NAVY OCCUPATIONAL SAFETY AND HEALTH PROGRAM

FISCAL YEAR 1998 ANNUAL AGENCY REPORT

I. SCOPE OF REPORT:

The Navy Occupational Safety and Health (NAVOSH) program covers the Navy's military and civilian workforce world-wide. This report covers U.S. Navy's shore installations world-wide and its military and civilian employees at those locations; shipboard (afloat) programs are generally not included because the Occupational Safety and Health Act exempted uniformed military personnel. This report does not cover the U.S. Marine Corps as they report directly to the U.S. Department of Labor - Occupational Safety and Health Administration (OSHA) on their own occupational safety and health program.

The statistical aspects of the report include all Navy civilian workers, including those employed in the United States and abroad. During fiscal year 1998 (FY98) the Navy employed approximately 181,045 civilian employees at approximately 444 shore installations, including naval shipyards, aviation repair facilities, and construction sites within the United States.

II. SAFETY AND HEALTH PROGRAM PERFORMANCE:

A. *Injuries and illnesses*

1. *What are the major causes of injuries and illnesses at your agency or Department?*

The major causes of Navy civilian occupational injuries and illnesses in FY98 are provided in the following categories: Mishap Type, Task Performed, Source of Mishap, Injury Diagnosis, and Body Part Injured. Review of individual mishaps reveals that over 50% of civilian mishaps reported in FY98 occurred while the affected

employee was walking or stepping, handling materials, or installing or removing equipment or materials. The majority of the mishaps were attributed to unsafe behaviors, such as excessive haste, inattention, and insufficient training or skills. Tables 1 through 4 furnish additional information concerning mishaps and workers' compensation cases.

Table 1:

LEADING CAUSES OF OCCUPATIONAL INJURIES AND ILLNESSES

Mishap Type	No.	WORK TASK	No.	Source of Mishap	No.	MEDICAL DIAGNOSIS	No.	BODY PART	NO.
Materials Handling	247	Traveling on Foot	210	Overexertion	331	Strain	330	Back	275
Walking/ Stepping	249	Handling Materials	127	Fall, Same Level	186	Sprain	106	Knee	103
Equipment Installation/ Maintenance	112	Installing/ Removing Equipment	105	Fall From Elevation	103	Fracture	93	Ankle	76
Office Work, Computers	89	General Office/ Admin. Duties	59	Struck By	73	Contusion	89	Shoulder	73
Equipment Operation	80	Mechanical Maintenance	23	Caught In, Under or Between	37	Ligament Muscle Tear	64	Hand	72
Natural Body Movement	44	Housekeeping	20	Struck Against	34	Hernia	44	Leg	60

Chemical Exposure	**12**	**Structural Maintenance**	**19**	**Repetitive Motion**	**26**	**Laceration**	**44**	**Foot**	**46**
Cargo Handling	**8**	**Rigging Activities**	**15**	**Laceration**	**24**	**Trauma, Other**	**25**	**Wrist**	**36**
Training	**7**	**Aviation Related Duties**	**15**	**Bodily Reaction**	**21**	**Abrasion**	**18**	**Groin**	**35**
Other Industrial	**7**	**Fabricating/ Assembling Metal**	**14**	**Temperature Extremes**	**12**	**Dislocation**	**16**	**Neck**	**34**
Total	**855**	**Total**	**607**	**Total**	**847**	**Total**	**829**	**Total**	**810**

Table 2: WORKERS' COMPENSATION CASES

CATEGORY	FY 94	FY 95	FY 96	FY 97	FY 98
Total Injury/Illness Cases*	**15,948**	**13,788**	**11,507**	**9,973**	**8,191**
Fatalities**	**4**	**3**	**2**	**1**	**7**
Lost Time Cases	**8,955**	**7,526**	**6,270**	**5,375**	**4,447**
Number of Employees***	**247,707**	**228,726**	**210,583**	**192,402**	**181,045**

Source of Data: * Department of Labor, Office of Workers' Compensation Program FECA Cases filed during fiscal year

