary only in cases where actual contact with blood and/or body fluids occurs.

3. The frequency of the the **Respirator User** Certification exam is **based on age:**

- up to age 34: every 5 years
- age 35 to 44: every 2 years
- age 45 or older: annual

4. **The Police/Security Guard exams are required annually. In the past, the frequency of this exam was based on age.**

5. The **Forklift Operator** exam is required every 5 years except for those 60 years of age or older, where it is required annually.

6. Enrollment in additional surveillance programs may be prescribed separately by the NSAM Safety and Occupational Health Office based on their inspections and safety-related requirements.

**APPENDIX H  
TRAINING MATRIX**

COMMAND: Naval Support Activity, Monterey      DATE: April 2012  
 DEPARTMENT: Police/Security Force

PROCESS	ESAMS TRAINING MODULE
Weapons Rangemasters	Lead Awareness (322), Occupational Reproductive Hazard Awareness (1242), Hearing Conservation (110)
Weapons Qualification	Lead Awareness (322), Occupational Reproductive Hazard Awareness (1242)
Supervisors of Hazardous Materials Users	HAZCOM Training For Supervisors (1058)
Ear plugs or muffs, protective gloves, dust masks, or other PPE	PPE (Initial only) 1398

All training is required annually except as noted.

Per Chapter 6, Appendix 6-B of OPNAVINST 5100.23 personnel also need to receive documented initial hazardous materials training that includes discussion of their work center's MSDSs, with training repeated whenever new types of chemical products are introduced into the workplace. Note that the EXAMS HAZCOM Initial Training Module 1169 for users of hazardous materials has been eliminated since the previous survey.

Additional training for safety-related hazards or requirements may be identified separately by the NSAM Safety and Occupational Health Office, or as automatically prescribed by ESAMS when each individual user logs onto his or her account.

**APPENDIX I  
GLOSSARY**

<b>TERM</b>	<b>MEANING</b>
<b>AL</b>	Action Level - Normally half of PEL. Exposure level at which air sampling, employee training, and medical surveillance are required.
<b>ACGIH</b>	American Conference of Government Industrial Hygienist
<b>AC/HR</b>	Air Changes Per Hour
<b>ANSI</b>	American National Standards Institute
<b>AQS</b>	Air Quality Standard
<b>ASHRAE</b>	American Society of Heating, Refrigeration, and Air Conditioning Engineers
<b>ASTC</b>	Aviation Survival Training Center
<b>C</b>	Ceiling - Toxic material exposure level which cannot be exceeded for any length of time.
<b>CFM</b>	Cubic Feet Per Minute
<b>CFR</b>	Code of Federal Regulation
<b>EL</b>	Excursion Limit - Concentration limit which cannot be exceeded at any time.
<b>EAMP</b>	Exposure Assessment/Monitoring Program. A program to evaluate workplace health hazards through surveys and exposure measurement.
<b>EPA</b>	Environmental Protection Agency
<b>ERT</b>	Emergency Reclamation Team
<b>FC</b>	Footcandles
<b>F/CC</b>	Fibers Per Cubic Centimeter. A means for expressing airborne asbestos fiber concentrations.
<b>FeA</b>	Field Area
<b>FiA</b>	Filter Area
<b>FPM</b>	Feet Per Minute
<b>FT3</b>	Cubic Feet
<b>HDI</b>	Hexamethylene Diisocyanate
<b>HEPA</b>	High Efficiency Particulate Air
<b>HM</b>	Hazardous Material
<b>HMC&amp;M</b>	Hazardous Material Control and Management
<b>HW</b>	Hazardous Waste
<b>IES</b>	Illumination Engineering Society
<b>IH</b>	Industrial Hygiene
<b>L</b>	Liter
<b>LPM</b>	Liters Per Minute
<b>LOD</b>	Limit of Detection
<b>LOQ</b>	Limit of Quantitation

**APPENDIX I**  
**GLOSSARY**  
(continued)

<b>MG/M3</b>	Milligram Per Cubic Meter of air. A means of expressing concentrations of dust and metal fumes in the air.
<b>MSAL</b>	Medical Surveillance Action Level. Concentration of air contaminant at which medical surveillance examinations must be provided to exposed personnel.
<b>MSDS</b>	Material Safety Data Sheet. A form used by manufacturers to communicate to users the chemical and physical properties of their products.
<b>MSM</b>	Medical Surveillance Matrix
<b>NAVOSH</b>	Navy Occupational Safety and Health
<b>NEHC</b>	Navy Environmental Health Center
<b>NIOSH</b>	National Institute of Occupational Safety and Health
<b>OEL</b>	Occupational Exposure Limit
<b>OH/PM</b>	Occupational Health/Preventive Medicine
<b>OSHA</b>	Occupational Safety and Health Administration
<b>OV</b>	Organic Vapor
<b>PPE</b>	Personal Protective Equipment
<b>PPM</b>	Parts Per Million. A means of expressing the concentration of gases and vapors in the air.
<b>PSI</b>	Pounds Per Square Inch
<b>RF</b>	Radio Frequency
<b>SOP</b>	Standard Operating Procedure
<b>SQFT</b>	Square Feet
<b>STEL</b>	Short Term Exposure Limit. A 15 minute time weighted average exposure which should not be exceeded at anytime during a workday.
<b>STRESSOR</b>	Potential hazard (e.g. Noise, Chemicals, Dusts, etc.)
<b>TLV</b>	Threshold Limit Value. Established by ACGIH as levels of airborne contaminants or physical hazards under which it is believed workers may be exposed on a daily basis without adverse effect.
<b>TWA</b>	Time Weighted Average. A method of averaging varying concentrations over a specified period of time, usually 8 hours.
<b>UG</b>	Microgram
<b>VOL</b>	Volume
<b>&gt;</b>	Greater Than
<b>&lt;</b>	Less Than

**APPENDIX J  
CHANGE OF OPERATION NOTIFICATION**

Please use this form to notify the Industrial Hygienist of any changes to operations. This form needs to be completed and e-mailed to S. Eric Thurston, Industrial Hygienist at [sethurst@nps.edu](mailto:sethurst@nps.edu). In such cases, contact the Industrial Hygienist for a version whose fields can be filled by the user.

POINT OF CONTACT:

TELEPHONE:

E-MAIL ADDRESS:

BLDG/ROOM #:

COMMAND/DEPARTMENT/SHOP:

INSTRUCTIONS:

The routine industrial hygiene survey process evaluates potential hazards to employees based on existing operations at the time of the survey. When operations change, the potential hazards can also change, and these new conditions need to be evaluated. Please notify the Industrial Hygienist if any of the following occur:

- a. New operations with suspected health hazards are performed
- b. New chemical products are used (please attach a brief list and only the page(s) of associated MSDS's listing the product's manufacturer, product name, and the chemical ingredients)
- c. An increase in major chemical usage
- d. New equipment with potential noise hazards is used
- e. Other new equipment posing suspected or known health hazards, such as lasers, is used
- e. Exposure frequency and time changes of operations with potential or known health hazards
- f. A change in local exhaust ventilation systems

List any changes below.

---

---

---

---

Date forwarded: \_\_\_\_\_