



DEPARTMENT OF THE NAVY

NAVAL HOSPITAL, JACKSONVILLE
BRANCH CLINIC
MARINE CORPS LOGISTICS BASE
814 RADFORD BOULEVARD
ALBANY, GEORGIA 31704

6260y refer to:
Ser 452
08 Jul 09

From: Officer in Charge, Naval Branch Health Clinic, Albany, GA
To: Commanding Officer, Marine Corps Logistics Base, Albany, GA

Subj: COMPREHENSIVE INDUSTRIAL HYGIENE SURVEY OF BUILDINGS 3500, 3600
AND 3700

Ref: (a) OPNAVINST 5100.23G
(b) NAVMC DIR 5100.8

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

1. A comprehensive Industrial Hygiene Survey of buildings 3500, 3600, and 3700 was recently conducted as required by the references. The enclosures are provided for your information.
2. The Point of Contact for this report is the undersigned, and may be reached at DSN 567-7846 or commercial (229) 639-7846, or by E-mail at john.sorenson@med.navy.mil.


J. G. SORENSON
By direction

Copy to:
Facilities Manager, I&E Division, MCLB Albany
Risk Management Office, MCLB Albany
Occupational Health, NBHC Albany

Subj: COMPREHENSIVE INDUSTRIAL HYGIENE SURVEY, BUILDINGS 1638, 3010, 3500, 3600, 3610, 3700, AND 7104

EXECUTIVE SUMMARY

A comprehensive industrial hygiene survey of buildings 1638, 3010, 3500, 3600, 3700, 3610, and 7104 was conducted during the week of 29 June through 3 July 2009 by Mr. John Sorenson, Industrial Hygienist, of Naval Branch Health Clinic (NBHC) Albany. The purpose of this survey was to identify health hazards present, assess actual health risk, and recommend controls where needed, as well as to assess your Occupational Health program status. Buildings 1638, 3610 and 7104 are not normally part of this survey report. These buildings are temporary housing workers that have been displaced by the renovations of Building 3700 and therefore have been included in this survey.

No formal response to the NBHC Albany Industrial Hygiene Division is needed, although recommendations made in this report may be specified as items for mandatory corrective action by the MCLB Risk Management Department.

Elements of the Public Safety Department (PSD), Risk Management Office (RMO), and Logistics Support Department (LSD) are contained in these office spaces, but are not covered in this survey because each of these departments is covered in other Industrial Hygiene surveys.

The assistance of your the Facilities Manager, Mr. James White, greatly facilitated the completion of this survey and is much appreciated.

Attachment (1) to enclosure (2) of this report provides an overall evaluation summary. Attachment (2) provides building specific individual work center hazard assessments. These are intended to be disseminated to the individual shops. If there are any changes in work operations from what is described in this report, or if a focused health hazard evaluation of a specific work operation or new project is needed, please contact Mr. Sorenson, at the Naval Branch Health Clinic Albany, at 639-7846 or john.sorenson@med.navy.mil. He will coordinate industrial hygiene support.

The following issues were found during this survey:

Field Findings.

- Building 3700 is currently going through a major renovation. At the time of this survey the employees from the second floor are displaced to other areas of the base. The renovation of the first floor is complete and the third floor renovation is scheduled to be performed when the second floor is completed.
- Employee interviews did indicate some minor ergonomic and discomfort issues. All of the chairs are ergonomically adjustable. Employees should be trained in the importance of proper adjustment.

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- Although there have been Air Quality issues in some of these buildings in the recent past, there were no complaints received during this survey. Specifically, the employees who had complained about allergies in building 3600 reported that their symptoms have cleared since the HVAC system was cleaned.
- The sound level in the mail room (large envelop opening machine) of building 7104 was measured and determined not to be a hazard to the health of the operator or anybody in the area.

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**COMPREHENSIVE INDUSTRIAL HYGIENE SURVEY
MCLB ADMINISTRATIVE BUILDINGS, 2009**

Ref: (a) OPNAVINST 5100.23G, *Navy Occupational Safety and Health Program Manual*
(b) NAVMC DIR 5100.8, *Marine Corps Occupational Safety and Health (OSH) Program Manual*

Att: (1) Evaluation Summary
(2) Individual Hazard Assessment
(3) Survey Schedule for Individual Buildings
(4) Glossary of Terms

1. **Introduction.** As required by reference (a) and (b), a periodic industrial hygiene survey of the main office buildings onboard MCLB Albany was conducted during the week of 29 June through 03 July 2009. This report was conducted by Mr. John Sorenson, Head, Industrial Hygiene Division, Naval Branch Health Clinic, Albany, GA. The survey consisted of site visits, 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.** The purpose of this survey is to identify and assess chemical and physical health hazards that are present within the surveyed buildings, evaluate controls present and recommend modified or additional controls where necessary, and identify hazard-based medical surveillance needs. To this end, this survey contains the following:

a. An evaluation summary of NAVOSH programs, control measures, and hazard evaluations, provided as attachment (1).

b. The updated Individual Hazard Assessments for each building, provided in attachment (2). These describe significant operations/processes that may produce health hazardous exposures.

