



U.S. COAST GUARD



FY03 Environmental Health Report

The purpose of this, our first annual Safety Report, is to raise the awareness of the CG community regarding the newly designated Coast Guard Headquarters Environmental Health Division at CG HQ. The Division of Environmental Health (EH) exists to provide guidance regarding Environmental Health topics of concern. Our assistance is provided to the field via our MLC (kse) personnel and their Detached Safety and Environmental Health personnel located at each ISC.

Creation of the EH Division serves to compartmentalize a number of disciplines which include not only what would be considered 'classic EH' such as food, water, and good sanitation practices, but also includes the disciplines of industrial hygiene (IH), human factors (HF), and occupational health (OH) monitoring. Together, these disciplines address those aspects of human health, including quality of life, that are determined by physical, chemical, and biological factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that can potentially affect adversely the health of present and future generations.

The EH program in the CG provides the following assistance to the field in the form of consultation, training/information packages, and on site assistance. Our MLC (kse) personnel provide the following services on an established frequency based upon perceived risk or by special request:

- Occupational medical surveillance coordination
- Workplace Health Risk Assessments
- Crew Endurance Management (CEM)
- Food sanitation evaluations
- Food borne illness investigations
- Potable water and waste water concerns
- Disaster response support
- Overseas EH threat information
- Housing EH risk assessment
- Respiratory protection assistance
- Sound surveys in the work environment
- Vessel De-ratting exemption certificates
- Pest control guidance
- Human System Integration (HSI)
- Workplace ergonomics evaluations
- Impact shock and vibration evaluations
- Human Factors assessments in mishaps
- General Sanitation inspections
- Potable water evaluation and testing
- Confined space identification
- Risk identification
- Risk management
- Training and education
- Occupational and communicable disease investigations
- Health and safety assistance for AMIO

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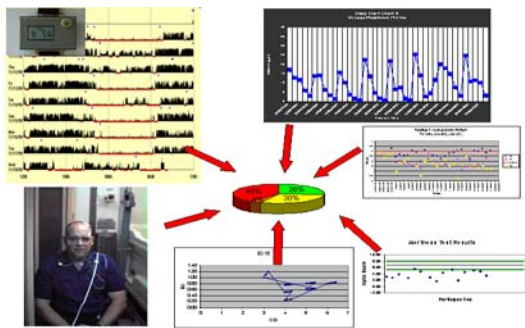
Crew Endurance Management
DOEHRS-IH
Newly revised Instructions
Instructions considered for revision
Mold in homes



Crew Endurance Management

Coast Guard personnel operate in challenging work environments that can compromise alertness and performance. Long work hours, harsh working conditions, extreme temperatures, frequent separation from loved ones, and fatigue are all too familiar demands that our people encounter on a regular basis. Despite the steadfast dedication and motivation our people have for the mission, exposure to these factors compromises crew endurance, increases operational risk, and reduces mission readiness.

Recent studies of numerous Coast Guard operations revealed the *70% of the CG personnel studied exhibited signs of compromised alertness*. Brain activity, biochemical levels, activity patterns, and subjective responses clearly showed crews were compromised.



The good news is that *crew endurance risk can be managed*. We have developed practical, proven methods to identify and manage crew endurance risks that can compromise the safety and effectiveness of Coast Guard operations. Efforts to control endurance risk have focused on three distinct levels; the organization, the command, and the individual. At the organizational level, policy and standards of performance are developed and established. We have been working with operational program managers to integrate endurance

management principles into operational doctrine and procedures so the information is institutionalized. At the command level, we work with units to transform policies and standards into action. Many of the traditional work practices (i.e., some watch schedules, taps and reveille, etc.) lend little to operational effectiveness and readiness but often compromise endurance. We work with units to identify endurance risk factors in their operations and explore controls for these risks. The individual is the most challenging level to change but has the most significant contribution to endurance management. The focus here is to education and training personnel on issues that promote good endurance (i.e., sleep needs, diet and nutrition, exercise, etc.) so that organization- and command-level efforts are maximized at the individual level.

Status of Program – Current activities include developing and refining tools to identify and control endurance risk, as well as, building an infrastructure in the field to support endurance management requests from operational units.

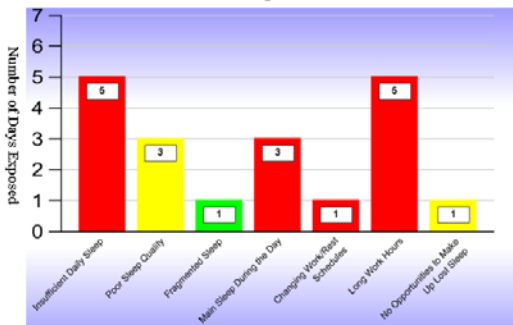
Infrastructure needs – While the tools are used at the unit level, and can be used by anyone with minimal expertise, an infrastructure is necessary to answer questions when problems arise or more information is required. We have identified Safety and Environmental Health Officers, Unit Safety Coordinators, Corpsmen, and Wellness Coordinators as ideal candidates for the infrastructure. To date, we have trained and certified 90% of our Safety and Environmental Health Officers and their corpsmen to be crew endurance management practitioners. Additional members will be trained as resources become available.

Tools - Three primary tools are available to identify and control endurance risk: Crew Endurance Management (CEM) Guide, Risk Factor Assessment (RFA), and the Crew Endurance Readiness Tool (CERT).

CEM Guide - takes you step-by-step through the process of understanding what endurance is, identifying endurance risk factors, exploring unit and personal options, and successfully implementing changes that will improve endurance *and* increase mission effectiveness. The methods discussed in this *Guide* go well beyond scientific theory. These are practical, workable methods that have been successfully implemented and proven during Coast Guard operations.

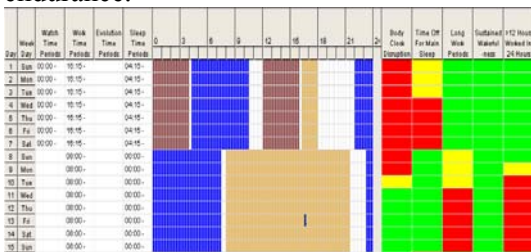
RFA - is a structured approach to quantify exposure to endurance risk factors.

Crew Endurance Management Core Risk Factors



The color red indicates the unit has high exposure to endurance risk, yellow is moderate risk, and green indicates the unit is maintaining endurance.

CERT – evaluates exposure to endurance risk as a function of work schedules. Watch/work schedules are generally determined by tradition and the number of qualified crew available to perform the task or function. Unfortunately, traditional work schedules do not take into consideration physiological constraints of humans. This tool allows you to determine how different watch/work schedules affect endurance and helps you design schedules that promote endurance.



Points of Contact – If you have crew endurance concerns or are interested in implementing a crew endurance management program, resources are available to assist you. Your first call should be to your Safety and Environmental Health Officer. These individuals have access to, and are trained on the use of, the tools. Additionally, they can provide assistance on the process to establish a program at your unit. The second call is to the Office of Safety and Environmental Health (G-WKS) at Coast Guard Headquarters. As the sponsor of the crew endurance management program, G-WKS can provide the tools and assistance to implement a program at your unit.

We are operating during a period of rapid operational and technological change. Consequently, we must be ever vigilant of the impact of these changes on our people and our operational readiness. This Guide provides you with information on the elements of crew endurance, step-by-step instructions for identifying crew endurance risk factors, and strategies for managing the risk.

As we confront current challenges, and prepare for new opportunities that technology and operational demands will bring, we must acknowledge that the protection of our people remains our highest priority and do our best to ensure that crew endurance limits are not exceeded.

While an asset's endurance is often described as how long it can support operations at sea without replenishing supplies or requiring in-port maintenance, so too, crew endurance can be described as a function of physiological and psychological factors that support crew members' ability to perform their jobs effectively.

Occupational Medical Surveillance and Evaluation Program (OMSEP)

The working environment for CG active duty and civilian personnel can expose individuals to health hazards with the potential to cause disease or injury. OMSEP is designed to identify work related diseases or conditions, through baseline and periodic examinations, at a stage when modifying the exposure or providing medical intervention could potentially arrest disease progression or prevent recurrences. The fundamental purpose of this program is to identify pre-existing health conditions, provide risk specific periodic screenings, and monitor clinical laboratory tests and biologic functions suggestive of work related environmental exposures. All OMSEP enrollees receive periodic physical examinations, in accordance with OSHA requirements, for the duration of their health hazard exposure or end of their employment. In accordance with OSHA regulations, the OMSEP personnel-tracking database containing the name, social security number, billet or occupation code, applicable examination protocols, and next physical examination due date remains active for an additional 30 years.

CAPT Mario Fajardo, our resident Occupational Health Doctor, has been actively involved with the improvement of our OMSEP program. He has spent the last five years improving the program previously known as Occupational Medical Monitoring Program (OMMP). This year he has introduced two new learning modules for our Occupational Medicine web-based training for medical providers. This lecture series is designed to continue the learning process for our CG medical providers to ensure our OMSEP enrollees get the best possible care. In addition, he has been actively involved with medical investigations into the causes of operator injuries on CG Deployable Pursuit Boats and of injuries to our Motor Life Boat (47') personnel.

In September of 2003, we published change 18 to chapter 12 of the Medical Manual. Change 18 included updates of protocols that now add blood borne pathogen exposure, and radiological events to the long list of protocols available to active duty and contract medical providers. In changes yet to come we plan to add protocols for Weapons of Mass Destruction events to provide CG clinics with an ability to rapidly assess signs and symptoms. Improvements have also been made to the OMSEP database available online on the CG Intranet making it a more accessible tool for unit OMSEP coordinators.

DOEHRS-IH

The Coast Guard has maintained involvement in the development of the Defense Occupational and Environmental Readiness System-Industrial Hygiene (DOEHRS-IH).

DOEHRS-IH is a computer program developed for use by all DoD agencies and the CG. The CG has been involved in the development to ensure CG can reap the benefits of this powerful workplace-monitoring tool. The data repository for DOEHRS-IH will link with the medical software utilized by DOD and CG medical providers. DOEHRS-IH will allow the Coast Guard to track occupational exposures and allow medical officers to view those exposures during physical examinations of Coast Guard members, both active duty and civilian. It will also have a variety of timesaving functions that will help the Safety and Environmental health officers track their surveys and equipment.

COMDTINST REVISIONS

Safety and Environmental Health Manual

In September of 2003, we published change 9 to COMDTINST M5100.47, Safety and Environmental Health Manual. Change 9

included complete updates to chapter 4, Occupational Health, and chapter 5, Environmental Health.

Changes to chapter 4 include updates to the Occupational Medical Surveillance and Evaluation Program to reflect the current program (chapter 12 of the Medical Manual) and additional information on thermal stress. Chapter 5 is now a combination of the old chapters on pest management and sanitation practices. The changes update policies on pesticide use and provide additional guidance on swimming pools, spas, wading pools, and training tanks.

Respiratory Protection Manual

COMDTINST 6260.2D, Technical Guide: Practices for Respiratory Protection went through Headquarters' concurrent clearance in the fall of 2003 and we plan to have it published in the spring of 2004. This is a complete rewrite of the manual that will update the Coast Guard's Respiratory Protection Program to meet the requirements of the most recent OSHA standard.

Asbestos, Lead and Radon in Coast Housing

COMDTINST 6260.1A, Asbestos, Lead, and Radon in CG Owned Housing: The updating and concurrent clearance of The Asbestos, Lead and Radon in Coast Guard Housing Instruction should be completed in the Spring of 2004. The updated instruction expands the scope by redefining and establishing responsibilities for the program elements, which includes occupant disclosure and documentation; tracking of environmental hazards; remediation and annual visual reassessment. It also reflects changes in the federal lead standards.

Polyurethane Coatings Exposure Control

COMDINST 6260.30, Polyurethane coatings exposure control is in the process of being rewritten. The first draft of the rewrite has been completed and will be sent

out for concurrent clearance in April 2004. The rewrite not only differentiates between the use of two-part polyurethane paints and one-part polyurethane paints, it also will provide information regarding other products (sealants and adhesives) that contain isocyanates – the hazardous component of concern.