From: Officer in Charge, Naval Medical Administrative Unit, Monterey  
To: Commanding Officer, Naval Postgraduate School, Monterey,  
1 University Circle, Monterey CA 93943-5100  

Subj: BASELINE INDUSTRIAL HYGIENE SURVEY OF NAVAL POSTGRADUATE SCHOOL,  
MONTEREY, SECURITY MANAGEMENT DEPARTMENT (CODE N14)  

Ref: (a) OPNAVINST 5100.23E, Section 0803.a  
Encl: (1) Industrial Hygiene Survey Report ET-0063  

1. As required by reference (a), a baseline industrial hygiene survey of the  
Naval Postgraduate School, Monterey, Security Management Department (Code 005)  
was conducted on 5 April 2000 by the Naval Medical Administrative Unit,  
Monterey Industrial Hygienist. The survey report ET-0063 is forwarded as  
enclosure (1).  

2. Due to the size and complexity of your command, separate reports will be  
issued as surveys of individual areas are completed to ensure the timeliness  
of the information. This survey is a service provided under the overall  
Occupational Health Program. It is not an inspection report but is designed  
to assist your Command's Occupational Safety and Health Program by identifying  
and evaluating actual and potential occupational health hazards and the status  
of their controls.  

3. The Navy Oversight Inspection Unit and other inspection teams rely on these  
surveys and the corrective actions taken as indicators of an aggressive and  
comprehensive Navy Occupational Safety and Health (NAVOSH) Program. A  
response to this report is unnecessary since no findings were noted and  
correction actions are not required.  

4. Further clarification or consultation with respect to these findings and  
recommendations is available from Eric Thurston at commercial (831) 656-3466.  

S.E. THURSTON  
By direction  

Copy to:  
Administrative Support Department, NAVHOSP Lemoore  
Industrial Hygiene Dept, NAVHOSP Lemoore  
Army Medical Clinic, POM/DLI, Occ Med Div
NAVAL MEDICAL ADMINISTRATIVE UNIT, MONTEREY
INDUSTRIAL HYGIENE SURVEY
of
NAVAL SUPPORT ACTIVITY, MONTEREY BAY
SECURITY MANAGEMENT DEPARTMENT (CODE 005)
SURVEY #ET-0063
5 April 2000

Survey Conducted By: Eric Thurston,
Industrial Hygienist
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</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

No occupational health hazards or deficiencies were noted. Personnel do not use chemicals and are not exposed to physical hazards. No problems involving the ergonomics program were noted. Other occupational health programs are unnecessary.

Specific details of these findings can be found in sections II and III of this report. The cooperation of your staff was greatly appreciated.
COMMON ABBREVIATIONS AND GLOSSARY

(The following abbreviations may be used in this report)

ACGIH  American Conference of Governmental Industrial Hygienists
ACM  Asbestos Containing Material.
AL  Action Level. Normally ½ PEL. Exposure level at which air sampling, employee training, medical surveillance are required.
ANSI  American National Standards Institute. A national consensus standards developing organization.
Ceiling  A toxic material exposure level which cannot be exceeded for any length of time.
CFM  Cubic feet per minute. Air flow rate.
dBA  A sound level reading in decibels as measured on the A-weighted network of a sound level meter.
EL  Excursion Limit. Is a concentration limit which cannot be exceeded at any time.
EPA  Environmental Protection Agency.
f/cc  Fibers per cubic centimeter. A means for expressing airborne asbestos fiber concentrations.
FPM  Feet per minute.
HAZCOM  Hazard communication. A system for training employees about job hazards through the use of chemical inventories, MSDSs, labels, and personnel training.
HCP  Hearing Conservation Program. A program to prevent hearing loss from exposure to noise through the use of hearing protection, training, and medical surveillance.
HEPA  High-efficiency particulate air filter. A filter capable of trapping and retaining 99.97% of 0.3 micron diameter, or larger, particles.
HM  Hazardous material. A material which is a physical or health hazard per 29 CFR 1910.1200.
HW  Hazardous waste. Any discarded or abandoned hazardous substance as defined in 40 CFR 261.
LEV  Local exhaust ventilation. Exhaust system at source of contamination.
mg/m³  Milligrams per cubic meter of air. A means for expressing concentrations of dust and metal fumes in air.
MMVF  Man made vitreous fibers. (Fiberglass, mineral wool, ceramics)
MSAL  Medical Surveillance Action Level. A concentration of an air contaminant at which medical surveillance examinations must be provided to exposed personnel.
MSDS  Material Safety Data Sheet. A form used by manufacturers to communicate to users the chemical and physical properties of their products.
NAVOSH  Navy Occupational Safety and Health
NFPA  National Fire Protection Association
NIOSH  National Institute for Occupational Safety and Health. Recommends safety and health standards for OSHA.
NPEL  Navy Permissible Exposure Limit.
OSHA  Occupational Safety and Health Administration.
OV  Organic vapors.
PCB  Polychlorinated Biphenyl
COMMON ABBREVIATIONS AND GLOSSARY