3. **Re-evaluation Schedule and Changes in the Workplace.** Please retain this report on file. NBHC Industrial Hygiene will re-evaluate these buildings at the frequency specified in attachment (3). All of these facilities have been classified as Category III and will, therefore, be scheduled for re-evaluation in four years. Any significant changes 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 re-evaluation of the affected area. NBHC Albany Industrial Hygiene should be notified of such changes.

EVALUATION SUMMARY
COMPREHENSIVE INDUSTRIAL HYGIENE SURVEY
BUILDINGS 1638, 3010, 3500, 3600, 3700, 3610, AND 7104

Reference Report

The most recent previous industrial hygiene survey report is BHC Albany Itr 6260/8D0700-AL04023 of 18 AUG 2004.

New or Significantly Modified Work Center Operations/Processes?

- No *significant* changes in operations/processes were identified. *
- The following changes were identified:

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

Program Findings and Recommendations

1. Medical Surveillance Program Status. Attachment (6) provides a summary of current medical surveillance needs.

- No Medical Surveillance is Recommended.
- Medical Surveillance is Recommended.
- No Change in Medical Surveillance Recommendations.
- Medical Surveillance Recommendations have changed as follows:

Comments:

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

- AUL Y N N/A Accurate Y N (where spot checked)
- MSDS Files Y N N/A Accurate Y N (where spot checked)
- HAZMAT Training Required? Y N (Note: IH does not track training completion).
- Other (lead, asbestos, etc): Lead Y N (Note: IH does not track training completion)

Comments: No hazardous chemicals are used in these office buildings. Cleaning chemicals used by contractor personnel are not stored in these buildings. Contractors carry their cleaning materials in with them when they arrive in the evening and carry them out when they depart each night.

3. Management of Reproductive Hazards:

- Reproductive Hazards Present? Y N
- Any change from previous survey? Y N

Comments:

4. Noise and Hearing Conservation Program (HCP):

- Are personnel recommended for the HCP? Y N
- Are personnel receiving audiograms? Y N Not All N/A or See Comments
- (Note: IH does not track training completion)
- Is hearing protection readily available? Y N N/A
- Is hearing protection used? Y N N/A Not Available for Observation

Comments:

- Hearing protection is not necessary in these buildings.

5. Respiratory Protection:

- Are respirators used to control workplace exposures? Y N Voluntary Use
- Are they effective? Y N N/A
- Is the Respiratory Protection Program satisfactory? Y N N/A

Comments: Respiratory protection is not necessary in these administrative buildings.

6. Ventilation:

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

Comments:

<p>7. Ergonomics: Ergonomic risk factors were identified pertaining to <input type="checkbox"/> shop work <input checked="" type="checkbox"/> office/computer work Available equipment/furniture incorporates good ergonomic design? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A Ergonomic training recommended? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N (Note: IH does not track training completion) Comments and/or Recommendations:</p>	<ul style="list-style-type: none"> Although the furniture used in these building is all ergonomically designed there were a few complaints of minor pain and discomfort.
<p>8. Other Applicable Programs: <input type="checkbox"/> Lead Control <input type="checkbox"/> Asbestos Control <input type="checkbox"/> Carcinogens <input type="checkbox"/> Other Comments:</p>	
<p>Consultative or Special Surveys/Findings Since the Previous Survey: <input type="checkbox"/> (check if none)</p> <p>Air sampling of Buildings 3600 and 3010 for mold analysis was performed in May 2009. The lab analysis indicated that there were no elevated levels of mold present.</p> <p>The large envelop opener in the mail room on the second floor of building 7104 was monitored for sound level. It operated between 72 dBA and 78 dBA with peaks to the lower 80s. No health hazard was observed.</p>	
<p>Changes to Specific Workplace Evaluations and Monitoring Plan</p>	
<p>1. Workplace Assessments: <input checked="" type="checkbox"/> No significant change to workplace assessment information was identified. <input type="checkbox"/> The following significant workplace assessment changes were identified: Comment: There were no large-scale changes in operations as compared to the prior industrial hygiene survey. Additional operations were identified and are reported, but these generally will not result in health hazardous exposures.</p>	
<p>2. Exposure Assessment: <input type="checkbox"/> New exposure data were obtained since the prior evaluation and are summarized below. <input checked="" type="checkbox"/> No change in any exposure assessment was identified as part of the survey or from sampling data. <input type="checkbox"/> The following changes in exposure assessments were identified: Comments:</p>	
<p>3. Findings and Recommendations: <input checked="" type="checkbox"/> There were no significant findings identified during this survey that require corrective action. <input type="checkbox"/> The following significant findings were identified:</p>	
<p>4. Exposure Monitoring Plan. <input type="checkbox"/> Exposure Monitoring needs were identified <input checked="" type="checkbox"/> No Exposure Monitoring needs were identified. <input checked="" type="checkbox"/> There are no changes to the previous Exposure Monitoring Plan.</p>	
<p>Additional Comments:</p> <ul style="list-style-type: none"> Buildings 1638, 3610 and 7104 are not normally part of this survey report. These buildings are temporary housing workers that have been displaced by the renovations of Building 3700 and therefore have been included in this survey. Elements of the Public Safety Department (PSD), Risk Management Office (RMO), and Logistics Support Department (LSD) are contained in these office spaces, but are not covered in this survey because each of these departments is covered in other Industrial Hygiene surveys. 	

