



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

IN REPLY REFER TO:

6260
G1A/0458
22 Aug 12

From: Commanding Officer, Naval Hospital, Lemoore
To: Chief Of Staff, Naval Postgraduate School,
1 University Circle, Monterey CA 93943

Subj: BASELINE INDUSTRIAL HYGIENE SURVEY, NAVAL POSTGRADUATE
SCHOOL, MONTEREY, INGERSOL HALL DEPARTMENTS

Ref: (a) OPNAVINST 5100.23G, Chapter 8

Encl: (1) Industrial Hygiene Survey Report 66271-12-7

1. Per reference (a), a baseline industrial hygiene survey of the Naval Postgraduate School, Monterey, Ingersol Hall departments was conducted by the Naval Hospital, Lemoore, Monterey area Industrial Hygienist from 17 to 23 July 2012.

2. No corrective actions are necessary, and the next industrial hygiene survey of these areas is due in Calendar Year 2016.

3. If further consultation on this report is needed, please contact S. Eric Thurston, Industrial Hygienist at Commercial (831) 656-1074, e-mail sethurst@nps.edu.

A handwritten signature in black ink, appearing to read "H. W. Cho", is positioned above the typed name.

H. W. CHO
By direction

Copy to:
NPS NAVOSH Dir
NHL/IH

2012 Industrial Hygiene Survey
Of
Naval Postgraduate School, Monterey
Ingersol Hall Departments
Report 62271-12-7
17 to 23 July 2012

Survey Conducted by: S. Eric Thurston,
Industrial Hygienist

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

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Report 62271-12-7
EXECUTIVE SUMMARY

1. The 2012 baseline industrial hygiene survey of the Naval Postgraduate School, Monterey, Ingersol Hall departments was recently conducted.
2. No Findings were noted and corrective actions are unnecessary.
3. Per the guidance provided by OPNAVINST 5100.23G, Chapter 8, Appendix 8-B, administrative spaces only need to be reviewed on a 4-year cycle, and therefore the next survey of these areas is due in Calendar Year 2016.

DISCUSSION, FINDINGS AND RECOMMENDATIONS

References: (a) OPNAVINST 5100.23G

As required by Chapter 8 of reference (a), a baseline industrial hygiene of the miscellaneous Naval Postgraduate School, Monterey, Halligan Hall areas was conducted from 17 to 23 July 2012. The primary purpose of this survey was to identify and assess exposure to occupational hazards, review the occupational health portion of their NAVOSH programs, and update the Exposure Monitoring Plan.

A. ENGINEERING CONTROLS: None observed or needed.

B. HAZARDOUS MATERIAL CONTROL AND MANAGEMENT PROGRAM: The only chemicals used consists of office products, including toner cartridges for the large copy machines located in Rooms 113 and 205. Exposure to chemical ingredients in the toner, as well as those in other office products, will not result in significant exposures if used in the normal and intended manner and manufacturer instructions for their proper use are followed.

C. HEARING CONSERVATION PROGRAM: There are no sources of hazardous noise in these spaces.

D. RESPIRATORY PROTECTION PROGRAM: Operations requiring the use of respirators are not performed in this department, and personnel do not wear them on an elective basis.

E. PERSONAL PROTECTIVE EQUIPMENT: None observed or necessary.

F. NON-IONIZING RADIATION CONTROL PROGRAM: There are no sources of non-ionizing radiation in the areas reviewed.

G. OCCUPATIONAL REPRODUCTIVE HAZARDS PROGRAM: There are no sources of occupational reproductive hazards in the areas reviewed.

H. ERGONOMICS: Per OPNAVINST 5100.23G, Chapter 8, paragraph 0802c(3) there are no ergonomic stressors that would present significant risk and per Chapter 23, Appendix 23-B, workers reporting pain or discomfort from computer use have not been referred to the Industrial Hygienist.

I. MEDICAL SURVEILLANCE MATRIX: Enrollment in medical surveillance programs is not recommended based upon the results of this survey.

J. TRAINING MATRIX: The only training recommendation for personnel in these departments besides Office Ergonomics, ESAMS Training Module 3030. Additional training for safety-related hazards or based on other requirements may be identified separately by the NPS Safety and Occupational Health Office, or as automatically prescribed by the Enterprise Safety and Application Management System (ESAMS) when the user logs onto his or her account.