PEL  Permissible Exposure Limit. The maximum permissible allowable exposure level of a toxic chemical or harmful physical agent (normally averaged over 8 hours) to which an employee may be exposed.

PPE  Personal Protective Equipment. Clothing or devices furnished to protect employees in performance of work in potentially hazardous areas or conditions.

ppm  Parts per million. A means for expressing the concentration of gases and vapors in air.

RFR  Radiofrequency/Microwave Radiation.

RPPM  Respiratory Protection Program Manager.

SCBA  Self Contained Breathing Apparatus.

SOP  Standard Operating Procedures.

STEL  Short term exposure limit. A 15 minute time weighted average exposure which should not be exceeded at any time during a workday.

Stressor Potential Hazard (e.g. Noise, Chemicals, Dusts)

TLV  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 day after day basis without adverse effect.

TWA  Time Weighted Average. A method for averaging varying concentrations over a specified period of time (usually 8 hours).

WC  Work Center

WMP  Workplace Monitoring Program. A program to evaluate workplace health hazards through surveys and exposure measurement.
SECTION I
INTRODUCTION

This department recently merged with the old Naval Support Activity (NSA), Monterey Bay, Code N14 Security Management Department. The old Code N14 portion of this department is not due for review until 2003, and was not looked at as part of this survey. This portion of the Code 005 Security Management is involved in control of all classified material, and processing of security investigations and clearances of staff, faculty, and students.

If an operation has been overlooked or significant changes made which are believed to put personnel at serious risk, the industrial hygienist should be contacted, and an evaluation requested.

REPORT ORGANIZATION

Reference: (a) OPNAVINST 5100.23E, Chapter 8, Section 0803.f

Section I - contains the background information associated with this report and the schedule for follow-up surveys.

Section II - addresses the status of the command's occupational health programs and hazards specific to individual codes. This section contains a short overview of each program's status and then a listing (Finding, Recommendation, Reference) of specific problems found in the program. Findings are identified by "Finding Numbers" such as "ET0063-A, ET0063-B, etc.".

Section III - Contains industrial hygiene assessments of specific work areas. These address the status of workplace hazards and required control procedures. Any deficient conditions or recommended improvements in specific work areas are addressed here and are also identified by "Finding Numbers" such as "ET0063-1, ET0063-2, etc.".

Section IV - contains the results of all the sampling/monitoring data conducted in support of this survey. This appendix is arranged in a tabular format showing the date, location, operation sampled, results and the applicable standard.

Section V - identifies the occupational health medical surveillance requirements for each work area based on survey findings.

Section VI - details the sampling required to be conducted for OSHA or NAVOSH regulated stressors or stressors which have been found to result in personnel exposures equal to or in excess of the MSAL. Unless otherwise noted, sampling will be performed by Bureau of Medicine and Surgery (BUMED) industrial hygienists.

Appendix A - contains the OPNAV 5100/14 forms which are required by reference (a). These forms detail the occupational exposures of employees by work center or functional group.

Appendix B - is a copy of the Change In Operation Notification form, which should be filled out whenever a major operational change occurs. By returning the completed forms to the industrial hygienist, all new operations can be evaluated as required by reference (a). This form can be copied as needed for your use.
SURVEY SCHEDULE

Reference:  (a) OPNAVINST 5100.23E, Chapter 8, Sections 0803.b and c  
(b) OPNAVINST 5100.23E, Chapter 8, Paragraph 0803.g

In accordance with reference (a), each workplace must be thoroughly evaluated to identify and quantify potential occupational hazards. To document these evaluations, an initial comprehensive (baseline) survey is needed, followed by periodic updated surveys. Reference (b) requires workplaces with recognized potential health hazards to be evaluated annually, and other workplaces to be evaluated periodically. Medical surveillance recommendations and a workplace monitoring plan are developed from the findings of these surveys. Any comments or suggestions regarding these survey schedules should be forwarded to the industrial hygienist via your Safety Office. The year of the last survey appears after each work center listing.