INDIVIDUAL HAZARD ASSESSMENT			DATE: 01 July 2009	
Recorded by: John Erenson Signature: <i>John Erenson</i> Command: MCLB and LOGCOM Shop Name: Building 1638			POC: James White PHONE: 639-8215 TOTAL PERSONNEL: 70 MALE: 22 FEMALE: 48	
Shop Operations: Administrative offices. Workers in these offices conduct meetings, write, and process paper work. They operate computers, copy machines, facsimile machines and other standard office equipment.				
HEALTH HAZARDOUS STRESSORS AND ASSOCIATED OPERATIONS	DURATION / FREQUENCY OF EXPOSURE	NO. OF WORKERS	CONTROLS	EXPOSURE ASSESSMENT (1)
Office and desk work: Ergonomics	8 hrs per day	70	Education and training	Acceptable
1. USE THE FOLLOWING EXPOSURE CODES: ACCEPTABLE - ONE WHERE THE IH WILL NOT EXPECT THE SEG 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 JUDGMENT. UNACCEPTABLE - ONE WHERE THE IH WILL EXPECT THE SEG TO BE EXPOSED ABOVE THE SELECTED OEL. SKIN - THE MATERIAL POSES A SKIN ABSORPTION HAZARD REPRODUCTIVE HAZARD - THE MATERIAL IS A NAVY-RECOGNIZED REPRODUCTIVE HAZARD CARCINOGEN - THE MATERIAL CONTAINS > 0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN				

INDIVIDUAL HAZARD ASSESSMENT			DATE: 30 June 2009	
Recorded by: John Sorenson Signature: <i>John C. Sorenson</i> Command: MCLB and LOGCOM Shop Name: Building 3500			POC: James White PHONE: 639-8215 TOTAL PERSONNEL: 400 MALE: 128 FEMALE: 272	
Shop Operations: Administrative offices. Workers in these offices conduct meetings, write, and process paper work. They operate computers, copy machines, facsimile machines and other standard office equipment.				
HEALTH HAZARDOUS STRESSORS AND ASSOCIATED OPERATIONS	DURATION / FREQUENCY OF EXPOSURE	NO. OF WORKERS	CONTROLS	EXPOSURE ASSESSMENT (1)
Office and desk work: Ergonomics	8 hrs per day	400	Education and training	Acceptable
1. USE THE FOLLOWING EXPOSURE CODES: ACCEPTABLE - ONE WHERE THE IH WILL NOT EXPECT THE SEG 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 JUDGMENT. UNACCEPTABLE - ONE WHERE THE IH WILL EXPECT THE SEG TO BE EXPOSED ABOVE THE SELECTED OEL. SKIN - THE MATERIAL POSES A SKIN ABSORPTION HAZARD REPRODUCTIVE HAZARD - THE MATERIAL IS A NAVY-RECOGNIZED REPRODUCTIVE HAZARD CARCINOGEN - THE MATERIAL CONTAINS > 0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN				

INDIVIDUAL HAZARD ASSESSMENT			DATE: 30 June 2009	
Recorded by: John Sorenson Signature: <i>John C. Sorenson</i> Command: MCLB, Post Office and LOGCOM Shop Name: Building 3600			POC: James White PHONE: 639-8215 TOTAL PERSONNEL: 7 MALE: 5 FEMALE: 2	
Shop Operations: Administrative offices. Workers in these offices conduct meetings, write, and process paper work. They operate computers, copy machines, facsimile machines and other standard office equipment.				
HEALTH HAZARDOUS STRESSORS AND ASSOCIATED OPERATIONS	DURATION / FREQUENCY OF EXPOSURE	NO. OF WORKERS	CONTROLS	EXPOSURE ASSESSMENT (1)
Office and desk work: Ergonomics	8 hrs per day	7	Education and training	Acceptable
1. USE THE FOLLOWING EXPOSURE CODES: ACCEPTABLE - ONE WHERE THE IH WILL NOT EXPECT THE SEG 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 JUDGMENT. UNACCEPTABLE - ONE WHERE THE IH WILL EXPECT THE SEG TO BE EXPOSED ABOVE THE SELECTED OEL. SKIN - THE MATERIAL POSES A SKIN ABSORPTION HAZARD REPRODUCTIVE HAZARD - THE MATERIAL IS A NAVY-RECOGNIZED REPRODUCTIVE HAZARD CARCINOGEN - THE MATERIAL CONTAINS > 0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN				