** Naval Safety Center Occupational Injury Database

*** Navy Civilian Personnel Data System (NCPDS)

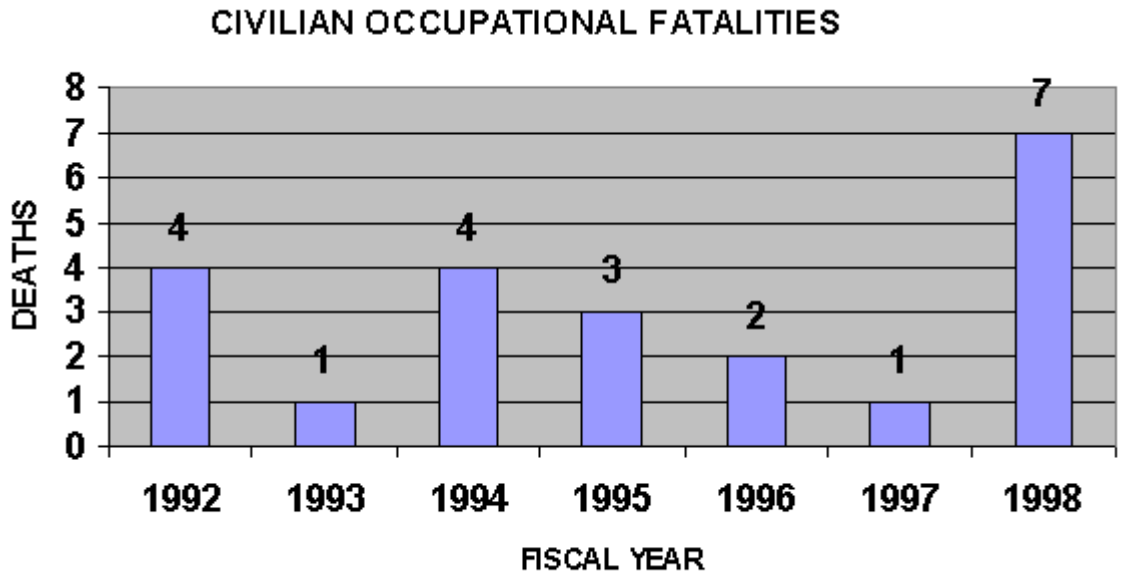
Table 3: OWCP* RATES OF INJURIES AND ILLNESSSES PER 100 CIVILIAN EMPLOYEES					
CATEGORY	**FY94**	**FY95**	**FY96**	**FY97**	**FY98**
OWCP Total Case Rate (TCR)	**6.19**	**5.79**	**5.25**	**4.98**	**4.35**
OWCP Lost Time Case Rate (LTCR)	**3.47**	**3.16**	**2.86**	**2.69**	**2.36**

* Office of Workers' Compensation Program (OWCP)

Table 4: FY98 WORKERS' COMPENSATION CASES			
Fiscal Year	**Lost Time Case Rate (cases per 100 worker-years)**	**Charge Back Year (July 1- June 30)**	**Workers' Compensation Costs ($Millions)**
1998	2.36	1997-98	225.7
1997	2.69	1996-97	229.4
1996	2.86	1995-96	237.8
1995	3.16	1994-95	237.6
1994	3.47	1993-94	243.2

1993	3.51	1992-93	232.3
1992	3.38	1991-92	222.5
1991	3.56	1990-91	207.9
1990	3.75	1989-90	201.1

These tables demonstrate that the Navy's civilian employee Total Case Rate (TCR), Lost Time Case Rate (LTCR), and its workers' compensation costs have steadily declined. Unfortunately, the number of work-related fatalities increased in FY98, the majority resulting from motor vehicle mishaps as shown below.



2. What action has the Agency taken to correct these hazards or remove employees from risk?

Navy policy is to provide a safe and healthful work place through an aggressive and comprehensive program, the Navy Occupational Safety and Health (NAVOSH) program. The NAVOSH program, which provides specific guidelines for the identification and correction of safety and health hazards, fully complies with 29 CFR Part 1960.

The NAVOSH program is promulgated in the *Navy Occupational Safety and Health Manual*, Chief of Naval Operations Instruction (OPNAVINST) 5100.23 series.

The current NAVOSH program is defined in OPNAVINST 5100.23E, which is available at web site address: http://www.navosh.net/references/instructions/510023E/. This document is password protected. A password request form is available at: http://www.navosh.net/passwords/index.html.

Inspection and abatement of work place hazards are specifically addressed in Chapter 9, NAVOSH Inspection Program, and Chapter 12, Hazard Abatement Program.

a. The NAVOSH Hazard Abatement Program

An integral component of the Navy's mishap prevention program is correction of work place hazards identified during inspections, investigations, evaluations, and oversight inspections and those reported by employees. The Hazard Abatement Program objective of correcting hazards and improving the work place is explained in the *NAVOSH Program Manual* (OPNAVINST 5100.23E, Chapter 12). Naval Facilities Engineering Command (NAVFAC) administers the centrally funded and managed program to abate major deficiencies.

Development of innovative methods for accomplishing facilities projects in a timely manner, including expeditious correction of work place hazards continued throughout FY98. Emphasis continues to be on prioritizing correction of the most hazardous conditions.

In FY98, the centrally funded NAVOSH Hazard Abatement Program disbursed $10.7 million for 67 projects, including individual facilities projects and program improvement projects and studies. From 1979 through 1998, over $314 million was expended under this program to correct serious work place deficiencies. During this period, 1,730 Hazard Abatement Program projects have been developed and completed. These projects include asbestos removal, improvements to industrial ventilation systems, abatement of life safety hazards, correction of electrical safety hazards, hazardous material control and storage, and fall protection.

The Hazard Abatement Program has been enhanced administratively and technically. The following are achievements of FY97 Hazard Abatement Program pilot programs that were evaluated, revised, and continued into FY98:

(1) Hazard Abatement Program Administrative Improvements

Customer service has been improved in the administration of the Hazard

Abatement Program in three important ways:

(a) Consolidating East Coast projects under one focal point;

(b) Adopting new procedures to distribute funds to the most efficient executive agency and;

(c) Consolidating project management to reduce administrative costs and increase the availability of funds for hazard abatement.