APPENDIX A

IH EXPOSURE ASSESSMENT/MONITORING PLAN				
WORKPLACE INFORMATION				
Organization: Naval Postgraduate School		Dept: Graduate School of Business and Public Policy		Work Center: -----
Location: Bldg 330		Supervisor: William Gates		Phone: 831-656-2161
Workers: 89 faculty/staff		Male: 58 faculty/staff		Female: 31 faculty/staff
<p>Operations: This department serves as a graduate level business school offering programs tailored to the Defense community, providing classes and courses in acquisition, program management, contracting, financial management, logistics, manpower and systems analysis, and information technology management. Only administrative tasks are performed. The number and sex of students varies by academic quarter.</p> <p>Offices: Rooms 201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,215A,216,217,218,219,219A,220,229,231,231A,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,252,270,270A,270B,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,331A,331B,331C,331D,332,333,334,335,336,337,338,339,364D,365,366,,368,369,370A,370B,371,372,375</p> <p>Computer Labs: Room 224,250</p> <p>Classrooms: Rooms 221,260,261,263,265,267,271,278,280,282,285,287A,322,323,325,379,380</p> <p>Conference/Meeting Rooms: Room 272,377</p> <p>Mail/Copy Room: Room 273</p> <p>Breakroom/Lounges: Rooms 222,251</p> <p>Storage Room: Rooms 274,276</p>				
WORK TASK	POTENTIAL HAZARD	WORKERS INVOLVD	FREQUENCY/DURATION	MONITORING RECOMMENDED?
	None			
IH EXPOSURE ASSESSMENT (EA)				
<p>NOISE: There are no sources of hazardous noise in these spaces.</p> <p>CHEMICALS: The only chemicals used would be office products, and toner cartridges for the printers and copy machines. Exposure to chemical ingredients in the toner, as well as those in other office products, will not result in significant exposures if used in the normal and intended manner and manufacturer instructions for their proper use are followed.</p> <p>RADIATION: There are no sources of ionizing or non-ionizing radiation in these spaces.</p> <p>PERSONAL PROTECTIVE EQUIPMENT (PPE): None worn or necessary.</p> <p>ENGINEERING CONTROLS: None present or required.</p>				

IH EXPOSURE ASSESSMENT/MONITORING PLAN

WORKPLACE INFORMATION

Organization: Naval Postgraduate School | **Dept:** Graduate School of Business and Public Policy

IH EXPOSURE ASSESSMENT (EA) (continued)

RESPIRATORY PROTECTION PROGRAM: Operations performed do not require use of respirators, and they are not worn on an elective basis.

ERGONOMICS: Per OPNAVINST 5100.23G, Chapter 8, paragraph 0802c(3) there are no ergonomic stressors that would present significant risk and per Chapter 23, Appendix 23-B, workers reporting pain or discomfort from computer use have not been referred to the Industrial Hygienist.

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 at this time.

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

Date: 19 July 2012

IH EXPOSURE ASSESSMENT/MONITORING PLAN

WORKPLACE INFORMATION

Organization: Naval Postgraduate School	Dept: Information Technology and Communication Services (ITACS)	Work Center: -----
Location: Bldg 330	Supervisor: Joe Lopiccolo	Phone: 831-656-2994
Workers: 105	Male: 82	Female: 23

Operations: Provides technology and communication support, voice, video, and data infrastructure as mission-crucial enablers of innovation and experimentation within the educational enterprise. The Sandbox is where equipment is set up and tested. The Church Computer Center is a new name for the Data Center, which houses the computer servers and main frame computers. All work involves teaching of classes involving computer use or is administrative in nature.

Offices: Rooms Basement, 102A, 102B, 102C, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 130, 131, 132, 133, 158B, 163, 337, 365
Network Operations Center/Test Lab/Sandbox: Room 149
Technical Assist Center: Room 151
Church Computer Center: Rooms 140, 141, 141A, 141B
Conference Room: Room 162
Cybersecurity Center: Rooms 115-135
Auditorium: Room 122

A Mail Room function is within Room 140.

This department also has academic support personnel in Bldg 232, Room 241; Bldg 235, Room 202; and Bldg 245.

The Videoteleconference Support Group is discussed in the survey report for Bldg 235, Root Hall.

The PC Shop is discussed in the survey report for Bldg 232, Herrmann Hall.

The Audiovisual Support group is addressed in a separate survey report.

WORK TASK	POTENTIAL HAZARD	WORKERS INVOLVD	FREQUENCY/DURATION	MONITORING RECOMMENDED?
	None			

IH EXPOSURE ASSESSMENT (EA)

NOISE: There are no sources of hazardous noise in these spaces.

CHEMICALS: The only chemicals used would be office products, and toner cartridges for printers and copy machines. Exposure to chemical ingredients in the toner, as well as those in other office products, will not result in significant exposures if used in the normal and intended manner and manufacturer instructions for their proper use are followed.

IH EXPOSURE ASSESSMENT/MONITORING PLAN**WORKPLACE INFORMATION**

Organization: Naval Postgraduate School | **Dept:** Information Technology and Communication Services (ITACS)

IH EXPOSURE ASSESSMENT (EA) (continued)

RADIATION: There are no sources of ionizing or non-ionizing radiation in these spaces.

PERSONAL PROTECTIVE EQUIPMENT (PPE): None worn or necessary.

ENGINEERING CONTROLS: None present or required.

RESPIRATORY PROTECTION PROGRAM: Operations performed do not require use of respirators, and they are not worn on an elective basis.

ERGONOMICS: Per OPNAVINST 5100.23G, Chapter 8, paragraph 0802c(3) there are no ergonomic stressors that would present significant risk and per Chapter 23, Appendix 23-B, workers reporting pain or discomfort from computer use have not been referred to the Industrial Hygienist.

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 at this time.

Signature: **Signed/**
S. Eric Thurston, Industrial Hygienist | Date: 23 July 2012

IH EXPOSURE ASSESSMENT/MONITORING PLAN

WORKPLACE INFORMATION

Organization: Naval Postgraduate School	Dept: Center For Executive Education	Work Center: -----
Location: Bldg 330	Supervisor: Ronald Franklin	Phone: 831-656-1839
Workers: 8 staff and 4 faculty	Male: 6 staff and 3 faculty	Female: 1 staff and 1 faculty

Operations: Of the 12 department members, 1 staff and 1 faculty members are located off-site. Offers a range of courses and workshops for visiting executives/Navy leadership. Classrooms and meeting rooms are offered for use by other departments on an as-available basis. Has one unclassified videoteleconference room in Bldg 330 and one classified VTC room in the basement of Glasgow Hall. Other rooms and functions follow:

Offices: Rooms 340, 342, 344, 346, 347, 348, 381

Classrooms: Rooms 354, 361, 384

Breakout Rooms: Rooms 341, 343, 351, 352, 361, 382

Computer Work Stations: Room 381

Conference Room: Room 345

Serving Room: Room 349

Copy Room: Room 350

WORK TASK	POTENTIAL HAZARD	WORKERS INVOLVD	FREQUENCY/DURATION	MONITORING RECOMMENDED?
	None			

IH EXPOSURE ASSESSMENT (EA)

NOISE: There are no sources of hazardous noise in these spaces.

CHEMICALS: The only chemicals used would be office products. Exposure to chemical ingredients in office products will not be significant if used in the normal and intended manner and manufacturer instructions for their proper use are followed.

RADIATION: There are no sources of ionizing or non-ionizing radiation in these spaces.

PERSONAL PROTECTIVE EQUIPMENT (PPE): None worn or necessary.

ENGINEERING CONTROLS: None present or required.

RESPIRATORY PROTECTION PROGRAM: Operations performed do not require use of respirators, and they are not worn on an elective basis.

ERGONOMICS: Per OPNAVINST 5100.23G, Chapter 8, paragraph 0802c(3) there are no ergonomic stressors that would present significant risk and per Chapter 23, Appendix 23-B, workers reporting pain or discomfort from computer use have not been referred to the Industrial Hygienist.

IH EXPOSURE ASSESSMENT/MONITORING PLAN

WORKPLACE INFORMATION (continued)

Organization: Naval Postgraduate School	Dept: Center For Executive Education
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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 at this time.

Signature: Signed/ S. Eric Thurston, Industrial Hygienist	Date: 23 July 2012
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APPENDIX B
AIR SAMPLING RESULTS

None collected or necessary.

APPENDIX C
MEASURED EQUIPMENT NOISE LEVELS

There are no hazardous noise sources located in these areas.

**APPENDIX D
LOCAL EXHAUST VENTILATION
SYSTEM EVALUATION**

There are no local exhaust ventilation systems located in these areas.

APPENDIX E
RESPIRATORY PROTECTION PROGRAM MATRIX

Respirators are not required and are not worn on an elective basis during departmental operations.

APPENDIX F
MEDICAL SURVEILLANCE MATRIX

Enrollment in medical surveillance programs is unnecessary.

**APPENDIX G
GLOSSARY**

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

APPENDIX G
GLOSSARY
(continued)

TERM	MEANING
MG/M3	Milligram Per Cubic Meter of air. A means of expressing concentrations of dust and metal fumes in the air.
MSAL	Medical Surveillance Action Level. Concentration of 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.
MSM	Medical Surveillance Matrix
NAVOSH	Navy Occupational Safety and Health
NEHC	Navy Environmental Health Center
NIOSH	National Institute of Occupational Safety and Health
OEL	Occupational Exposure Limit
OH/PM	Occupational Health/Preventive Medicine
OSHA	Occupational Safety and Health Administration
OV	Organic Vapor
PPE	Personal Protective Equipment
PPM	Parts Per Million. A means of expressing the concentration of gases and vapors in the air.
PSI	Pounds Per Square Inch
RF	Radio Frequency
SOP	Standard Operating Procedure
SQFT	Square Feet
STEL	Short Term Exposure Limit. A 15 minute time weighted average exposure which should not be exceeded at anytime during a workday.
STRESSOR	Potential hazard (e.g. Noise, Chemicals, Dusts, etc.)
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 daily basis without adverse effect.
TWA	Time Weighted Average. A method of averaging varying concentrations over a specified period of time, usually 8 hours.
UG	Microgram
VOL	Volume
>	Greater Than
<	Less Than

**APPENDIX H
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. 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: NPS Physics

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: _____