INDIVIDUAL HAZARD ASSESSMENT			DATE: 01 July 2009	
Recorded by: John Sorenson Signature: <i>John Sorenson</i> Command: MCL, NCC, and LOGCOM Shop Name: Building 3010			POC: James White PHONE: 639-8215 TOTAL PERSONNEL: 40 MALE: 17 FEMALE: 23	
Shop Operations: Administrative offices. Workers in these offices conduct meetings, write, and process paper work. They operate computers, copy machines, facsimile machines and other standard office equipment.				
HEALTH HAZARDOUS STRESSORS AND ASSOCIATED OPERATIONS	DURATION / FREQUENCY OF EXPOSURE	NO. OF WORKERS	CONTROLS	EXPOSURE ASSESSMENT (1)
Office and desk work: Ergonomics	8 hrs per day	40	Education and training	Acceptable
1. USE THE FOLLOWING EXPOSURE CODES: ACCEPTABLE - ONE WHERE THE IH WILL NOT EXPECT THE SEG 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 JUDGMENT. UNACCEPTABLE - ONE WHERE THE IH WILL EXPECT THE SEG TO BE EXPOSED ABOVE THE SELECTED OEL. SKIN - THE MATERIAL POSES A SKIN ABSORPTION HAZARD REPRODUCTIVE HAZARD - THE MATERIAL IS A NAVY-RECOGNIZED REPRODUCTIVE HAZARD CARCINOGEN - THE MATERIAL CONTAINS > 0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN				

INDIVIDUAL HAZARD ASSESSMENT			DATE: 30 June 2009	
Recorded by: John Sorenson Signature: <i>John Sorenson</i> Command: LOGCOM Shop Name: Building 3700			POC: James White PHONE: 639-8215 TOTAL PERSONNEL: 350 MALE: 224 FEMALE: 126	
Shop Operations: Administrative offices. Workers in these offices conduct meetings, write, and process paper work. They operate computers, copy machines, facsimile machines and other standard office equipment.				
HEALTH HAZARDOUS STRESSORS AND ASSOCIATED OPERATIONS	DURATION / FREQUENCY OF EXPOSURE	NO. OF WORKERS	CONTROLS	EXPOSURE ASSESSMENT (1)
Office and desk work: Ergonomics	8 hrs per day	350	Education and training	Acceptable
<p>1. USE THE FOLLOWING EXPOSURE CODES:</p> <p>ACCEPTABLE - ONE WHERE THE IH WILL NOT EXPECT THE SEG TO BE EXPOSED ABOVE THE SELECTED OEL.</p> <p>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 JUDGMENT.</p> <p>UNACCEPTABLE - ONE WHERE THE IH WILL EXPECT THE SEG TO BE EXPOSED ABOVE THE SELECTED OEL.</p> <p>SKIN - THE MATERIAL POSES A SKIN ABSORPTION HAZARD.</p> <p>REPRODUCTIVE HAZARD - THE MATERIAL IS A NAVY-RECOGNIZED REPRODUCTIVE HAZARD</p> <p>CARCINOGEN - THE MATERIAL CONTAINS > 0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN</p>				

INDIVIDUAL HAZARD ASSESSMENT			DATE: 01 July 2009	
Recorded by: John Sorenson Signature: <i>John Sorenson</i> Command: MCLB and LOGCOM Shop Name: Building 7104			POC: James White PHONE: 639-8215 TOTAL PERSONNEL: 70 MALE: 15 FEMALE: 55	
Shop Operations: Administrative offices. Workers in these offices conduct meetings, write, and process paper work. They operate computers, copy machines, facsimile machines and other standard office equipment.				
HEALTH HAZARDOUS STRESSORS AND ASSOCIATED OPERATIONS	DURATION / FREQUENCY OF EXPOSURE	NO. OF WORKERS	CONTROLS	EXPOSURE ASSESSMENT (1)
Office and desk work: Ergonomics	8 hrs per day	70	Education and training	Acceptable
Operation of large envelop opening machine: Noise	Every day for 10 minutes.	1	Ear plugs of muffs may be used but not required.	Acceptable: Sound levels do not exceed Navy Standard and duration and frequency of exposure are short. Noise is a Navy recognized reproductive hazard.
<p>1. USE THE FOLLOWING EXPOSURE CODES:</p> <p>ACCEPTABLE - ONE WHERE THE IH WILL NOT EXPECT THE SEG TO BE EXPOSED ABOVE THE SELECTED OEL.</p> <p>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 JUDGMENT.</p> <p>UNACCEPTABLE - ONE WHERE THE IH WILL EXPECT THE SEG TO BE EXPOSED ABOVE THE SELECTED OEL.</p> <p>SKIN - THE MATERIAL POSES A SKIN ABSORPTION HAZARD</p> <p>REPRODUCTIVE HAZARD - THE MATERIAL IS A NAVY-RECOGNIZED REPRODUCTIVE HAZARD</p> <p>CARCINOGEN - THE MATERIAL CONTAINS > 0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN</p>				

INDIVIDUAL HAZARD ASSESSMENT			DATE: 01 July 2009	
Recorded by: John Sorenson Signature: <i>John Sorenson</i> Command: MCLB and LOGCOM Shop Name: Building 3610			POC: James White PHONE: 639-8215 TOTAL PERSONNEL: 50 MALE: 31 FEMALE: 19	
Shop Operations: Administrative offices. Workers in these offices conduct meetings, write, and process paper work. They operate computers, copy machines, facsimile machines and other standard office equipment.				
HEALTH HAZARDOUS STRESSORS AND ASSOCIATED OPERATIONS	DURATION / FREQUENCY OF EXPOSURE	NO. OF WORKERS	CONTROLS	EXPOSURE ASSESSMENT (1)
Office and desk work: Ergonomics	8 hrs per day	50	Education and training	Acceptable
1. USE THE FOLLOWING EXPOSURE CODES: ACCEPTABLE - ONE WHERE THE IH WILL NOT EXPECT THE SEG 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 JUDGMENT. UNACCEPTABLE - ONE WHERE THE IH WILL EXPECT THE SEG TO BE EXPOSED ABOVE THE SELECTED OEL. SKIN - THE MATERIAL POSES A SKIN ABSORPTION HAZARD REPRODUCTIVE HAZARD - THE MATERIAL IS A NAVY-RECOGNIZED REPRODUCTIVE HAZARD CARCINOGEN - THE MATERIAL CONTAINS > 0.1% OF AN OSHA, ACGIH, IARC, OR NTP-RECOGNIZED CARCINOGEN				

**CONSOLIDATED SURVEY SCHEDULE FOR INDIVIDUAL SHOPS
MCLB Albany Administrative Buildings**

This table shows the frequency of survey and the year of next survey due for MCLB administrative buildings.

Hazard categories are as follows:

- High Hazard (Category I), surveyed annually: Commands/activities or components of commands/activities where exposures to chemical/physical stressors routinely exceed published exposure limits, or could exceed these limits if controls in place fail. These activities or components will have an active exposure monitoring plan in place and will also have personnel recommended for enrollment in medical surveillance program(s).
- Moderate Hazard (Category II), surveyed every two years: Commands/activities or components of commands/activities where chemical/physical stressors are used, but do not routinely exceed published exposure limits. These activities or components will not have an active exposure monitoring plan in place, although exposure assessment (non-routine) monitoring or continuing evaluation of ventilation systems may be specified at the discretion of the cognizant industrial hygienist. They will generally not have personnel recommended for enrollment in medical surveillance program(s); or if so, their enrollment is based on well characterized hazards.
- Low Hazard (Category III), surveyed every four years: All other commands/activities or components of commands/activities with primarily office or classroom work.

NOTE: Shops that are entirely staffed by contractor personnel will not receive an industrial hygiene survey. At this time it is outside the mandate of BUMED Industrial Hygiene to provide services to contractors.

Department	Risk Category	Next Due
Building 1638	III	July 2013
Building 3010	III	July 2013
Building 3500	III	July 2013
Building 3600	III	July 2013
Building 3610	III	July 2013
Building 3700	III	July 2013
Building 7104	III	July 2013

GLOSSARY OF TERMS

AABA: Ambient Air Breathing Apparatus. Unlike compressors used for breathing air for atmosphere supplying respirators which must be tested quarterly to ensure that at least Grade D quality air is supplied to respirator wearers; AABAs are exempt from quarterly Grade D air quality testing.

NOTE: AABA air intakes must be located in fresh clean ambient air.

Acceptable (in the context of exposure assessment): Exposure estimate of similar exposure group is less than half (50%) of the occupational exposure limit (OEL). *See also Action Level.*

ACGIH[®]: American Conference of Governmental Industrial Hygienist is an independent standard setting group who develops Threshold Limit Values[®], the workplace exposure limit recommended by the American Conference of Governmental Industrial Hygienists. Examples of this include annual editions of the *TLVs[®] and BEIs[®]* and work practice guides. *See also TLV[®] (Threshold Limit Value); TWA (Time-Weighted Average); STEL (Short-Term Exposure Limit); and Ceiling Limit*

Action Level: Unless otherwise specified in a NAVOSH standard, one-half the relevant PEL, TLV[®], etc. *See also Occupational Exposure Limit (OEL).*

Administrative Control: Procedures and practices that limit exposure to harmful physical or chemical agents by control or manipulation of work schedule or the manner in which work is performed. Administrative controls reduce the exposure to stressors and thus reduce the cumulative dose to any one worker. If unable to alter the job or workplace to reduce the stressors, administrative controls should be used. Administrative controls are most effective when used in combination with engineering controls.

AUL: Authorized User List: A listing of chemicals whose use is authorized by for a department, shop or other entity.

BBP: Blood-Borne Pathogen: Pathogenic microorganisms transmissible by exposure to blood and other potentially infectious materials, and include Hepatitis B Virus (HBV), Hepatitis C, and Human Immune Deficiency Virus (HIV), as well as syphilis and malaria.

Carcinogen: The material contains greater than or equal to 0.1% OF AN Occupational Safety and Health Administration (OSHA), American Conference of Governmental Industrial Hygienist (ACGIH), International Agency for Research on Cancer (IARC), or National Toxicology Program (NTP)-recognized carcinogen.

Ceiling Limit- TLV[®]: (TLV-C): Is a concentration that should not be exceeded during any part of the workday (as recommended by the ACGIH). *See also OEL*

Concentration: The quantity of a substance per unit volume (in appropriate units). The following are examples of concentration units. *See unit examples below*

Mg/m ³	Milligrams per cubic meter	Unit of airborne concentration for gases, vapors, fumes, and/or dusts
µg/m ³	Micrograms per cubic meter	Unit of airborne concentration for gases, vapors, fumes, and/or dusts
PPM	Parts per million (air)	Unit of airborne concentration for vapors or gases
Fibers/cc or f/cc	Fibers per cubic centimeter	A unit of measure for fibrous airborne particulates such as asbestos fibers.
Mppcf	Millions of particles per cubic foot	A unit used for airborne dusts based on particle counts & which has virtually been eliminated from routine use.

CHRIMP: The Consolidated Hazardous Material Reutilization and Inventory Management Program serves as a fundamental element of the Navy's life-cycle control and management of Hazardous Materials.

Contaminant: A material or agent in concentrations higher than those normally present in the atmosphere, e.g., dust, fume, gas, mist or vapor, which can be harmful, irritating, or a nuisance.

Decibel-dB: A unit used to express sound pressure levels; specifically, 20 times the logarithm of the ratio of the measured sound pressure to a reference quantity, 20 micro-pascals (0.0002 microbars).

dBA or dBA_s: A sound level reading in decibels as measured on the A-weighted network of a sound level meter. (See A-weighted Sound Level) Sometimes referred to as dBA, meaning A-weighted Sound level, where the sound level meter is set to "slow response." A -weighted sound pressure is designated to approximate the response of the human ear to sound.

DV: Dilution Ventilation – An engineering control strategy which relies upon the dilution of potential contaminants with fresh (outside) air thus reduces the concentration of potential contaminants to acceptable levels.

EPA: United States **E**nvironmental **P**rotection **A**gency is a federal agency charged with the promulgation and enforcement of environmental regulations. Their mission includes Air, Water and Waste regulation to protect the public and the environment.

Ergonomic Hazards: Workplace conditions that pose a biomechanical stress to a worker's body as a consequence of posture and force requirements, work/rest regimens, repetition rate, or other similar factors. Faulty work station layout, improper work methods, or tools may contribute to such conditions.

Ergonomics: The study of the design of work in relation to the physiological and psychological capabilities of people. The aim of the discipline is the evaluation and design of facilities, environments, jobs, training methods, and equipment to match the capabilities of users and workers, and thereby to reduce fatigue, error, or unsafe acts.

AND / OR

Ergonomics is the field of study that involves the application of knowledge about physiological, psychological and biomechanical capacities and limitations of the human body. This knowledge is applied in the planning, design, and evaluation of work environments, jobs, tools and equipment to enhance worker performance, safety and health and reducing the potential for fatigue, error, or unsafe acts.

Ergonomics is essentially fitting the workplace to the worker. The application of knowledge about physiological, psychological and biomechanical capacities and limitations of the human body to work environments, jobs, tools and equipment to enhance worker performance, safety and health and to reduce the potential for fatigue, error, or unsafe acts.

Fibers per cubic centimeter (fibers/cc): Unit of measure used to describe the concentration of asbestos or manmade fibers in air. This unit is often used to describe airborne or occupational inhalation exposure potential and in describing recommended control limits.

Hazardous Chemical: Any chemical that is a physical hazard or a health hazard per 29 CFR Section 1910.1200(c), and with some exceptions as specified in the Community Right to Know Law of 1986 (Superfund Amendments and Reauthorization Act [SARA], Title III). See "*Hazardous Material.*"

Hazardous Material (HM): For the purposes of the Material Safety Data Sheet (MSDS), a hazardous material is defined as a material having one or more of the following characteristics:

- (a) Has a flashpoint below 200°F (93.3°C) closed cup, or is subject to spontaneous heating or is subject to polymerization with release of large amounts of energy when handled, stored, and shipped without adequate control.
- (b) Has a threshold limit value (TLV) below 1000 ppm for gases and vapors, below 500 mg/m³ for fumes, and below 30 mppcf for dusts.
- (c) A single oral dose which will cause 50 percent fatalities to test animals when administered in doses of less than 500 mg per kilogram of test animal weight.
- (d) Is a strong oxidizing or reducing agent.
- (e) Causes first degree burns to skin in short time exposure or is systematically toxic by skin contact.
- (f) In the course of normal operations, may produce dusts, gases, fumes, vapors, mists, or smokes with one or more of the above characteristics.

- (g) Produces sensitizing or irritating effects.
- (h) Is radioactive.
- (i) The item has special characteristics, which in the opinion of the manufacturer could cause harm to personnel if used or stored improperly.

Hazardous Substance: Any substance that, because of its quantity, concentration, or hazardous properties, may pose a substantial hazard to human health or the environment when purposely released or accidentally spilled.

HCP: Hearing Conservation Program – Such programs typically include: monitoring, audiometric testing, hearing protectors, training, and recordkeeping requirements.

IHFOM: The Navy Industrial Hygiene Field Operations Manual
<http://www-nehc.med.navy.mil/ih/ihfom.htm>

L_{avg} : Best described as the Average Sound Level over the period of the measurement. Usually measured A-weighted but there is no time constant applied. As it is an average, it will settle to a steady value, making it much easier to read accurately than with a simple instantaneous Sound Level. Being an average, it is also showing the total energy of the noise being measured, so it is a better indicator of potential hearing damage or the likelihood that the noise will generate complaints.

LEV: Local Exhaust Ventilation – an engineering control form which relies on exhaust systems equipped with specially designed ‘hoods’ which capture dusts, fumes, mists, gases or vapors to prevent or reduce the inhalation contaminants.

Mandatory

1. authoritatively ordered; obligatory; compulsory: *It is mandatory that all personnel show ID badges when entering the gate.*
2. permitting no option; not to be disregarded or modified: *e.g. a mandatory requirement*

MCE Filter: Mixed Cellulose Ester membrane filters – a type of sampling media used to collect specific particulates as a part of Industrial Hygiene evaluation.

Micrograms per cubic meter ($\mu\text{g}/\text{cu.m.}$ or $\mu\text{g}/\text{m}^3$): A unit of measure for exposures to materials based on mass per unit volume. A microgram represents one millionth of a gram of material. *See also Milligrams per cubic meter and parts per million*

Milligrams per cubic meter ($\text{mg}/\text{cu.m.}$ or mg/m^3): A unit of measure for exposures to materials based on mass per unit volume. A milligram represents one thousandth of a gram of material. *See also Micrograms per cubic meter and parts per million.*

Monitoring, Industrial Hygiene: Measurement of the amount of contaminant or physical stress reaching the worker in the environment.

Monitoring, Medical Surveillance: The preplacement and periodic evaluation of the health status of workers exposed to toxic substances or physical agents in the workplace. Measures the effects of contaminant on a workers body functions and tissues, e.g., decreased lung function, dermatitis, and abnormal blood count.

MSAL: Medical Surveillance Action Level; The recommended threshold at which ongoing medical surveillance should be initiated as an additional assurance that clinical health effects are not occurring. Medical surveillance may be specified by standard or voluntarily adhered to by convention. *See also Action Level*

Navy Occupational Safety and Health (NAVOSH) Standards; Occupational safety and health standards published by the Navy which include, are in addition to, or are alternatives for the OSHA standards which prescribe conditions and methods necessary to provide a safe and healthful working environment.

NEHC: Navy Environmental Health Center

NIOSH: The National Institute for Occupational Safety and Health is the federal agency that tests equipment, evaluates and approves respirators, conducts studies of workplace hazards, and proposes occupational exposure standards to OSHA.

NOAA: The National Oceanic and Atmospheric Administration is a federal agency focused on the condition of the oceans and the atmosphere.

NOEL: Navy Occupational Exposure Limit

Noise: Noise is defined as unwanted sound.

Noise Exposure: Personal exposure to a combination of sound levels at various intensities and durations.

Occupation Exposure Limit (OEL): The exposure limit used by a health professional to help determine a workers' or populations' health risk from exposure to a hazard. "OEL" is a generic term used to apply to all exposure limits, to include: DoD standards from DoD 6055.1, Occupational Safety and Health Administration (OSHA), Permissible Exposure Limits (PELs), DoD Component standards, military deployment environmental health limits, American Conference of Governmental Industrial Hygienists (ACGIH[®]), Threshold Limit Values[®] (TLVs[®]), National Institute for Occupational Safety and Health (NIOSH) Recommended Exposure Limits (RELs), and other exposure limits reviewed for potential use.

Occupational Health: That multidisciplinary field of preventive medicine that is concerned with the promotion and maintenance of the highest degree of physical, mental and social well being of workers in all occupations, and the prevention and/or treatment of illness or injury induced by factors in the workplace. The major disciplines involved are: occupational medicine, occupational health nursing, epidemiology, toxicology, audiology, industrial hygiene, ergonomics, and health physics. Activities include the design, implementation and evaluation of comprehensive health and safety programs that promote employee health and safety in the workplace.

OEL: *See Occupational Exposure Limit*

OSHA: (a) Occupational Safety and Health Act, or

(b) Occupational Safety and Health Administration, Department of Labor (DOL), the federal agency which adopts and enforces health and safety standards.

Peak Noise Level: The true peak value is the maximum value of the noise waveform. The impulse measurement is an integrated measurement. The true peak reading should only be used when determining compliance with OSHA's 140 dB peak sound pressure level [1910.95(b)(1) or 1926.52(e)].

Note: The user should *not* use "impulse" response when measuring true peak sound pressure levels.

PEL: Permissible Exposure Limit – The maximum permissible concentration of a toxic chemical or exposure level of a harmful physical agent (normally averaged over an 8-hour period) that an employee may be exposed. This term is applied to OSHA regulated limits.

Potentially Hazardous Noise: Exposure to greater than the Navy Occupational Exposure Limit of 84 dBA sound level or 140 dB peak sound pressure level for impulse noise. The safe exposure time (T) for periods of less than 16 hours in any 24-hour period may be determined by using the equation:

$$T = 16/2^{[(L-90)/4]}$$

Where T = time in hours

L = effective sound level in dBA

Potentially Hazardous Noise Area: Any work area where the A-weighted sound level (continuous or intermittent) is greater than 84 dBA or any work area where the peak sound pressure level exceeds 140 dB.

PPE: Personal Protective Equipment – See *Protective Clothing and Protective Equipment*.

ppb: Parts Per Billion - A measure of concentration used much like percent. One part per billion represents 0.000001% and conversely, one percent is equivalent to 10,000,000 ppb.

ppm: Parts Per Million – A measure of concentration used much like percent. One part per million represents 0.001% and conversely, one percent is equivalent to 10,000 ppm.

Protective Clothing: An article of clothing furnished to an employee at government's (as the employer's) expense and worn for personal safety and protection in the performance of work assignments in potentially hazardous conditions.

Protective Equipment: A device or item to be worn, used, or put in place for the safety or protection of an individual or the public at large, when performing work assignments in or entering hazardous areas or under hazardous conditions. Equipment includes hearing protection, respirators, electrical matting, barricades, traffic cones, lights, safety lines, life jackets, etc.

Prudent Practice: Generally accepted reasonable and prudent practice. "A prudent or good practice" involves not only accepted customary practices, but also prudent behavior in terms of the risks of violation of law or regulation, that is, the risk of adverse publicity for the institution and the risk of injury and/or damages.

PVC Filter: Poly Vinyl Chloride filters – a type of sampling media used to collect specific particulates as a part of Industrial Hygiene evaluation.

Reproductive Hazard: Any occupational stressor (biohazard, chemical, or physical) that has the potential to adversely affect the human reproductive and/or developmental process.

RPP: Respiratory Protection Program

SCBA: A type of Positive pressure respirator, Self-Contained Breathing Apparatus – a form of respiratory protection which relies on bottled breathing air (worn by the user) as the source of air to be breathed by the wearer. Most typically, these devices are equipped with a full face mask which also serves to protect the wearer’s face and eyes from incident splash and or gas/vapor contact.

SLM: Sound Level Meter – a device for measuring sound or noise levels

SPL: Sound Pressure Level – a term used in discussion of sound or noise measurements.

STEL: Short-Term Exposure Limit – Type of Threshold Limit Value, (workplace exposure limit) recommended by the American Conference of Governmental Industrial Hygienists® (ACGIH®). A concentration to which workers can be exposed for a short periods of time (15 min.) without adverse affect. The STEL supplements the TLV® and is recommended where toxic effects have been reported for short-term exposures. *See also Threshold Limit Value (TLV®).*

TLV®: Threshold Limit Values® are established by the American Conference of Governmental Industrial Hygienists® (ACGIH®). TLVs refer to airborne concentrations of a substance and represent conditions under which it is believed that nearly all workers may be exposed day after day without adverse effect. *See also TWA, STEL and Ceiling Limits.*

TLV-C: *See Ceiling Limit - TLV*

TWA: Time-Weighted Average - Occupational exposure limit guideline - An average value weighted in terms of the actual time that it exists during a given time interval. That is, across a sampling period, an 8-hour work day, etc. *See also OEL, PEL, REL, and TLV®.*

Unacceptable (in the context of exposure assessment): Exposure estimate of similar exposure group is greater than (100%) of the occupational exposure limit (OEL). *See OEL.*

Uncertain (in the context of exposure assessment): Additional data is needed to clarify the exposure. Measurements, further fact-finding or sample collection may be necessary in order to resolve an exposure assessment.

UV: Ultra Violet light: Ultraviolet rays have wavelengths shorter than visible rays. So short that they are not part of the visible light spectrum.

WBGT: The wet-bulb globe temperature is considered the most practical heat stress index, characterizing the effect of a heat stress environment on the individual. WBGT was developed because the dry-bulb temperature alone does not provide a realistic guide to the effects of heat, inasmuch as it does not take humidity and heat radiation into consideration. The WBGT is used in setting the weather “Flag” (white, green, yellow, red, or black) conditions used to communicate the relative risk of heat stress during outdoor work or exercise.