(2) Hazard Abatement Program Technical Achievements

Hazard abatement focused primarily on crane safety, fall protection, ergonomics, high voltage safety, health hazards, and life safety issues in FY98.

(a) The Hazard Abatement Program funded $1.5 million to a Navy Crane Center project to retrofit all 132 cranes used in long-shoring operations with load indicating devices (LIDs). Each LID alerts the crane operator when a load comes close to the crane's weight lifting limit, as required by OSHA and directed by the Department of Defense (DOD). Use of LIDs reduces the risk of the cranes dropping loads or overturning, thereby preventing injuries and property damage.

(b) Development of fall protection and fire protection/life safety projects was streamlined to reduce administrative costs and extend the availability of reliable designs so that they may be used in, or adapted to, comparable projects. The role of the fall protection center of expertise, located in San Diego, California, was also expanded so that any Navy facilities engineer or safety professional can consult directly with the center for guidance on fall protection.

(3) Pilot Programs Iinitiated in FY98.

(a) An industrial ergonomics center of expertise, modeled on the fall protection center, provides guidance to Navy commands on correction of ergonomic hazards at industrial work locations. The center, located in San Diego, California, also tracks successful ergonomic resolutions so that they can be duplicated at other locations.

(b) Two centers of expertise were established to assist Naval Shipyards and Naval Air Stations in the abatement of

common hazards that are specific to their operations. They are both located in Poulsbo, Washington.

(4) Aluminized Proximity Protective Clothing

Use of aluminized proximity protective clothing for aircraft rescue was directed by OSHA in its April 3, 1997 letter to the Assistant Deputy Under Secretary of Defense for Safety and Occupational Health Policy. The letter informed DoD that an earlier interpretation, stating that Federal employers would not be cited for failure to provide this personal protective equipment (PPE) for aircraft fire fighting, was no longer valid. The letter advised that an agency that failed to provide this level of protection would be subject to OSHA citations. DoD followed up with an April 8, 1997 memorandum that relayed OSHA's position on aircraft fire fighting PPE to the Deputy Assistant Secretary of the Navy for Environment and Safety.

The Hazard Abatement Program initiated the funding of this PPE for aircraft rescue fire fighters in FY98. Purchases were prioritized to ensure that the firefighters most likely to respond to aircraft crashes were the first to be issued PPE. Distribution of this PPE to all aircraft rescue firefighters is scheduled for completion in FY00.

(5) FY99 Hazard Abatement Program Emphasis

(a) To continue assisting shore activities with their hazard abatement projects;

(b) To continue prioritizing the most hazardous deficiencies for correction first;

(c) To streamline the acquisition and distribution of Hazard Abatement Program funds;

(d) To identify the most cost effective and efficient methods for completing hazard abatement projects;

(e) To continue to improve the various centers of expertise (i.e., fall protection, ergonomics, shipyards, and air stations).

Projections for NAVOSH Hazard Abatement Program funds for the next five fiscal years are presented in Table 5, below:

Table 5: NAVOSH HAZARD ABATEMENT PROGRAM FUNDS

FY99	$14.7 million
FY00	$14.7 million
FY01	$13.7 million
FY02	$14.2 million
FY03	$14.3 million

B. CNO Mishap Review Board

The Navy convenes a Mishap Review Board (MRB) semi-annually for Class A (fatalities) and B (major property loss/multiple injuries) mishap investigations. The MRB is chaired by RADM A. Granuzzo, CNO (N45). Board activities include:

- A mishap briefing by the activity Commanding Officer.

- Lessons learned compilation as a result of the formal investigation.

- A summary of lessons learned on the Naval Safety Center website.

3. *What action has been taken to address the causes of these hazards?*

Numerous actions have been taken at all levels to identify and correct the causes of hazards in the work environment. Five representative examples are provided below:

a. Electronic MSDS Management System

Naval Aviation Depot (NADEP), North Island, San Diego, California established an electronic Material Safety Data Sheet (MSDS) management system as a component of its Hazardous Material Management System (HMMS). This system, that complies with the OSHA Hazard Communication Standard, allows employers to maintain MSDSs electronically. It tracks all hazardous substances received, issued, and used throughout the NADEP. Electronic

MSDSs management allows for 24-hour access to MSDSs for all hazardous substances used or stored at the NADEP.

A computer-generated tracking label is placed on every container of hazardous substances issued by the NADEP's hazardous materials storage facility. The label includes the name of the product, its manufacturer, National Stock Number, the unique computer-generated numerical identification code for that product, the hazard code, and the expiration date of that container. The computer-generated numerical identification code is cross-indexed to identify the employee who was issued the product. HMMS also cross-indexes its hazardous substance inventory by National Stock Numbers and Open Purchase Stock Numbers.

The goal of electronic MSDS management is to ensure access to information on any hazardous substance with which an employee may come into contact. It also provides emergency response organizations immediate access to hazard information in the event of a spill, personnel exposure, or other emergency.

b. Operational Risk Assessment

Shore Intermediate Maintenance Activity (SIMA), Ingleside, Texas developed a five-step Operational Risk Assessment (ORA) process to identify operational hazards in its daily operations and to identify measures to reduce the risk of injury and property damage due to mishaps.

ORA was developed to detect hazards in work processes and work locations, to determine the root causes of those hazards, and to assess systematically the probability of mishaps occurring as a result of those hazards. ORA also predicts the severity of potential damage or losses due to such mishaps and identifies effective methods of controlling risk factors.

The five phases of SIMA Ingleside's ORA are: Hazard Identification, Hazard Assessment, Risk Decision, Implementation of Control Factors, and Monitoring and Supervision of the Operation.

c. Site-Specific Respiratory Protection Program

Trident Refit Facility (TRIREFFAC) Bangor, Washington developed an extensive Respiratory Protection Program for inhalation hazards that are specific to its operations. The industrial hygienist manages the program, which includes various types, sizes, and models of respiratory protective devices from several manufacturers to meet the needs of the TRIREFFAC Bangor workforce.

Every respirator user must qualify annually to use, and to continue to use, respiratory protection. Respirator users must pass a physical examination, and be trained and fit-tested on each type of respiratory protection they need. TRIREFFAC Bangor uses quantitative fit testing to maximize protection from inhalation of air contaminants and from asphyxiation. Those who meet program criteria are issued *Respiratory Protection Program Qualification and Certification* cards that establish the holder as certified to use the specified respiratory protective device or devices until the expiration date stamped on the certification card. During their certification period, respirator users are periodically reminded of Respiratory Protection Program requirements and notified of any changes to the program.

Standard Operating Procedures (SOPs) are posted in each shop that requires the use of respiratory protection. SOPs identify the tasks that require respiratory protection, the type(s) of respirator(s) that meet these requirements, and the use, care, and limitations of the required respiratory protective devices.

d. Electrical Safety Field Guide

In FY98, the Navy published OPNAV P-45-117-6-98, an *Electrical Safety Field Guide* for use by electrical operations planners, supervisors, electrical workers, and safety personnel. An Electrical Hazard Abatement Team, a multi-disciplinary working group made up of electrical engineers, electrical foremen and electrical safety specialists from Naval shipyards, Public Works Centers, and the Navy Safety Center was headed by NAVFAC to develop the field guide. The field guide is written in accordance with current Navy and Federal policy on electrical operations and provides a concise guide to safe electrical work practices. Use of the *Electrical Safety Field Guide* in planning and carrying out electrical work is anticipated to improve overall working conditions and to decrease excess costs by reducing the risk of injuries, death, and property losses, and by enhancing readiness. The guide can be downloaded and printed from NAVFAC's Internet site at: http://www.navfac-safety.navy.mil/docs/pdf/elecsfty/cover.pdf.

e. Construction Project Fall Protection

Naval Facilities Engineering Command (NAVFAC) surveyed Navy construction officers, using a National Safety Council database, to identify the effectiveness of Navy construction safety programs. The results focused attention on high risk factors in construction projects, such as falls from heights, the most common cause of fatalities in the construction industry and the third most prevalent cause of injuries to the Navy's civilian workforce. As a result of this finding, Rear Admiral Nash, NAVFAC Commander, directed fall protection reference information from the American Society of Safety Engineers to be distributed to all Navy construction officers.

4. *Does your agency use injury and illness data to set program priorities and objectives?*

The Navy uses multiple occupational injury and illness and exposure databases to set program priorities and objectives. Five representative examples are provided below:

a. Occupational Safety and Health System

The Navy finalized the first phase of its computerized Occupational Safety and Health System (OSHSYS) in FY97 for activities to analyze the types of workers' compensation claims at their activity as well as all other Navy activities. The system also predicts total life cycle costs by extrapolating costs over the predicted life of the claims.

OSHSYS predicts that the total cost of Navy workers' compensation claims will be $2.7 billion unless interventions are put in place. The next section discusses a new initiative, to intervene and improve management of workers' compensation cases. Version 2.0 of OSHSYS was released in FY97 and a copy was provided with the FY97 OSHA report. It is a tool for activities to improve their injury and illness prevention strategies, based on their workers' compensation experience.

b. Workers' Compensation Case Reduction Business Plan

The Navy's Workers' Compensation Case Reduction Business Plan is a joint effort by four organizations: The Deputy Assistant Secretaries of the Navy (DASN) for Civilian Personnel, the DASN for Environment and Safety, the Chief of Naval Operations (N45), and the Bureau of Medicine and Surgery (BUMED). The goal of this Flag Officer and SES level working group is to assist commands in improving workers' compensation case management. Naval Sea Systems Command (NAVSEA) and others, who have been successful in reducing workers' compensation costs, met in August 1998 to explore ideas for reducing and better managing workers' compensation cases. Since over half of the cost results from claims over ten years old, a significant effort is being invested to review "older" claims.

The mission of the Workers' Compensation Case Reduction Business Plan is to reduce the incidence and severity of occupational injuries and illnesses throughout the Department of the Navy. Its objectives are to preserve our most important resource, our people, and to provide the best medical care to our injured workers, returning them to work as expeditiously as practicable, and thereby, to reduce direct and indirect occupational injury and illness costs. The business plan was developed and refined to identify specific resources and to assign responsibilities in three key

areas:

(1) Management Commitment

Major commands must be committed to reducing workers' compensation cases through joint efforts of managers, supervisors, human resources, health and safety, and medical personnel working together as a team. Mishap prevention remains the first priority; however, the team must be prepared to work together to minimize mishaps and to provide the appropriate level of care and support of employees who slip through the "mishap prevention net."