WORKPLACE SURVEY SCHEDULE

<table>
<thead>
<tr>
<th>Annual Required</th>
<th>2 Year Schedule</th>
<th>4 Year Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>None</td>
<td>Security Mgt, Bldg 220(2000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Security Mgt, Bldg 235(1999)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Security Mgt, Bldg 302(1999)</td>
</tr>
</tbody>
</table>

Change of Operations Notification:

Reference (b) requires an industrial hygiene re-evaluation when workplace changes occur. Please notify the industrial hygienist via your Safety Office whenever major changes occur in a workplace. Examples of major changes include:

- Exposure times have changed.
- New types of equipment are used.
- New chemical/chemical product usage.
- New operations are performed.
- Increase in major chemical usage.
- Changes in exhaust ventilation.

A "CHANGE OF OPERATIONS NOTIFICATION" form is provided in Appendix B and can be used for this purpose. Copy the form as needed for your use.
The following programs are not required to be maintained by the Naval Postgraduate School, Monterey, Security Management Department because these hazards are not present:

- Asbestos Control
- Bloodborne Pathogens
- Hearing Conservation
- Lead Control
- Manmade Vitreous Fiber Control
- Non-Ionizing Radiation Control
- Polychlorinated Biphenyls (PCB’s) Control
- Process Control Ventilation
- Reproductive Hazards Control
- Respiratory Protection
- Ventilation Control

**ERGONOMICS PROGRAM**

Potential ergonomics problem can arise from use of computers. No injuries resulting from ergonomic problems were noted. A comprehensive ergonomics evaluation and training session will be performed by one of the Code 223 safety specialists in the future.

**Recommendations:**

None. Provided for your information and records.
SECTION III

INDUSTRIAL HYGIENE ASSESSMENTS
INDUSTRIAL HYGIENE ASSESSMENT

ACTIVITY: NPS Monterey FILE NO.: ET-0063 DATE: 5 April 2000

DEPARTMENT: Security Management Department POCs: Marcus Andersen

LOCATION: Bldg 220, Room 130 IND. HYG: Eric Thurston

FUNCTION: The portion of the Code 005 Security Management Department reviewed during this survey is involved in control of all classified material, and processing of security investigations and clearances of staff, faculty, and students.

INDUSTRIAL HYGIENE ASSESSMENT

There are no operations that potentially expose personnel to hazardous occupational stressors.

The following operations will not expose personnel to hazardous occupational stressors in excess of established health standards:

Ergonomics during computer use. No injuries resulting from ergonomic problems were noted. A comprehensive ergonomics evaluation and training session will be performed by one of the Code 223 safety specialists in the future.

There are no operations that potentially expose personnel to stressors identified by OPNAVINST 5100.23E, Chapter 29, Appendix 29-A as reproductive hazards.

RECOMMENDATIONS:

None.

FINDINGS:

None.
This Section contains the sampling/monitoring conducted in support of this survey. It should be noted that the measured levels of chemical and physical hazards are compared to the standards without regard to any personal protective equipment that may be worn or the protection afforded by it. The goal of the NAVOSH Program is to reduce workplace hazard levels by other means so that personal protective equipment is not required.

The sampling and analyses performed in support of this survey follow methods approved and validated by OSHA, NIOSH, or by other appropriate Naval instructions. When such methods are either unavailable or not applicable, other consensus methods may be used. In all cases, accepted professional industrial hygiene practices are followed. Documentation concerning the types of instruments used and their calibration records are held by the Naval Medical Admin Unit, Monterey Bay Industrial Hygienist.