(2) Information Systems

The Injury Compensation/ Unemployment Compensation (IC/UC) system is used within DoD, for furnishing billing information to occupational injury and illness claims administrators. Plans are to explore the capabilities of the IC/UC system, to compare it with alternatives, such as the Federal Employees Compensation Act Management Information System (FECAMIS2) system developed by NAVSEA, and to identify improvements needed to make the system a better management tool.

(3) Specific Case Reduction Strategies

Strategies will be developed for prioritizing claims to be targeted for resolution based on the histories of those commands that have had significant successes in resolving and closing claims. A handbook will be developed to assist with workers compensation management. A website is being established at http://www.navosh.net which will be linked to both Navy human resources and Navy occupational safety and health websites.

c. Ergonomics Pilot Program

The Navy's Ergonomics Pilot Program is an example of injury and illness data utilized to set program priorities and objectives. Ergonomics hazards increase the risk of cumulative trauma disorders (CTDs), the fastest growing occupational illness in the United States, and back injuries. Since there is no Federal regulation of ergonomics risk factors, the Navy has pioneered a pilot ergonomics program at five shore activities, on one ship, and at the United States Naval Academy to attempt to prove cost effectiveness and justify the need for funding. Ergonomic training is being integrated into the curriculum at the United States Naval Academy in FY99 with a goal of behavior modification at the start of the plebes' Navy careers to allow them to reduce the risk of experiencing CTDs and back injuries that could prematurely terminate their Naval careers. The first two-hour training session was conducted at

the Naval Academy on July 8, 1998.

Civilian and active duty workers' at the Ergonomics Pilot Program sites are trained in ergonomic practices and observed to determine whether ergonomic interventions are cost effective. Successful ergonomic interventions are posted on the Chief of Naval Operations (CNO), Director of Environmental Protection, Safety, and Occupational Health Division (N45) Internet Home Page located at http://www.navosh.net. Synopses of 12 case studies from one of the pilot program sites, San Diego Public Works Center, are also published on the N45 web site. CNO N45 also periodically publishes an ergonomics newsletter, *ERGONEWS*, which is also available at http://www.navosh.net/references/ergonews/index.html.

d. Joint Strike Fighter Integrated Process Team

The Navy's environmental, safety, and health (ESH) support to Joint Strike Fighter (JSF) efforts is indicative of information on injuries and illnesses being used to influence the military acquisition process. The objective of the JSF Integrated Process Team (IPT) is to integrate occupational safety and health in acquisition of JSF. A major environmental and occupational health challenge with JSF will be noise control. The Navy Environmental Health Center (NEHC) Industrial Hygiene Division provides the Navy's ESH support to the IPT which is made up of Navy, Air Force, and Marine Corps environmental and industrial hygiene experts. The IPT is tasked with developing and executing an ESH analysis in accordance with DOD Regulation 5000.2-R, *Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs*. This IPT coordinates government agencies and JSF contractors to identify, define, and resolve JSF-related ESH issues to avoid potentially adverse ESH effects on personnel, the environment, and on the aircraft itself.

e. Navy Occupational Exposure Database

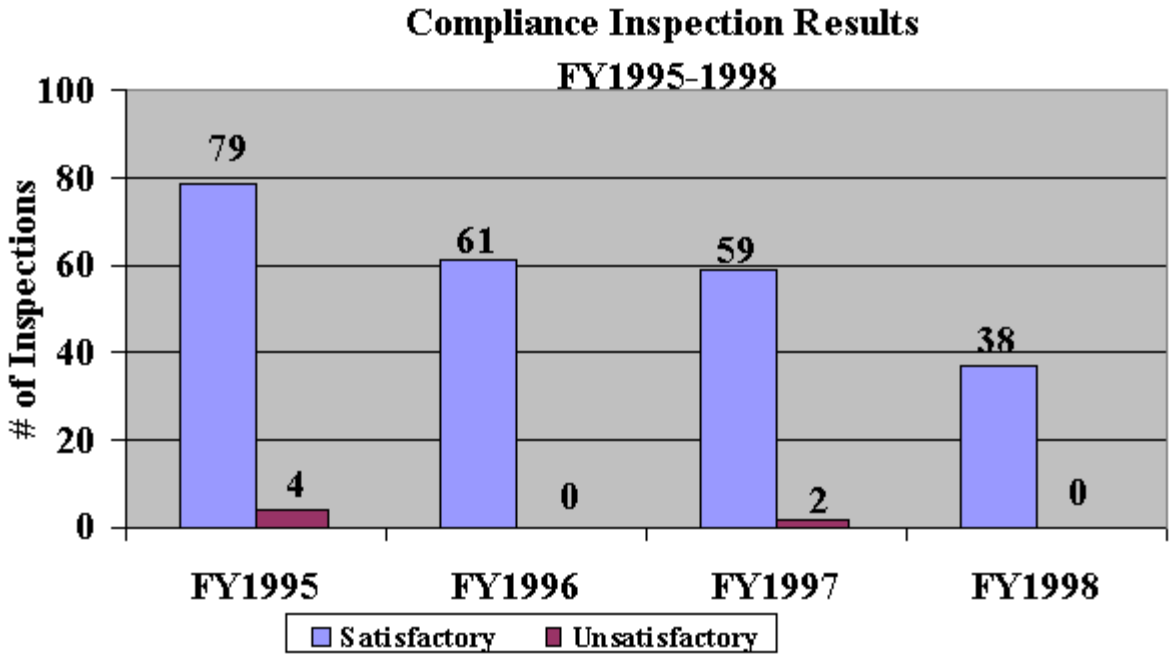
The Navy also utilizes exposure data to set program priorities and objectives. The Navy Occupational Exposure Database (NOED) is maintained at the Navy Environmental Health Center in Norfolk, Virginia. NOED is comprised of work place air sampling data and noise dosimetry data collected by Navy industrial hygienists from 1984 to the present time. The industrial hygienists monitor potential environmental and occupational exposures to determine appropriate strategies to protect workers and others from overexposures and to minimize risk factors. The 67,828 air samples currently in the database have been validated for accuracy and completeness. Navy industrial hygienists can query the database by e-mail to determine, for example, the risk of overexposure of a worker to airborne contaminants during a specific work process.

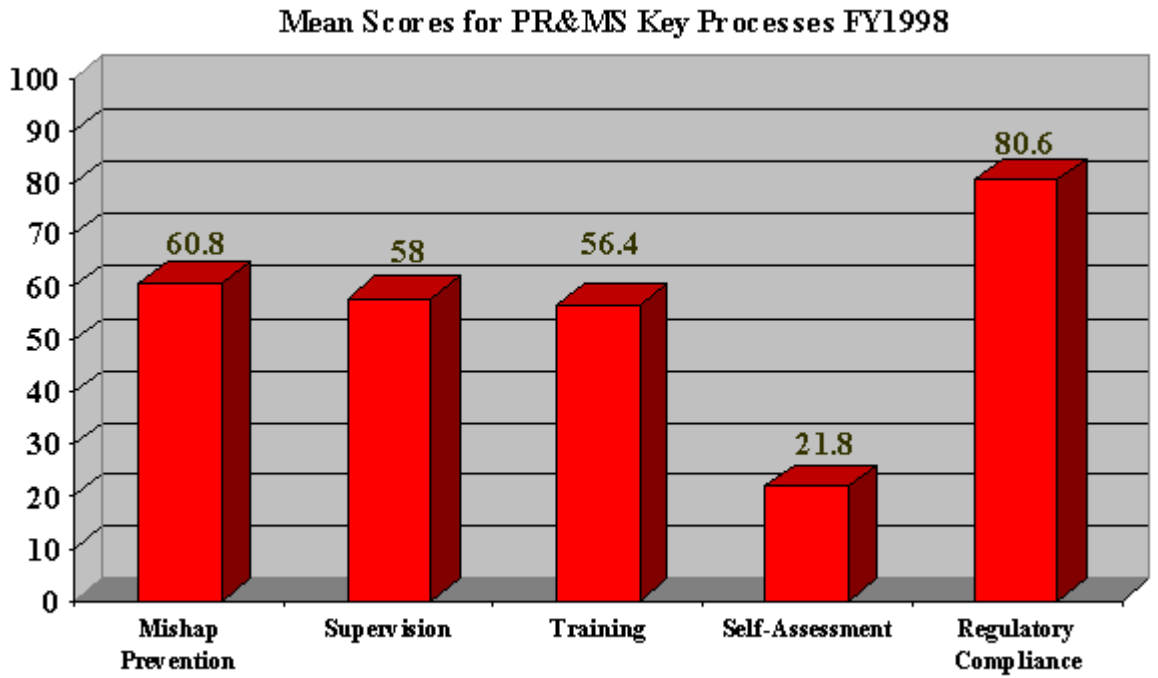
5. *Does your agency use injury and illness data to evaluate the performance of top managers?*

The Navy Inspector General (IG) is responsible for inspecting, investigating, or inquiring into all matters of importance to the Department of Navy with particular emphasis on readiness at shore activities worldwide. The IG is also responsible for reviewing effectiveness, efficiency, discipline, morale, economy, ethics and integrity; environmental protection; safety and occupational health; and issues affecting quality of life, command relationships, and organizational structures.

In FY98, the IG completed development of a new occupational safety and health inspection process to replace the "compliance-focused" inspection process. The new inspections are called "Process Review & Measurement System." These new inspections evaluate the effectiveness of the managers of Navy installations in seven categories: mishap prevention, regulatory compliance, supervision and accountability, training, self-assessment, control of occupational injury costs, and customer support. This approach applies private industry experience to identification and control of crucial processes to prevent injuries, to maximize productivity, and to avoid property losses. IG inspections focus on how effectively an activity incorporates occupational safety and health into its work practices by commending achievements as well as identifying deficiencies.

The Naval Inspector General Oversight Inspection Unit (NOIU) conducted 38 OSH regulatory compliance inspections in FY98. The reduced number of inspections from previous years was due to transitioning to the new and more complex OSH Process Review and Measurement System (PR&MS) inspection process. The regulatory compliance model of PR&MS closely parallels the previous compliance inspection process; however, PR&MS inspections are more in-depth than the previous regulatory compliance inspection process in that they also scrutinize program strategies and processes. Overall inspection scores increased from previous years, and all inspected commands received satisfactory ratings with an average score of 93%. During the same period, there was a corresponding reduction in the Navy mishap case rates.


Compliance Inspection Results
FY1995-1998
# of Inspections
100
80
60
40
20
0
79
4
61
0
59
2
38
0
FY1995
FY1996
FY1997
FY1998
Satisfactory
Unsatisfactory



B. Written Safety and Health Program

1. *Does your agency have an up-to-date written safety and health program? Please attach a copy.*

OPNAVINST 5100.23E, a 400 page Instruction, is the Navy's written safety and health program. Refer to response II. 2, which provides the website address for OPNAVINST 5100.23E at http://www.navosh.net/references/instructions/510023E/.

The Navy Occupational Safety and Health Strategic Plan has also been significant in promoting occupational safety and health throughout the Navy. The current plan identifies specific goals and initiatives to continue improving the effectiveness of the NAVOSH program. A copy of the NAVOSH Strategic Plan was provided with the Navy's FY97 OSHA report and is available on the worldwide web at the NAVOSH Strategic Plan web site at http://www.navosh.net/references/strategic96.pdf.

a. *When was it last updated?*

The most recent revision of the NAVOSH manual, OPNAVINST 5100.23E, was reviewed and revised during FY98 and signed on January 15, 1999 by Admiral Andy Granuzzo, CNO (N45). OPNAVINST 5100.23E is the version that is referenced throughout this report. OPNAVINST 5100.19C, the shipboard version of the NAVOSH manual, is currently under review with a revised version scheduled for release in FY00.

The current Navy Occupational Safety and Health Strategic Plan was published in 1996. The first Strategic Plan was published in 1993 and has been revised twice, in 1994, and in 1996. The third revision is scheduled for release in FY99.

b. *Does the written safety and health program reflect current occupational safety and health policies and procedures?*

Refer to responses to questions II. B1. and II.B1.a., above.

c. *Does the written safety and health program reflect current organizational structure?*

Refer to OPNAVINST 5100.23E, Chapter 2, Responsibilities, which defines current organizational structure.

2. *Do your Department's subagencies have separate written safety and health programs specific to their operations? If so, how does your Departmental program relate to the subagencies' programs?*

Refer to OPNAVINST 5100.23E, Chapter 1, Introduction, Section 0104: "Navy Occupational Safety and Health Policy," and Chapter 2, Section 0207 "Activity Programs" which discuss safety and health programs at the activity level.

3. *Have agency managers, supervisors, employees, and employee representatives been provided with training to familiarize them with the written safety and health program?*

The Naval Occupational Safety and Health and Environmental Training Center (NAVOSHENVTRACEN) is the Navy's center of training excellence. The Center provided classes in over 45 environmental and occupational health and safety subjects to nearly 7,000 sailors, marines and Department of Navy civilian employees in FY98. Trainees included safety and health professionals, hazardous materials workers, and shipboard collateral-duty safety and environmental protection personnel. NAVOSHENVTRACEN retains multi-media classrooms and video teletraining (VTT) sites on the east and west coasts and deploys mobile training teams to 28 locations worldwide.

NAVOSHENTRACEN recently used VTT to instruct aircraft carrier personnel deployed in the Persian Gulf in a 40-hour hazardous waste and emergency response (HAZWOPER) course. Applications for courses, course catalogs, and others publications and training aids are available from NAVOSHENVTRACEN and also at http://www.norva.navy.mil/navosh.

C. *Safety and Health Program Training*

1. *How does your agency ensure that managers, supervisors, employees, and employee representatives have been trained in the requirements of the safety and health program?*

NAVOSH training guidance is provided in OPNAVINST 5100.23E, Chapter 6, Training, Section 0602a, *Management Personnel*, which directs commands to provide sufficient OSH training to management to enable their support of OSH program components in their areas of responsibility. Section 0602b, *Supervisors and Employee Representatives*, directs the training of supervisory personnel and employee representatives so that they can recognize unsafe and unhealthful working conditions and practices and manage OSH programs at the work unit level. Section 0602c, *Non-supervisory Personnel*, directs commands to train non-supervisory employees in job safety and health topics appropriate to the tasks they perform.

2. *How does your agency train managers, supervisors, employees and employee representatives to recognize the hazards of their work operations?*

In accordance with OPNAVINST 5100.23E, Chapter 6 Training, Section 0607e, "Responsibilities," *Commanders, Commanding Officers, Directors,* and *Officers in Charge* directs shore activities to identify their OSH training requirements and the resources needed to accomplish such training. Section 0601b. directs each activity to customize its OSH training program to the level of responsibility of each employee in order to instruct each employee in the recognition of the hazards associated with his or her assigned tasks and work station.

3. *What training has your agency done to help managers develop hazard abatement plans when abatement cannot be achieved within 30 workdays?*

Specific training on hazard abatement plans is not provided. OPNAVINST 5100.23E, Chapter 12, Hazard Abatement Program, Section 1202, "Hazard Abatement Processing and Tracking," describes procedures for identifying and evaluating hazards and directs those in charge of the operation on the actions to take to ensure

prompt abatement of hazards. Section 1203, "Interim Controls," defines interim actions to be taken when hazards cannot be abated immediately.

III. ACCOMPLISHMENTS:

Please describe the major success story or stories of occupational safety and health in your agency during the reporting period.

The NAVOSH program has had numerous success stories in FY98, which inspired a call for newsworthy events that demonstrate the Navy's commitment to occupational safety and health. They are: *The 1,001 NAVOSH Success Stories* project, the Military Sealift Command's Lockout/Tagout Program, the Navy's Non-ionizing Radiation Safety Program, The Navy Corporate Ergonomics Plan and the Workers' Compensation Cost Reduction Initiative.

A. 1,001 NAVOSH Success Stories

NAVOSH professionals are guardians of the lives and well being of the Navy's workforce; every worker who goes home to his or her family at the end of a work shift represents another success. In the September 1998, the Chief of Naval Operations (CNO), Code N454 (Safety and Occupational Health Branch) initiated the *1,001 NAVOSH Success Stories* project to highlight NAVOSH program accomplishments and the events that make them distinctive. Success Stories focus on events and outcomes that are especially newsworthy and which demonstrate the Navy's commitment to protecting its workforce from occupational hazards. These NAVOSH Success Stories will be published at http://www.navosh.net/references/success/index.html.

B. Military Sealift Command Lockout/Tagout Program

Forty Military Sealift Command (MSC) vessels have successfully implemented a Lockout/Tagout Program that requires that workers physically lock out energized equipment to prevent the start-up or release of stored energy while personnel work on that equipment.

The Navy has long had a shipboard Tagout Program that requires a worker to tag out electrical equipment or machinery that is out of service. The tag warns against activation of the tagged out equipment or machinery and identifies measures to take before reactivation. The MSC program takes the concept one step further by also requiring locking devices to secure, in the "off" position, any electrical, hydraulic, steam, or pressurized system prior to working on it. Only the person who installed them is authorized to remove the tag and lock, from a tagged-out

and locked-out system or equipment.

C. Non-ionizing Radiation Safety Program (Laser Safety)

The Navy's major weapons, guidance, and communications systems rely on electromagnetic radiation (EMF) systems, such as lasers and radio frequency (RF) radiation. Protection of airborne, land-based, and shipboard personnel from lasers and (RF) radiation injuries is crucial to mission success and essential to retaining the military-unique waiver for its systems from the U.S. Food and Drug Administration (FDA) for compliance with its safety requirements.

One hundred laser systems, exercises and development protocols were provided authoritative safety review and assistance for acquisition, development, and deployment by the Laser Safety Review Board headed by the Bureau of Medicine and Surgery since May 1996. Laser eye protection, including aviation visors with threat protection, has been developed and acquired. Distribution to the fleet is anticipated to be complete in FY99. The success of the Navy's Non-ionizing Radiation Safety Program is illustrated by the absence of a single mishap or injury attributed to laser systems or misguided laser munitions during the Gulf War conflict, during which tens of thousands of sophisticated laser systems were used.

D. Navy Corporate Ergonomics Plan

Ergonomic disorders make up the fastest-growing category of reported occupational injuries and illnesses in the United States. Known collectively as cumulative trauma disorders (CTDs), musculoskeletal disorders (MSDs), or repetitive motion injuries (RMIs), they include tendonitis and carpal tunnel syndrome as well as lower-back pain and numerous other afflictions. Unlike industrial mishaps, which result from a single traumatic event, most CTDs result from motions and exertions repeated over an extended period of time.

The Navy's Corporate Ergonomics Plan (NCEP) is a pilot program designed to determine the feasibility of implementing activity-level ergonomic programs throughout the Navy. NCEP's purpose is to assist commands in developing activity-specific ergonomic programs to increase productivity, decrease injury and illness rates and workers' compensation costs, and improves worker morale. NCEP focuses on integrating ergonomics into the safety culture rather than of relying on an expert-driven system. Seven model sites are currently participating in the pilot program.

The NCEP web site, which is continuously being improved, will feature input from the seven pilot sites. NCEP is expected to assist in resolving ergonomic risk factors, obtaining appropriate equipment and materials, and developing recommendations for and the remodeling, and refurbishment of Navy facilities. The NCEP web site is located at: http://www.navosh.net/programs/casestudies/index.html.

E. Workers' Compensation Cost Reduction

NAVSEA has aggressively pursued its mature workers' compensation cases to reduce the costs of occupational injuries and illnesses. NAVSEA's initiative includes rehabilitating injured workers and returning them to work, retiring eligible workers, and removing inappropriate cases from workers' compensation rolls. During the past five years this endeavor has resulted in a savings of over $10 million in direct workers' compensation costs.

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