No survey data was collected in support of this survey.
SECTION V

MEDICAL SURVEILLANCE MATRIX

The Medical Surveillance Matrix is provided to assist commands in assigning personnel to required medical surveillance. Medical surveillance for a work group must be based on exposure levels at or above the MSAL and exposure frequency of ten days per quarter or thirty days per year or as required by regulations or instruction.
<table>
<thead>
<tr>
<th>EXAM</th>
<th>All personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>*601</td>
<td>ACIDS/ALKALIS</td>
</tr>
<tr>
<td>*114</td>
<td>ASBESTOS CURRENT WORKER &gt; MSAL</td>
</tr>
<tr>
<td>*178</td>
<td>BLOOD AND/OR BODY FLUIDS</td>
</tr>
<tr>
<td>*124</td>
<td>CADMIUM</td>
</tr>
<tr>
<td>*133</td>
<td>CHROMIC ACID/CHROMIUM VI</td>
</tr>
<tr>
<td>508</td>
<td>HAND-ARM VIBRATION</td>
</tr>
<tr>
<td>505</td>
<td>IONIZING RADIATION</td>
</tr>
<tr>
<td>506</td>
<td>LASER RADIATION-CLASS IIIb or IV</td>
</tr>
<tr>
<td>*161</td>
<td>LEAD (INORGANIC)</td>
</tr>
<tr>
<td>*162</td>
<td>MACHINE OIL MIST/CUTTING FLUID</td>
</tr>
<tr>
<td>212</td>
<td>MANMADE MINERAL FIBERS/FIBERGLASS</td>
</tr>
<tr>
<td>*602</td>
<td>METAL FUMES</td>
</tr>
<tr>
<td>*168</td>
<td>METHYLENE CHLORIDE</td>
</tr>
<tr>
<td>*503</td>
<td>NOISE</td>
</tr>
<tr>
<td>*507</td>
<td>RADIOFREQUENCY &amp; MICROWAVE RADIATION</td>
</tr>
<tr>
<td>*603</td>
<td>MIXED SOLVENTS</td>
</tr>
<tr>
<td>510</td>
<td>SIGHT CONSERVATION</td>
</tr>
<tr>
<td>511</td>
<td>WHOLE BODY VIBRATION</td>
</tr>
<tr>
<td>*604</td>
<td>WOOD DUST</td>
</tr>
<tr>
<td>*723</td>
<td>BARBER/BEAUTY SHOP WORKER</td>
</tr>
<tr>
<td>*703</td>
<td>CHILD CARE WORKER</td>
</tr>
<tr>
<td>*706</td>
<td>DOT VEHICLE OPERATOR</td>
</tr>
<tr>
<td>*722</td>
<td>FIREFIGHTER, ANNUAL EXAM</td>
</tr>
<tr>
<td>*707</td>
<td>FIREFIGHTER, PREPLACEMENT AND PERIODIC EXAMS</td>
</tr>
<tr>
<td>*709</td>
<td>FOOD SERVICE PERSONNEL</td>
</tr>
<tr>
<td>*710</td>
<td>FORKLIFT OPERATOR</td>
</tr>
<tr>
<td>*711</td>
<td>HAZARDOUS WASTE WORKER/SPILL RESPONSE</td>
</tr>
<tr>
<td>*714</td>
<td>POLICE/SECURITY GUARD</td>
</tr>
<tr>
<td>*716</td>
<td>RESPIRATOR USER CERTIFICATION EXAM</td>
</tr>
<tr>
<td>*702</td>
<td>WASTEWATER/SEWAGE WORKER</td>
</tr>
<tr>
<td>OTHER:</td>
<td></td>
</tr>
<tr>
<td>OTHER:</td>
<td></td>
</tr>
<tr>
<td>OTHER:</td>
<td></td>
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<tr>
<td>OTHER:</td>
<td></td>
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<tr>
<td>OTHER:</td>
<td></td>
</tr>
<tr>
<td>NONE REQUIRED</td>
<td>X</td>
</tr>
</tbody>
</table>
SECTION VI

WORKPLACE MONITORING PROGRAM

The attached Workplace Monitoring Plan presents stressors and/or systems which need to be evaluated periodically during the coming year. Items included on the plan are based on regulations, professional knowledge and information obtained from supervisors. The plan should be reviewed to ensure operational information is correct. The industrial hygienist will have to be contacted when operations are scheduled so your Command's sampling can be completed. Changes or deletions of operations should also be communicated to the industrial hygienist so that the Workplace Monitoring Plan can be amended.
WORKPLACE MONITORING PLAN

<table>
<thead>
<tr>
<th>LOCATION/JOB</th>
<th>STRESSOR</th>
<th>REQUIRED</th>
<th>MEASURING METHOD</th>
<th>FREQUENCY PER YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>None required.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Air samples for each chemical stressor will be collected using sampling methods listed in the Industrial Hygiene Sampling Guide for Consolidated Industrial Hygiene Laboratories, Navy Environmental Health Center Technical Manual NEHC-TM6290.91-2, Revision B, March 1999. Asbestos monitoring will include EL and area sampling.

1. Use the following codes to indicate sampler and sampling location:

<table>
<thead>
<tr>
<th>SAMPLER:</th>
<th>SAMPLING LOCATION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR-direct reading instrument</td>
<td>GA-general area</td>
</tr>
<tr>
<td>DT-detector tube</td>
<td>BZ-breathing zone</td>
</tr>
<tr>
<td>AT-adsorption tube</td>
<td>HZ-hearing zone</td>
</tr>
<tr>
<td>IM-impinger/bubbler</td>
<td>SZ-source zone</td>
</tr>
<tr>
<td>FI-filter</td>
<td>OT-other (specify)</td>
</tr>
<tr>
<td>ND-noise dosimeter</td>
<td></td>
</tr>
<tr>
<td>PD-personal dosimeter</td>
<td></td>
</tr>
<tr>
<td>OT-other (specify)</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX A

OPNAV 5100/14 Forms

Reference: (a) OPNAVINST 5100.23E, paragraph 0803.f

This appendix contains the OPNAV 5100/14 forms which are required by reference (a). These forms detail the occupational exposures of employees by work center or functional group. These forms are used to develop the workplace monitoring program in Section VI. They also describe the type of work done in each area and can be used to verify that all work areas were included in the survey.
**WORKPLACE INFORMATION**

**Activity:** NSA Monterey Bay  **Supervisor:** Marcus Andersen  **Phone:** (831)656-2110

**Bldg#:** 220, Herrmann Hall, Room 130  **Shop:** Security Management Dept

**Total Personnel:** 4  
**Male:** 3  
**Female:** 1

**Shop Operation:** The portion of the Code 005 Security Management Department reviewed during this survey is involved in control of all classified material, and processing of security investigations and clearances of staff, faculty, and students.

<table>
<thead>
<tr>
<th>Potential Hazard</th>
<th>Inter or Cont.</th>
<th># Workers Exposed</th>
<th>Exposure &gt; MSAL?</th>
<th>Controls in Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ergonomics, computer use</td>
<td>Daily, up to 8 hrs</td>
<td>4</td>
<td>No</td>
<td>None</td>
</tr>
<tr>
<td>* Reproductive hazard (See I. H. assessment)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**If no exposure > MSAL, provide rationale:** No injuries resulting from ergonomic problems were noted. A comprehensive ergonomics evaluation and training session will be performed by one of the Code 223 safety specialists in the future.

**Signature/Title:** S.E. Thurston, Industrial Hygienist  
**Date:** 5 April 2000
## Monitoring Plan

<table>
<thead>
<tr>
<th>Stressor to be Sampled</th>
<th># of Meas. Required</th>
<th>* Measure. Method</th>
<th>**Measure. Location</th>
<th>Frequency per Yr.</th>
<th>Man Hrs. per Yr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* Use the following Codes: DR-direct reading instrument
  DT-detector tube
  AT-adsorption tube
  IM-impinger/bubbler
  FI-filter
  PD-personal dosimeter
  ND-noise dosimeter
  OT-other (specify)

** Use the following Codes: GA-general area
  BZ-breathing zone
  HZ-hearing zone
  SZ-source zone
  OT-other (specify)
APPENDIX B

CHANGE OF OPERATION NOTIFICATION

Please use this form to notify the industrial hygienist of any changes to operations conducted by your department. The notification form may be copied as needed. The completed forms can be returned to:

NAVAL POSTGRADUATE SCHOOL, MONTEREY
CODE 223, SAFETY OFFICE (ATTN: INDUSTRIAL HYGIENIST)
1 UNIVERSITY CIRCLE
MONTEREY CA 93943
CHANGE-OF-OPERATION NOTIFICATION

FOREMAN/SUPERVISOR:                                            EXT:

BLDG:          COMMAND/SHOP: NPS Monterey, Security Management Dept,
WORK AREA: Bldg 220

SURVEY REPORT:  ET-0063

INSTRUCTIONS TO FOREMAN/SUPERVISOR:

The industrial hygiene survey evaluated the potential hazards to your employees based on the operations existing at the time. When your operations change, the potential hazards can also change, and these new conditions must be evaluated. Please contact the industrial hygienist if any of the following occur:

a. Exposure times have changed.
b. New operations are performed.
c. New types of equipment are used.
d. An increase in major chemical usage.
e. New chemicals or chemical products are used.
f. A change in existing exhaust ventilation.

List any changes below.

Date Forwarded: