

U.S. Department of  
Homeland Security



United States  
Coast Guard

Commandant  
United States Coast Guard

2100 2nd Street, SW  
Washington, DC 20593-0001  
Staff Symbol: G-WKS  
Phone: (202) 267-1883

COMDTNOTE 5100  
08 SEP 2003

COMMANDANT NOTICE 5100

CANCELLED:  
08 SEP 2004

Subj: CH-9 TO SAFETY AND ENVIRONMENTAL HEALTH MANUAL, COMDTINST M5100.47

1. PURPOSE. This Notice publishes CH-9 to the Safety and Environmental Health Manual, COMDTINST M5100.47. Intended users of this directive are all units which maintain the Manual.
2. ACTION. Area and district commanders, commanders of maintenance and logistics commands, commanding officers of headquarters units, and assistant commandants for directorates, Chief Counsel, and special staff offices at Headquarters shall ensure compliance with the provisions of this Notice. Internet release authorized.
3. DIRECTIVES AFFECTED. Public Pool Guide, COMDTINST M6200.7, is cancelled.
4. SUMMARY OF CHANGES. Chapter 4, Occupational Health, was completely updated. Changes include updates to the Occupational Medical Surveillance and Evaluation Program to reflect the current program and additional guidance on industrial hygiene and thermal stress. Chapter 5, Environmental Health, was completely updated and is a combination of the old chapters on pest management and sanitation practices. This chapter updates policies on pesticide use and provides additional guidance on habitability and swimming pools, spas, wading pools, and training tanks. Enclosure 3, Medical Officer's Report, was updated with current forms to be used during a mishap investigation.
5. PROCEDURES. No paper distribution will be made of this Notice. Official distribution will be made via Coast Guard Directives System CD-ROM and website at: <http://cgweb.uscg.mil/g-c/g-ccs/g-cit/g-cim/directives/welcome.htm> or <http://www.uscg.mil/ccs/cit/cim/directives/welcome.htm>. Message notification will announce changes and effective dates.

DISTRIBUTION – SDL No. 140

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
A	3	2	2		2	2	2	2	1	1		1	2	2	2	1	1		1		3					
B		8	20	2	12	6		10	10	10	10	20	5	20	2	1	20	20	20	1	5	1	3	1	1	1
C	10	8	1	6	3	3	1	1	1		12	1	1		1		1	1		1	1	1	1		1	1
D	3	1	2	3	1	1	1	1		1	1	1	1	1	1	1	1	1	1		1	1	1			1
E	1							1						1	1											
F																	1		1							
G																										
H																										

NON-STANDARD DISTRIBUTION:

COMDTNOTE 5100

a. Remove and insert the following pages:

Remove:

Table of Contents p. i thru v  
Chapter 4  
Chapters 5 and 6  
Enclosure 3

Insert:

Table of Contents p. i thru iv, CH-9  
Chapter 4, CH-9  
Chapter 5, CH-9  
Enclosure 3, CH-9

/s/

JOYCE M. JOHNSON  
Director of Health and Safety

Encl: (1) CH-9 to Safety and Environmental Health Manual, COMDTINST M5100.47

## TABLE OF CONTENTS

	<b>PAGE</b>
<b>CHAPTER 1 - COAST GUARD SAFETY AND ENVIRONMENTAL HEALTH PROGRAM</b>	
Section B - Purpose	1-1
Section C - Scope	1-1
Section D - Authority	1-1
Section E - Definitions	1-3
Section F - Responsibilities	1-4
Section G - Appointment of Safety Officers and Unit Safety Supervisors	1-11
Section H - Audits/Inspections	1-12
Section I - Hazard Identification and Reporting	1-14
Section J - Mishap Investigation and Reporting	1-14
Section K - Safety and Environmental Health Standards and Requirements	1-14
Section L - Safety and Environmental Health Data Systems	1-17
Section M - Personnel Reprisal Protection and Appeal Rights	1-18
Section N - Interaction with Other Federal Agencies	1-19
<b>CHAPTER 2 - AVIATION SAFETY PROGRAM</b>	
Section A - Policy	2-1
Section B - Goal	2-1
Section C - Scope	2-1
Section D - Commitment to Safety	2-1
Section E - Risk Management	2-1
Section F - Organization and Responsibilities	2-2
Section G - Audits and Inspections	2-12
Section H - Unit Training	2-12
Section I - Flight Safety Officer (FSO) Selection/Assignment	2-16
Section J - Accident Investigation Specialist (AIS)	2-17
Section K - Mishap Cockpit Voice and Data Recorders	2-17
Section L - Near Midair Collisions and Midair Collisions	2-18
Section M - Aviation Mishap Class C, D and E Investigation and Reporting	2-19
Section N - Hosting the MAB and Mishap Site Safeguarding	2-22
Section O - Other Reports and Requirements Associated with Mishaps	2-22
Section P - Investigating Potential Criminal Acts (Including Sabotage)	2-23

**CHAPTER 3 - MISHAP RESPONSE, INVESTIGATION AND REPORTING**

Section A - Scope	3-1
Section B - Mishap Definition	3-1
Section C - Policy	3-1
Section D - Mishap Response Flow Chart	3-1
Section E - Pre Mishap Plan	3-1
Section F - Mishap Events	3-4
Section G - Non Reportable Mishap Events	3-7
Section H - Mishap Classifications	3-8
Section I - Mishap Investigation Boards	3-13
Section J - Mishap Reporting	3-16
Section K - Limitations on the Use and Disclosure of Mishap Investigations and Reports	3-20
Section L - Personnel Casualty Reporting	3-20

**CHAPTER 4 - OCCUPATIONAL HEALTH**

Section A - Scope	4-1
Section B - Background	4-1
Section C - Responsibilities	4-1
Section D - Occupational Health Standards	4-2

**CHAPTER 5 - ENVIRONMENTAL HEALTH**

Section A - Scope	5-1
Section B - Background	5-1
Section C - Responsibilities	5-1
Section D - Environmental Health Standards	5-2

**CHAPTER 6 - TO BE DEVELOPED**

**CHAPTER 7 - COAST GUARD RADIOLOGICAL HEALTH PROGRAM**

Section A - Purpose	7-1
Section B - Policy	7-1
Section C - Authority	7-1
Section D - Definitions	7-2

**CHAPTER 7 - COAST GUARD RADIOLOGICAL HEALTH  
PROGRAM (Cont'd)**

Section E - Responsibilities	7-4
Section F - Personnel Dosimeter Program	7-7
Section G - Privacy	7-8

**CHAPTER 8 - VESSEL SAFETY PROGRAM**

Section A - Policy	8-1
Section B - Goal	8-1
Section C - Scope	8-1
Section D - Authority	8-1
Section E - Standards	8-1
Section F - Organization	8-1
Section G - Safety and Environmental Health Audits	8-5
Section H - Training	8-7
Section I - Pre-Mishap Plan	8-8

**CHAPTER 9 - SHORE FACILITY FIRE SAFETY**

Section A - Policy	9-1
Section B - Purpose	9-1
Section C - Scope	9-1
Section D - Authority	9-1
Section E - Definitions	9-3
Section F - Responsibilities	9-6
Section G - Pre-Fire Plan	9-9
Section H - Notification of Fire	9-10
Section I - Inspections	9-10
Section J - Fire Detection and Alarm Systems	9-11
Section K - Reporting	9-11
Section L - Alternative Fire Protection Options	9-11
Section M - Emergency Medical Service Response	9-12
Section N - Personnel Training and Physical Fitness	9-13
Section O - Personal Protective Equipment	9-14
Section P - Standardization of Fire Apparatus	9-16

**CHAPTER 10 - TRAFFIC SAFETY**

Section A - Purpose	10-1
Section B - Scope	10-1
Section C - Definitions	10-1
Section D - Authority	10-1
Section E - Regulations and Directives	10-2
Section F - Background	10-2
Section G - Motor Vehicle Requirements	10-2
Section H - Pedestrian Safety	10-4
Section I - Bicycle Safety	10-5
Section J - Training	10-6
Section K - Awareness and Promotional Campaigns	10-8
Section L - Responsibilities	10-9
Section M - Governor's Highway Safety Representatives	10-11
Section N - State Motorcycle Safety Administrators	10-16

**ENCLOSURES**

- (1) Employee Hazard Reporting, Hazard Identification and Abatement
- (2) Mishap Analysis Report Format
- (3) Medical Officer's Report
- (4) Mishap Board Procedures
- (5) Format for Coast Guard Aviation Mishap Message
- (6) Format for Vessel Underway Operational Mishaps
- (7) Sound Level Survey Report Instructions (RCN-5100-3)
- (8) Workplace Monitoring Report Instructions (RCN 5100-2)
- (9) Format for Vessel Non-Operational and Shore Mishap Message
- (10) Limitations of the Use and Disclosure of Mishap Investigations and Reports
- (11) Personnel Dosimeter Program Requirements
- (12) Prenatal Radiation Health Risk
- (13) Determining the Cost of Property Damage
- (14) Optional Format for MAB Progress Message
- (15) Sample Pre-Mishap Plan
- (16) Sample Mishap Analysis Kit
- (17) Sample MOU Between USCG and Local Fire Department

## CHAPTER 4. OCCUPATIONAL HEALTH

- A. Scope. This chapter provides requirements and guidance to promulgate policy, standards, and guidelines for implementing the Coast Guard Occupational Health Program. The occupational health program pertains to all Coast Guard active duty and civilians on any Coast Guard facility, aircraft, or vessel or during any Coast Guard-related activities on a non-Coast Guard facility, aircraft, or vessel. Sections 3 and 4 also apply to contractors and visitors.
- B. Background. Occupational health is a science devoted to the anticipation, evaluation and control of various environmental factors that arise in living or working environments that may lead to impaired health. The primary goal of occupational health is to ensure unit members are provided with working conditions free of known hazards. To be effective, occupational health programs must be proactive, e.g., conducting training and inspections, versus reactive, e.g., determining what caused an occupational illness or injury. One of the best proactive methods is to educate all hands on occupational health hazards and methods of prevention. The following program areas of occupational health will be covered by this chapter:
1. Occupational Medical Surveillance and Evaluation Program (OMSEP).
  2. Industrial Hygiene
  3. Hearing Conservation
  4. Thermal Stress
- C. Responsibilities.
1. Maintenance and Logistics Command (kse).
    - a. Provide assistance, funding, equipment, training and references to Safety and Environmental Health Officers to ensure they are able to provide services needed by units in their AOR.
    - b. Evaluate units regarding compliance with this instruction during routine unit visits.
  2. Safety and Environmental Health Officer (SEHO).
    - a. Maintain equipment and references to provide services needed by units in their AOR.
    - b. Provide assistance to units regarding the contents of this instruction.

3. Group Commanders or Commanding Officers shall.
  - a. Ensure that the contents of this instruction are enforced at their unit(s).
  - b. Contact the local SEHO for assistance with any requirements that are beyond the abilities and training of personnel assigned to the unit.

D. Occupational Health Standards.

1. Occupational Medical Surveillance and Evaluation Program.

a. Reference.

- (1) Medical Manual, COMDTINST M6000.1 (series), Chapter 12.

- b. Background. The OMSEP is a physical examination program designed to identify work-related diseases at a stage when modifying the exposure or providing medical intervention may potentially arrest disease progression or prevent recurrences. This program provides exposure-specific physical examinations. It does not prevent adverse health effects. The primary role of the OMSEP is to provide initial, periodic, acute exposure and exit/separation physical examinations. Detailed information on the OMSEP program can be found in reference (1).

c. Responsibilities.

(1) Commandant (G-WKS).

- (a) Provide program oversight and make policy decisions.
- (b) Responsible for Safety and Environmental Health (SEH) policy as well as exposure assessment oversight.
- (c) Provide policy oversight on Chapter 12 of the Medical Manual; maintains database on diagnosed occupational health disorders; determines need for long-term population based epidemiological studies; and provides training and support.

(2) Maintenance and Logistics Commands (MLC's).

- (a) Maintain and manage the OMSEP centralized database.
- (b) Provide OMSEP physical examination oversight.

- (3) Safety and Environmental Health Officers (SEHO's).
  - (a) Perform workplace evaluations.
  - (b) Provide support and training on OMSEP related matters.
  - (c) Interact with OMSEP coordinator on final enrollment recommendations.
  - (d) Approve enrollment entries into the centralized database.
- (4) Group Commanders or Commanding Officers.
  - (a) Must appoint a unit OMSEP coordinator.
  - (b) Ensure members comply with all established preventive safety practices.
  - (c) Request assistance from MLC (kse) for program support.
- (5) OMSEP Coordinator.
  - (a) Maintain unit tracking report.
  - (b) Update database concerning enrollment and exam status for unit members.
  - (c) Interact with SEHO regarding enrollment recommendations/approvals/disapprovals.
  - (d) Ensure physical examinations occur as required.
- (6) Medical Officers / Clinic Administrators.
  - (a) Ensure all physical examinations are appropriately conducted and recorded. Eligibility of enrollment in the OMSEP program must be verified utilizing the online OMSEP database.
  - (b) Provide oversight to contract providers and Independent Duty Technicians (IDTs) within their area of responsibility.
  - (c) Make diagnosis in accordance with the ICD-9 coding process.

- (d) Provide patient notification on physical examination results and laboratory/radiological findings, including examinations conducted upon termination of employment/end of exposure and Exit/Separation Letter.

d. Required Program Elements.

- (1) Each unit must name an OMSEP coordinator, typically the Unit Safety Coordinator or the Safety and Health Coordinator (SOHC) to coordinate the unit OMSEP program with the SEHO and medical clinic;
- (2) Requirements for entry into OMSEP can be found in reference (1). Members must be recommended by their OMSEP coordinator and approved by the SEHO to be placed in the OMSEP database. Entry into the database is required prior to receiving an OMSEP examination.
- (3) OMSEP data must be entered and maintained in the member's medical record; OMSEP records, data and related material, including the medical record jacket, must be clearly marked "OMSEP";
- (4) MLCA (kse) will maintain the OMSEP centralized database in accordance with privacy act regulations. The database must be updated and readily accessible to the various levels of the OMSEP organization;
- (5) OMSEP examinations, laboratory results, radiological findings and consultations must be discussed with the member, and all discrepancies explained before filing into the medical record;
- (6) Members must receive a summary result of their OMSEP examination findings at the completion of their initial or periodic evaluations;
- (7) Members separating from the OMSEP at end of exposure or at termination of employment must be provided with an Exit/Separation Letter, accounting for all their known exposures and surveillance protocols;
- (8) Members recommended for enrollment must meet the enrollment criteria;

2. Industrial Hygiene Program.

- a. References.
  - (1) 29 CFR 1910, Occupational Safety and Health Standards
  - (2) American Conference of Governmental Industrial Hygienists' Threshold Limit Values.
  
- b. Background. Industrial hygiene as a specialty is concerned with solving industrial health problems by anticipating, recognizing, evaluating and controlling potential health hazards in the occupational environment. As such, it is devoted to the recognition, evaluation and control of those environmental hazards - chemical, physical, biologic and ergonomic - that may cause sickness, impaired health or significant discomfort. Occupational health hazards are conditions that may potentially cause legally compensable occupational illness or any condition in the work place that impairs the health of employees sufficiently to make them lose time from work or work at less than full efficiency.
  
- c. Responsibilities.
  - (1) Maintenance and Logistics Commands (MLCs) and detached Safety and Environmental Health Officers (SEHOs).
    - (a) Maintain industrial hygiene equipment to be prepared to conduct exposure monitoring as requested by Coast Guard units.
    - (b) During Risk Assessment Surveys, identify, measure, and evaluate personnel exposures to hazardous chemical or physical agents.
    - (c) Assist units in selecting engineering and administrative controls and personal protective equipment and clothing.
  - (2) Group Commanders or Commanding Officers.
    - (a) Ensure unit personnel are not overexposed to chemical and physical hazards.
    - (b) Request assistance from the cognizant SEHO or MLC to evaluate exposures.
  
- d. Occupational Exposure Limits.
  - (1) The more stringent of reference (a) and (b) will be used when evaluating exposures to chemical hazard, including 8-hour time

weighted averages (TWAs), short term exposure limits (STELs) and ceiling limits.

- (2) Engineering and/or administrative controls will be put into place when exposure levels exceed the occupational exposure limit.
- (3) Personal protective equipment will be used as a last resort or during implementation of engineering controls.

- e. Industrial Hygiene Equipment. All industrial hygiene equipment will be maintained according to manufacturer's specifications.
- f. Record Keeping. All industrial hygiene evaluations and sampling results shall be maintained for no less than 40 years.

### 3. Hearing Conservation.

#### a. Reference.

- (1) Medical Manual, COMDTINST M6000.1 (series)

- b. Background. The Coast Guard working and living environments contain many high intensity noise sources. Exposure of Coast Guard personnel to high intensity noise damages their hearing, causing a major health and economic impact.

#### c. Responsibilities.

##### (1) Maintenance and Logistics Commands (MLCs) and detached Safety and Environmental Health Officers (SEHOs).

- (a) Maintain noise monitoring equipment to be prepared to conduct exposure monitoring as requested by Coast Guard units.
- (b) During Risk Assessment Surveys, identify, measure, and evaluate personnel exposures to noise sources.
- (c) Assist units in selecting engineering and administrative controls and hearing protective devices.

##### (2) Group Commanders or Commanding Officers.

- (a) Ensure unit personnel are not overexposed to noise hazards.

- (b) Ensure that personnel exposed to hazardous noise receive initial and refresher training in hearing conservation.
  - (c) Ensure that all noise areas and sources are properly labeled and posted.
  - (d) Request assistance from the cognizant SEHO or MLC to evaluate noise sources and exposures.
  
- d. Program Requirements. To reduce the impact of noise on personnel, the Coast Guard has implemented a hearing conservation program requiring the accomplishment of the following six action elements:
  - (1) Identify, assess, and post hazardous noise sources.
  - (2) Determine extent and disposition of personnel exposed.
  - (3) Engineer methods to abate noise.
  - (4) Provide and require the use of hearing protectors for all personnel exposed to hazardous noise (fit personnel with hearing protection devices as necessary).
  - (5) Educate and advise personnel concerning hearing conservation.
  - (6) Monitor employee hearing acuity using trained audiometric technicians in certified audiometric booths.
  
- e. Noise Standard. Environments or equipment that produce continuous noise levels at or above 85 dB(A) time weighted average (TWA) and impact noises exceeding 140dB(A) are considered hazardous and protective measures must be taken to reduce exposure to personnel. Noise exposures shall be calculated using a 3 dB(A) exchange rate. See section 1.P.24 of this Manual for the definition of TWA.
  
- f. Hearing Protection Devices.
  - (1) Hearing protective devices shall be worn by all personnel when they enter or work in an area where the operations generate noise levels of:
    - (a) Equal to or greater than 85 dB(A) continuous sound pressure level;
    - (b) 140 dB peak sound pressure level or greater.

- (2) A combination of insert type and circumaural type hearing protective devices (double hearing protection) shall be worn in all areas where noise levels exceed 104 dB(A).
- (3) In cases where hearing protective devices do not provide sufficient attenuation to reduce the individual's effective exposure level below 85 dB(A) and engineering controls are impractical, administrative control of exposure time will be necessary.

g. Training. All personnel exposed to hazardous noise shall receive a minimum of one hour of initial Hearing Conservation Training and appropriate refresher training annually thereafter. Documentation of such training (i.e., attendance logs) shall be made part of the command's training records. The following are the minimum requirements of hearing conservation program training:

- (1) description of the symptoms, mechanism, and consequences of temporary and permanent hearing loss;
- (2) elements of the hearing conservation program;
- (3) proper selection, wearing, and maintenance of hearing protective devices;
- (4) identification of hazardous noise sources at the command and safe work practices to be used to minimize exposure to hazardous noise;
- (5) description of audiometric testing which will include explanation of audiometric test results and the procedures involved in testing.

h. Audiometric Testing. Shall be done in accordance with procedures in reference (1).

#### 4. Thermal Stress

a. References.

- (1) Preventing Heat Casualties, COMDTPUB P6200.12 (series)
- (2) Cutter Heat Stress Program, COMDTINST M6260.17 (series),
- (3) Sustaining Health and Performance in the Cold: Environmental Medicine Guidance for Cold Weather Operations, US Army Research Institute for Environmental Medicine  
<http://www.vnh.org/refer/ColdWeatherOperations/depcold/toc.html>

- b. Background. Extreme heat and cold conditions may occur on Coast Guard cutters, at shore facilities, and during outdoor activities. It is important to evaluate environmental conditions and take preventive action to avoid adverse health effects to personnel.
  
- c. Responsibilities.
  - (1) Maintenance and Logistics Commands (MLCs) and detached Safety and Environmental Health Officers (SEHOs).
    - (a) Provide assistance to units to evaluate thermal stress conditions and recommend preventive measures to avoid adverse health effects to personnel.
    - (b) Maintain equipment to evaluate extreme thermal stress conditions.
  - (2) Group Commanders or Commanding Officers.
    - (a) If onboard a cutter or in a location where heat or cold conditions are prevalent, initiate a thermal stress program to include training and an SOP to deal with extreme environmental conditions.
    - (b) Ensure that preventive measures are taken to prevent heat and cold stress disorders in unit personnel.
    - (b) Request assistance from the cognizant SEHO or MLC to evaluate environmental conditions and preventive measures.
  
- d. Heat Stress. Heat stress conditions, medical disorders, and preventive measures are described in references (1) and (2). Particular attention must be paid to the following:
  - (1) Ensure personnel are aware of the symptoms of heat stress disorders and use the buddy system to watch out for these symptoms when working in hot environments.
  - (2) Measure hot environments to determine appropriate work-rest schedules to use to prevent heat stress disorders.
  - (3) Ensure personnel consume adequate amounts of fluids and eat three meals a day.

- (4) Ensure new personnel are acclimatized to the environment prior to working in hot environments.
  - (5) Take efforts to reduce the heat load on personnel. This may include wearing lighter clothing and/or scheduling work during the cooler times of the day.
- e. Cold stress. Cold stress conditions, medical disorders, and preventive measures are described in reference (3). Particular attention must be paid to the following:
- (1) Ensure personnel are aware of the symptoms of cold stress, especially hypothermia, and use the buddy system to watch out for these symptoms when working in cold environments.
  - (2) Ensure personnel consume adequate amounts of fluids, eat three meals a day, and get plenty of rest.
  - (3) Have personnel dress in layers to help trap air for insulation. Do not overdress so as to cause excessive sweating. The clothing layer next to the skin should wick away moisture, and the outer layer should be wind resistant.
  - (4) Heat loss is higher in the extremities and particular attention should be paid to preventing heat loss through the feet, hands, and head.

## CHAPTER 5. ENVIRONMENTAL HEALTH

- A. Scope. This chapter provides requirements and guidance to prevent human illness through the elimination or control of biological disease agents and the various modes of their transmission to man.
- B. Background. Environmental health is a science devoted to the identification, evaluation and control of various environmental factors that arise in living or working environments that may lead to impaired health. The primary goal of environmental health is to ensure unit members are provided with healthful working and living conditions. History has repeatedly demonstrated the relationship between a healthful environment and mission accomplishment. To be effective, environmental health programs must be proactive, e.g., conducting training and sanitary inspections, versus reactive, e.g., determining what caused a disease outbreak. One of the best proactive methods is to educate all hands on environmental health hazards and methods of prevention. The following program areas will be discussed within this chapter:
1. Habitability.
  2. Swimming Pools and Spas.
  3. Pest Management.
  4. Food Safety.
  5. Potable Water and Waste Water Systems.
  6. Bloodborne Pathogens
- C. Responsibilities.
1. Maintenance and Logistics Command (kse).
    - a. Provide assistance, funding, equipment, training and references to Safety and Environmental Health Officers to ensure they are able to provide services needed by units in their areas of responsibility (AOR).
    - b. Evaluate units regarding compliance with this instruction during routine unit visits.
  2. Safety and Environmental Health Officer (SEHO).
    - a. Maintain equipment and references to provide services needed by units in their AOR.
    - b. Provide assistance to units regarding the contents of this instruction.

3. Group Commanders and Unit Commanding Officers.
  - a. Ensure that the contents of this instruction are enforced at their unit(s).
  - b. Contact the local SEHO for assistance with any requirements that are beyond the abilities and training of personnel assigned to the unit.

D. Environmental Health Standards.

1. Habitability.

a. References.

- (1) Naval Ships Technical Manual, Chapter 510, Heating, Ventilation, and Air Conditioning Systems for Surface Ships.  
<http://cgweb.mlcpac.uscg.mil/mlcpv/>
- (2) Naval Ships Technical Manual, Chapter 330, Lighting.  
<http://cgweb.mlcpac.uscg.mil/mlcpv/>
- (3) ASHRAE Standard 62-1999, Ventilation for Acceptable Indoor Air Quality, Section 6.1 (NOTAL)
- (4) Unaccompanied Personnel Housing (UPH) Design Guide, COMDTINST M11012.6 (series), Chapters 3 and 4
- (5) Illuminating Engineering Society (IES) Lighting Handbook (NOTAL)
- (6) Manual of Naval Preventive Medicine, NAVMED P-5010, Chapter 2  
<http://www.vnh.org/PreventiveMedicine/PreventiveMedicine.html>

- b. Background. Habitability is an aspect of environmental health that focuses on improving living conditions in berthing and other living spaces. Basic components include sanitation, illumination and ventilation. When these components are optimized, health, morale and duty performance is heightened. Poor living conditions generally have an adverse effect and must be avoided whenever possible. Some operations environments may not allow for optimal habitability. In these situations, the command must continually monitor the status of the operation and determine if improvements in living conditions are possible without compromising the mission. Besides crew living environments, habitability is concerned with protecting the health and well being of personnel utilizing laundry, barber and beauty shops, playgrounds, campgrounds and picnic areas, gymnasiums, theaters, child care centers, administrative spaces, and other similar facilities.

c. Responsibilities:

- (1) Maintenance and Logistics Command (kse). Evaluate habitability of all appropriate areas as part of routine support visits.
- (2) Safety and Environmental Health Officer (SEHO). Provide units with assistance in evaluating conditions in berthing. This includes, but is not limited to ventilation and lighting surveys.
- (3) Unit Commanding Officers and Officers in Charge. Ensure that habitability conditions at their unit meet the minimum standards of this instruction.

d. Habitability Standards. Minimum standards that shall be maintained are as follows:

(1) Berthing Afloat.

- (a) The master-at-arms is responsible for implementing a cleaning schedule in accordance with the Shipboard Regulations Manual. Berthing spaces, heads and showers shall be clean at all times, operable, well ventilated, and well illuminated.
- (b) Routine inspections of toilets, lavatories and berthing spaces shall be conducted to check for problems related to sanitation and health conditions. These inspections are normally conducted by the unit's health services technician (HS) and reported to the CO via XO on the health services log and during material/safety inspections. If no HS is assigned, document inspections during XO or material/safety inspections.
- (c) Indoor air quality shall meet the standards described in D.1.a(1), above.
- (d) Minimum lighting standards are found in D.1.a(2), above.
- (e) Use of polyurethane pillows and sleeping bags aboard ships are prohibited. Clean and comfortable mattresses and bedding are to be maintained.
- (f) Food items are not permitted in berthing spaces to preclude pest problems.

- (g) Pets or other animals are not permitted at any time in these areas.
- (h) Mops, brooms, and other cleaning gear will be thoroughly cleaned and properly stored away from berthing areas after each use in a manner to facilitate drying.
- (i) Problems related to sewage backflow through deck drains shall be identified and corrected as soon as possible using appropriate safe work practices to avoid exposure to potentially infectious human wastes.

(2) Unaccompanied Personnel Housing.

- (a) The master-at-arms will implement a daily cleaning schedule for their respective areas. All spaces shall be kept clean, well illuminated and free of unnecessary clutter.
- (b) The unit Commanding Officer or his/her designee will conduct routine inspections of these spaces to check for sanitation and health conditions. This inspection may be part of a routine material/safety inspection. Discrepancies will be reported back through the chain of command and promptly corrected.
- (c) Indoor air quality shall meet the standards described in D.1.a(3), above. Berthing areas that are not air-conditioned must have screened windows and self-closing doors.
- (d) Minimum lighting standards and other facility requirements are found in D.1.a(4), above.
- (e) Mattresses and bedding will be clean and free from defects.
- (f) Sewage overflow problems constitute an immediate health hazard and will be corrected immediately.
- (g) Dogs, cats, birds or similar pets shall not be permitted in berthing areas. Other pets are allowed at the discretion of the Commanding Officer.
- (h) Mops, brooms, and other cleaning gear will be thoroughly cleaned and properly stored away from living areas after each use in a manner to facilitate drying.

- (i) For officer berthing, the Commanding Officer shall ensure routine inspections are conducted of all spaces, including common rooms and head facilities for compliance of minimum standards of sanitation. Complaints of unsanitary conditions will be investigated and resolved promptly. All head facilities and common rooms will be cleaned on a daily basis. Facility requirements are found in D.1.a(4), above.
- (3) Child Development Centers (CDC). Environmental health concerns are discussed in Child Development Services Manual, COMDTINST M1754.15 (series), Chapter 3.

(4) Administrative Spaces.

- (a) Indoor air quality and illumination must be maintained in accordance with D.1.a(3) and (5), above, respectively.
- (b) Drinking fountains will be of the angle-jet type and should be cleaned at least once daily. Head facilities should be cleaned and re-supplied daily. The minimum ratio of plumbing fixtures to the number of persons to be accompanied are as follows:

	Water Closets	Lavatories	Urinals	Drinking Fountains
Females				
Up to 120	1/15	1/10	None	1/75
Males				
Up to 30	1/15	1/15	1/30	1/75
Up to 120	1/20	1/20	1/40	1/75

- (c) Floors should be cleaned regularly. The type of floor determines the method of cleaning. Carpets and rugs should be maintained and cleaned as recommended by the manufacturer. Lavatory floors, commodes, sinks, and shower stalls must be cleaned and disinfected on a daily basis.
- (d) Mops, brooms, and other cleaning gear will be thoroughly cleaned and properly stored away from working areas after each use in a manner to facilitate drying.
- (e) Cooking is not permitted in administrative spaces. Designated lounges or coffee messes can be utilized if inspected and approved by the unit HS or XO.

(f) Trash receptacles shall be emptied daily and cleaned periodically.

(5) Laundry Facilities.

(a) Members working in laundry areas shall be briefed on safety in the work place, as well as, the hazards of chemical cleaning agents. Personnel must practice proper personal hygiene such as frequent hand washing after cleaning or sanitizing the lavatory

(b) Laundry facilities shall be maintained in a clean and sanitary condition, free from infestation by rodents and insects. Floors will be cleaned at least once daily by dustless methods. Grease drip pans will be installed where necessary and cleaned daily. Paper and trash will be placed in covered containers. Lint will be removed as necessary from bulkheads, overheads, and supporting members.

(c) Plumbing fixtures and appliances will be properly installed, maintained in good repair, and kept in a sanitary condition. These fixtures and appliances will be connected to prevent backflow or cross-connection with the potable water supply. For afloat units, seawater must not be used for laundry facilities when the ship is in polluted waters.

(d) Adequate drinking water will be furnished by means of a drinking fountain of the sanitary angle-jet type. Adequate toilet facilities with a shower and ample locker space will be provided and maintained in a sanitary condition. A sign stating "Wash Hands Before Leaving" will be prominently displayed in all toilet areas.

(e) Eating, drinking (other than water fountain), cooking, smoking, and storage of food, drinks, or smoking materials will be prohibited in rooms where clothing is handled, sorted, marked, washed, and/or dry cleaned.

(f) Unwashed clothes will not be received, sorted, marked, or handled in close proximity to washed clothes. Rooms or spaces should be designed and machines and equipment arranged so that a separate flow of clean and soiled garments will be maintained through the laundry or cleaning process. This flow requires separate contact surfaces, such as tables, carts, shelves, etc. Ventilation should move air from clean to soiled areas to prevent cross-

contamination. Vehicles and containers used for the transportation and storage of laundry and dry cleaning will be kept clean and in a sanitary condition.

(g) Contaminated work clothing/coverall must be laundered separate from domestic laundry. This includes clothing or other laundry that is contaminated during industrial operations, chemical spill cleanups, alien migrant interdiction operations, etc. Personnel may use the laundry facility in their industrial area or the unit's laundry service. If contaminated clothing is laundered in unit laundry, care must be taken to avoid personnel exposure and it shall be laundered separately from normal laundry.

(1) Care must be taken when cleaning chemically contaminated clothing. If clothing is heavily contaminated, consider disposing as hazardous waste.

(2) Laundry that is biologically contaminated (e.g., AMIO, body parasites) shall be washed at a minimum temperature of 120° F and hot air dried. Laundry that may be infested with body parasites (head/body lice) shall be laundered under the direction of the unit HS or XO to maintain confidentiality.

(h) Additional standards for laundry and dry cleaning facilities are found in section 4 of D.1.a(6), above.

(6) Barber and Beauty Shops.

(a) Employees of barbershops and beauty shops will adhere to the following personal hygiene and physical requirements:

(1) All barber and beauty shop employees, including personnel employed by a civilian contract, must be medically screened and determined to be free of communicable disease prior to their initial assignment. Unless required by local laws for subsequent health screening, annual evaluation is not routinely required. The medical screening must be sufficiently comprehensive to detect acute or chronic diseases that may be transmitted by direct or indirect contact during the performance of their services. Depending upon the prevalence of

communicable diseases in the geographical location, local units may order specific testing they consider necessary. Barber and beauty shop employees may be screened by local military medical departments or they may present documentary evidence, acceptable to the command, that a complete and thorough medical screening was completed.

- (2) Barber and beauty operators shall maintain good personnel hygiene and wear clean clothing when attending patrons. Hands will be thoroughly washed with soap and hot water between patrons.
- (b) The serving of persons with inflamed or infectious conditions of the scalp, face, or neck without the written consent of the medical department representative is prohibited.
  - (c) Barbershops and beauty shops will not be located in food service or berthing areas. If barbershops and beauty shops are located within a BOQ, BEQ, officer club or enlisted club, a separate room is required.
  - (d) Indoor air quality and illumination must be maintained in accordance with D.1.a(3) and (5), above, respectively.
  - (e) These shops will be maintained and operated in a clean and sanitary manner as follows:
    - (1) Only FDA-approved tonics, lotions, bleaches, dyes, etc., will be used. Only EPA/FDA disinfectants or sanitizing agents will be used. Questionable or unlabeled products shall be referred to the unit HS, local SEHO, or MLC (kse) for determination of suitability.
    - (2) Therapeutic practices, such as treating skin problems (dermatitis), pimples, ingrown hair, etc., are prohibited.
    - (3) The treatment of eye conditions is prohibited.
    - (4) Common brushes, dusters, etc. are prohibited.
    - (5) Shaving is prohibited.

- (6) Individual sanitary neck strips must be used for each patron.
  - (7) The headrest of barber chairs will be covered with a clean sheet of paper or clean towel for each patron.
  - (8) Only types of material approved by the medical clinic or unit HS will be used to stop the flow of blood in case of “nicks.” These materials will be applied only with freshly laundered towels or sterile cotton.
  - (9) Covering clothes will be changed preferable daily or as often as necessary to ensure cleanliness.
  - (10) Street clothing of operators will not be stored with that of patrons.
  - (11) Barber or beauty operators will not eat, drink, or smoke while attending patrons.
  - (12) Clean, covered sanitary receptacles will be provided for waste materials and used linen. Receptacles should be lined with disposable bags.
  - (13) The removal of cut hair from the decks shall be done frequently by dustless methods. Floors must be washed with detergent and water on a frequent basis to prevent the accumulation of dirt.
  - (14) When compressed air is used to remove hair from patrons, the pressure shall be 15 psi or less.
- (f) Instruments shall be cleaned and disinfected as follows:
- (1) All instruments in direct contact with patrons shall be cleaned and disinfected. Instruments will be thoroughly washed with soap and hot water to remove all film, oil, and debris immediately after use on each patron. Following cleaning, the instruments will then be placed in an EPA-registered disinfecting solution. Solution must be replaced as per manufacturer’s instructions, but at least weekly. Due to the patron load at some facilities, the solutions may require changing on a more frequent basis. All instruments disinfected in a chemical

solution will be rinsed in running potable water to remove the chemical residue prior to use.

- (2) Non-removable clipper heads, must be wiped, dusted and sprayed with an EPA registered disinfecting spray between each patron. Removable clipper heads may be disinfected with the spray or removed, wiped and dusted, and placed in a disinfecting solution as described in the previous paragraph.
  - (3) Adequate numbers of instruments and supplies must be available to accomplish disinfection.
  - (4) Formaldehyde cabinets and similar practices involving highly toxic chemicals for disinfecting are prohibited. Ultraviolet light is not an acceptable method of disinfection
  - (5) The label and Material Safety Data Sheet (MSDS) for any chemical used, including disinfecting solutions and sprays, must be maintained and consulted for information concerning proper use and any storage or handling precautions.
- (g) Operators shall be expected to read, understand, and comply with these requirements. If necessary, bilingual/multilingual translation will be accomplished and posted.
  - (h) Unit HS shall conduct inspections of barber and beauty shops at least monthly.
  - (i) Further guidance can be found in D.1.a(6), above.
- (7) Other Facilities. Standards for campgrounds, picnic areas, play grounds, gymnasiums and theaters are found in D.1.a(6), above.

2. Swimming Pools, Spas, Wading Pools, and Training Tanks.

a. References.

- (1) Manual of Naval Preventive Medicine, NAVMED P-5010, Chapter 4.  
<http://www.vnh.org/PreventiveMedicine/PreventiveMedicine.html>
- (2) Public Swimming Pools, ANSI/NSPI-1 1991.

(3) Public Spas, ANSI/NSPI-2 1999.

b. Background. Since water can transmit disease, swimming pools, spas, wading pools, and training tanks have the potential for causing many health problems if they are not properly operated. The risk of contracting a disease from a swimming pool, spa, wading pool, or training tank is extremely low if the facility is operated properly. Safety hazards play an equal and possibly greater role in causing harm to Coast Guard members and their families.

c. Responsibilities.

(1) Maintenance and Logistics Commands (kse). Evaluate swimming pool, spa, wading pool, and training tank sanitation as part of routine support visits.

(2) Safety and Environmental Health Officer (SEHO). Provide units with assistance in evaluating proper sanitation of swimming pools, spas, wading pools, and training tanks.

(3) Group Commanders or Commanding Officers. Ensure the proper operation and safety of swimming pools, wading pools spas, and training tanks at their unit in accordance with D.2.a(1) through (3), above.

d. Swimming pools, spas, wading pools, and training tanks shall be maintained in a manner that affords maximum protection from disease and injuries. D.2.a(1), above, provides requirements for the safe and healthful operation of swimming pools and other bathing areas. Design, construction, operation and maintenance of facilities shall conform to D.2.a(2) and (3), above.

e. Standards for saunas and steamrooms are found in chapter 2 of D.2.a(1), above.

### 3. Pest Management.

a. References.

(1) Armed Forces Pest Management Board. Standard Pesticides Available to DoD Components and All Federal Agencies.  
<http://www.afpmb.org/afpmbdirectoriate/standardlist.htm>

(2) U.S. Navy Shipboard Pest Management Manual.  
<http://www.vnh.org/PestControl/>

- (3) Manual of Naval Preventive Medicine, NAVMED P-5010, Chapter 8.  
<http://www.vnh.org/PreventiveMedicine/PreventiveMedicine.html>
  - (4) Armed Forces Pest Management Board Technical Information Memorandum Number 39, Guidelines for Preparing Pest Control Contracts. <http://www.afpmb.org/pubs/tims/tim39.htm>
  - (5) Armed Forces Pest Management Board Technical Guide Number 18, Installation Pest Management Program Guide.  
<http://www.afpmb.org/pubs/tims/TG18/tg18.htm>
- b. Background. Pest management is important to the health and well-being of Coast Guard personnel and is needed to protect property and resources. Pest management is defined as the control or mitigation of insects and other arthropods, snails, slugs, fungi, weeds, birds, mammals, plant disease agents, and other pest organisms where their presence results in unacceptable consequences. This program seeks to minimize reliance on chemical pest control procedures and the adverse health effects of pesticides. Policy and procedures shall be consistent with the Federal Insecticide, Fungicide and Rodenticide Act, EPA and OSHA standards.
- c. Responsibilities.
- (1) Maintenance and Logistics Commands (kse).
    - (a) Evaluate pest management programs as part of routine support visits.
    - (b) Ensure that vessels that travel overseas are inspected and receive deratization certificate every six months.
  - (2) Safety and Environmental Health Officer (SEHO). Provide units with assistance in evaluating pest control issues and pesticide storage and application.
  - (3) Group Commanders or Commanding Officers.
    - (a) Establish pest management programs as specified in this instruction to ensure the health of personnel and dependents, and to protect real and other property.
    - (b) Ensure that all pesticide applicators have received appropriate training and certification in accordance with

this instruction. This includes contractors that apply pesticides at the unit.

- (c) Use integrated pest management as the first line of defense for pest control. Chemicals shall be used only as a last resort.
- d. Pesticide Applicator Training and Certification. All Coast Guard military and civilian pesticide applicators shall be trained and certified under one of the programs listed below:
  - (1) State Certified or Licensed Pesticide Applicators. State Certified or Licensed Applicators have met the training and certification requirements of the State in which they work. A copy of the certification or license must be maintained onboard the unit.
  - (2) Shipboard Pest Management Specialist. Shipboard Pest Management Specialists have completed the Navy's Shipboard Pest Control Course or Medical Entomology and Pest Management Technology for Preventive Medicine Technicians Course and have received authorization from their respective MLC (kse) to apply non-restricted use pesticides afloat. This program is not available to civilians. Four hours of annual refresher training is required.
  - (3) Coast Guard Limited Duty Pesticide Applicators. Coast Guard Limited Duty Pesticide Applicators are military members authorized by the respective MLC (kse) to apply non-restricted use pesticides on Coast Guard property. This authorization is limited to isolated duty stations or where commercial pest control services are not readily available or are cost prohibitive. Approvals will be limited to specific targeted pests, products and facilities. Personnel must meet any state training requirements for applying non-restricted use pesticides. Units requesting approval for limited duty applicators shall contact their MLC (kse).
  - (4) Afloat unit FS's should be encouraged to attend shipboard pest control training to increase their understanding of sanitation practices related to shipboard pest control, pest recognition, and proper preparation of spaces before and after pesticides are applied. Although these personnel will not receive certification, they may assist the HS in applying pesticides, when directly supervised by authorized personnel.
- e. Integrated Pest Management (IPM) Strategy. It is the policy of the Coast Guard to establish and maintain safe, efficient, and environmentally sound integrated pest management programs to control pests that may adversely

affect health or damage structures or property. IPM is a comprehensive approach to pest control or prevention that considers all available strategies including mechanical, cultural, biological, and chemical techniques.

- (1) Non-chemical pest controls such as good sanitation practices and the elimination of pest harborage and access will be instituted prior to implementing chemical control measures. Occupants of buildings, including family housing, play a critical role in an effective pest management program.
- (2) The uses of preventive or scheduled periodic pesticide treatments are prohibited unless they are based on surveillance information or documented past uncontrolled pest problems (e.g., seasonal pest problems).
- (3) Control of nuisance pests by chemical means is prohibited unless approved by the respective MLC (kse). Nuisance pests are those that do not present a public health threat or do not cause damage to property (e.g., spiders).
- (4) Only pesticides listed in D.3.a(1), above, may be used by CG applicators at shore facilities. Pesticides approved for shipboard use are found in appendix A of D.3.a(2), above. Use of any pesticide not on one of these lists must receive approval from Commandant (G-WKS) prior to purchase.
- (5) Proposed pest management projects that involve the aerial application of pesticides shall be approved by Commandant (G-WKS).

f. Record Keeping. Each unit will maintain a log of all pesticide applications, including general use pesticides. The log must contain, name of applicator, chemical used, quantity used, date of application, location, targeted pest and description of pest problem. The log shall be maintained indefinitely. Non-chemical pest control activities involved in pest management should also be documented. Pest control logs will be made available for review by Headquarters or MLC (k) safety and environmental health professionals.

g. Mixing, Storage, and Transport. Pesticides will be stored, mixed and loaded in suitable facilities and in such a manner that the material is not degraded, and that workers, the public and the environment are not threatened by exposure under routine conditions or in the event of an accidental spill. D.3.a(3), above, provides general guidance on use of pesticides. D.3.a(2), above, gives specific guidance for shipboard use and

storage. Pesticides shall be secured when unattended to prevent tampering and accidental exposure or release into the environment. Units must include pesticides in their spill prevention control and contingency plans.

- h. Before handling any pesticide, read all label directions for use and precautions. Review the MSDS and any other product information sheets that may be available. It is required that pesticides be used according to manufacturers directions.
- i. Commercial and Contract Pest Control Services. Contractors performing pest control work on CG facilities shall comply with all certification, licensing, and registration and use requirements applicable in the legal jurisdiction in which the work is performed. Follow the guidelines in D.3.a(4), above, for all contracts for pest control services. Contracted pest control services shall have an IPM approach. Records must be maintained in accordance with D.3.f. of this chapter. A copy of the certification or license of all commercial applicators must be maintained at the unit.
- j. Rodent Control for Afloat Commands. Commanders of afloat units who travel overseas will maintain a vessel deratization certificate and keep it current every six months. One month extensions may be granted if a request is made to the original issuer before the certificate expires. When moored, approved rat guards shall be properly installed on all ship-shore lines at a minimum distance of 6 feet from ship's hull and 6 feet from the shore (D.3.a(2), above)).
- k. Additional information can be found in D.3.a(2), above, for afloat units and D.3.a(3) and (5), above, for shore units.

#### 4. Food Service Sanitation.

##### a. References.

- (1) Food Service Sanitation Manual, COMDTINST M6240.4 (series).
- (2) U. S. Food and Drug Administration Food Code.  
<http://www.cfsan.fda.gov/~dms/foodcode.html>
- (3) Manual of Naval Preventive Medicine, NAVMED P-5010, Chapter 1.  
<http://www.vnh.org/PreventiveMedicine/PreventiveMedicine.html>

##### b. Background.

- (1) Food protection and environmental sanitation play an important role in preventing food borne illness, as well as ensuring

operational readiness. An oversight in sanitation can lead to proliferation of disease-causing microorganisms sufficient enough to cause an outbreak. For this reason, food service operations require careful management to protect the health and well being of patrons. Steps must be taken to prevent the contamination of food items as they flow through the galley by identifying and addressing critical control points.

- (2) D.4.a(1), above, details the requirements for the Coast Guard's food service sanitation program. D.4.a(2), above, is the industry standard for food service sanitation and D.4.a(3), above, details the U. S. Navy's program.

c. Responsibilities.

- (1) Maintenance and Logistics Command (kse). Evaluate the operation of galleys and the food service sanitation program as part of routine support visits.
- (2) Safety and Environmental Health Officer (SEHO). Provide units with assistance in maintaining a quality food service sanitation program.
- (3) Group Commanders or Commanding Officers. Establish an effective food service sanitation programs as specified in this instruction and reference (1) to ensure the health of all personnel who use the galley or other food services at the unit.

d. Required Program Elements.

- (1) A Food Service Officer (FSO) shall be appointed by the Commanding Officer.
- (2) The unit HS or XO shall perform weekly food service facilities inspections. Results of the inspection shall be submitted to the unit CO/OIC with copies provided to the FSO.
- (3) Foods shall be acquired from approved sources and properly handled from receiving to serving.
- (4) Food service equipment shall be approved by the National Sanitation Foundation (NSF) and properly maintained.
- (5) Strictly follow cleaning and disinfection procedures.

- (6) Report food borne diseases using the disease alert format found in the Medical Manual, COMDTINST M6000.1 (series), Chapter 7. Immediately consult with the servicing MLC (kse) for assistance in a food borne illness investigation.
- (7) Ensure assigned food service personnel are trained annually on sanitation requirements.

5. Potable Water and Wastewater.

a. References.

- (1) Water Supply and Wastewater Disposal Manual, COMDTINST M6240.5 (series).
- (2) Manual of Naval Preventive Medicine, NAVMED P-5010, Chapters 5, 6 and 7.  
<http://www.vnh.org/PreventiveMedicine/PreventiveMedicine.html>

b. Background.

- (1) One of the most significant environmental health threats to a unit's operational readiness is having inadequate or contaminated supplies of potable water. Potable water systems shall be managed to provide adequate supplies of potable water for human consumption and culinary purposes.
- (2) For additional information, see D.5.a(1), above, for details of the requirements for the Coast Guard's potable water and wastewater program. D.5.a(2), above, details the U.S. Navy's shore and afloat programs.

c. Responsibilities.

- (1) Maintenance and Logistics Command (kse). Evaluate the water and wastewater program as part of routine support visits.
- (2) Safety and Environmental Health Officer (SEHO). Provide units with assistance in maintaining a proper operation and sanitation of their water and wastewater program.
- (3) Group Commanders or Commanding Officers. Establish a water and wastewater program as required at the unit in accordance with this instruction and D.5.a(1), above.

d. Required Program Elements.

(1) Water Supply Afloat.

- (a) Develop a Water Sanitation Bill to meet the individual needs of the ship and address any unique conditions.
- (b) Ensure that personnel responsible for the maintenance and treatment of the potable water systems receive adequate training.
- (c) Obtain water from approved sources. If the ship must use suspect water, it must be properly disinfected before use.
- (d) Properly handle and store potable water hoses.
- (e) Indoctrinate crew in water conservation methods.
- (f) Take appropriate actions to protect potable water tanks and piping systems.
- (g) Prevent cross-connections between the potable water systems and any other piping system on the ship.
- (h) Install a back-flow prevention device on all potable water hose connections to ensure nonpotable water or other materials are not pulled into the potable water system.
- (i) Conduct required halon residual, pH and bacteriological testing of the water system.
- (j) Investigate all complaints of taste or smell of the water using the guidelines in D.5.a(1), above.

(2) Water Supply Ashore.

- (a) Conduct required halon residual, pH and bacteriological testing of water throughout the unit, if required.
- (b) Properly label all non-potable water sources.
- (c) If unit has its own water system and does not receive water from an approved city water source, they must strictly follow the storage, disinfection, testing and record keeping requirements of D.5.a(1), above, and contact local authorities to determine additional requirements.

- (d) Units with wells must ensure they are properly protected and maintained in accordance with D.5.a(1), above.
- (e) Investigate all complaints of taste or smell in the water according to the guidelines in D.5.a(1), above.
- (f) Install a back-flow prevention device on all potable water hose connections to ensure nonpotable water or other materials are not pulled into the potable water system.
- (g) Follow storage and treatment requirements in D.5.a(1), above, if storing bulk potable water.

(3) Wastewater Treatment Afloat.

- (a) Follow local and federal regulations regarding the discharge of sewage and gray water, including reporting of releases.
- (b) Properly maintain the collection, holding and transfer (CHT) system to prevent accidental discharge of sewage.
- (c) Have a kit available for safe clean up and disinfection of sewage spills onboard.
- (d) Provide training to personnel who conduct maintenance on the CHT systems. Training should include personal hygiene, sanitation, personal protective equipment, and safety.

(4) Wastewater Treatment Ashore.

- (a) Units with septic systems must ensure proper operation and maintenance of the system. Inspect the tanks periodically based on the guidance provided in D.5.a(1), above. Contact the local health department to determine any additional requirements.
- (b) Units with community wastewater treatment systems must follow the guidelines provided in D.5.a(1), above, and contact local and state authorities to determine any additional requirements.
- (c) Provide training to personnel who conduct maintenance on the CHT systems. Training should include personal

hygiene, sanitation, personal protective equipment (PPE), and safety.

- (d) Units with a wastewater treatment plant shall comply with local laws and regulations.

6. Bloodborne Pathogens and Infectious Waste.

a. References.

- (1) Prevention of Bloodborne Pathogen Transmission, COMDTINST M6220.8 (series).
- (2) The Medical Manual, COMDTINST M6000.1 (series), Chapter 13, Section J.

b. Background.

- (1) It is essential to prevent the transmission of infectious disease. Some Coast Guard personnel have assignments that will put them at a higher risk of infectious diseases, particularly bloodborne diseases.
- (2) D.6.a(1), above, details the requirements for the Coast Guard's bloodborne pathogen program. D.6.a(2), above, contains guidelines for an infection control program.

c. Responsibilities.

- (1) Maintenance and Logistics Command (kse). Evaluate the bloodborne pathogen program as part of routine support visits.
- (2) Safety and Environmental Health Officer (SEHO). Provide units with assistance in the proper handling and disposal of bloodborne pathogen-related items.
- (3) Group Commanders or Commanding Officers. Establish an effective bloodborne pathogen program as specified in this instruction and D.6.a(1) and (2), above, as appropriate at the unit.

d. Required Program Elements.

- (1) Establish engineering controls as the first line of defense for bloodborne pathogens (e.g., sharps containers).

- (2) Personnel who are at risk for exposure to bloodborne pathogens must be offered the hepatitis B vaccine series.
- (3) Provide training to employees prior to them entering into a job that puts them at risk for exposure to bloodborne pathogens and then annually thereafter.
- (4) Use universal precautions at all times when there is blood or other potentially infectious material present or the possibility of the presence exists.
- (5) Post exposure evaluations must be conducted to determine vaccination status and possible need for post exposure prophylaxis.
- (6) Ensure proper disinfection of spills and the surrounding area.
- (7) Ensure proper segregation, storage, and disposal of infectious waste is in accordance with reference (2) and federal, state, and local regulations. Contact the county health department for more information.
- (8) Ensure proper handling of contaminated laundry.

MEDICAL OFFICER'S MISHAP REPORT (MOR)

1. GENERAL.

- a. An accident is an unplanned event or series of events, which result in an injury and/or property damage. If the total severity of the damage and/or injury meets the minimum established criteria, then the event is categorized as a mishap. Most mishaps result from a combination of two or more causal factors. All cause factors are considered to have an equal role in the cause of a particular mishap since without one of them the mishap would likely not occur. All cause factors are also considered to be "under human control" meaning they can be eliminated and mishaps prevented. Defining the cause factors of a mishap and determining why they occurred is one of the biggest challenges of a mishap investigation. These investigations are difficult and time consuming but they need to be thorough and precise if we are to determine what went wrong and figure out how to prevent a recurrence. In all cases involving death or injury, Class A and Class B mishaps, a medical officer representative will be assigned, by the appointing authority, as the Human Factors member to the Mishap Investigation Board.
- b. The Medical Officer's Mishap Report (MOR) is an essential part of a mishap investigation. The Medical Officer, when assigned to the investigation, should collect the initial medical evidence and compile ALL available medical materials that could be used by the Board as future evidence. This should include laboratory results, medical records, hospital admission forms, psychological profiles, autopsy reports, medical photographs, diagrams and any medical written opinions. However, information received, based only on opinions, should not be included in the MOR unless it is supported by physical facts, witness statements, and/or statements made during medical interviews. The analysis of the medical data shall be effectively coordinated with all other aspects of the investigation and must comprise the five essential underlying elements- *medical, physiological, psychological, social and behavioral* - which may relate to the cause factors of the mishap. In addition, the MOR should contain a detailed analysis of the two general groups of causal factors: **human and material**. This analysis should include a careful investigation of crash survival characteristics, escape systems, egress mechanisms and procedures, survival factors and any additional supporting information.
- c. The ultimate goal of a mishap investigation is to determine the cause(s) of the mishap and prevent future recurrences. To such endeavor, the medical officer should pay close attention to all possible and potential contributing factors. It is important to remember that causality may have started as a result of events seemingly isolated and distant from the actual mishap. Causality should be sought along all possible operational settings, from crew, maintenance and supervisory factors, to the unit's facilities and support. The evaluation of these causality factors should, at a minimum,

include a careful review of operational components, such as communication, coordination, and performance, as well as engineering and environmental conditions before making a probability determination. In summary, the MOR should include all the factors included in the following table format.

### Medical Officers Report- Causality Table

Human and Material Causal Factors Evaluation			
Medical Data	Mishap Factors	Causal Factors	Operational Components
Medical information	Crash survival characteristics	Crew factors	Communication
Physiological conditions	Escape systems	Maintenance factors	Coordination
Psychological status	Egress mechanisms and procedures	Support and facilities	Performance
Social events	Survival factors	Supervisory factors	Engineering
Behavioral reports	Supporting information (photos; witness reports)		Environmental
Causality Determination			
Determined	Most Probable	Possible	Undetermined

- d. Prior to completing the report, the Medical Officer should carefully review the following policies contained in the current version of the Safety and Environmental Health Manual, COMDTINST M5100.47 (series):
- (1) Chapter 2, Aviation Safety Program.
  - (2) Chapter 3, Mishap Response, Investigation and Reporting.
  - (3) Enclosure (2), Mishap Analysis Report (MAR) Format.
  - (4) Enclosure (4), Mishap Analysis Board (MAB) Appointment, Composition and Procedures.
  - (5) Enclosure (10), Limitations on the Use and Disclosure of Mishap Investigations and Reports.

2. PREPARATION.

a. The medical officer should utilize all available tools in preparing the MOR. A well-organized pre-mishap plan and on-site mishap investigation as well as a thorough understanding of post-mishap factors will facilitate this process. Planning, and preparation as well as understanding the value of the information collected and knowing how to utilize it will yield the best results. The accuracy and value of the MOR is dependent on the medical officer's attentiveness to detail and fulfillment of pre-mishap-on site-and post-mishap duties. The medical officer's responsibilities include:

- (1) Having a well-organized, compact, portable mishap investigation kit.
- (2) Providing adequate care to survivors and ensuring all crews are afforded the necessary medical and psychological services.
- (3) Documenting the relationships at the mishap site before items are removed and impounding critical equipment and records.
- (4) Ascertaining and documenting injuries and maintaining close follow-up of the injured for changes in the medical condition.
- (5) Ensuring that pathological services are available, knowing the autopsy jurisdiction, getting acquainted with the local coroner and coordinating support with the Air Force's Institute of Pathology (AFIP) for transport of victims to the morgue or transporting the team to the mishap site.
- (6) Performing adequate physical exams, distributing and collecting the post-mishap questionnaires and 72-hour medical history as well as drawing the appropriate labs and performing the necessary radiological studies.
- (7) Performing timely witness interviews and correlating that information with photographs, and diagrams of the mishap site.
- (8) Understanding crash survivability, impact forces, restraint systems, survival equipment, and egress and rescue procedures.
- (9) Knowing the effect that environmental conditions, such as water temperature, wind conditions and surface terrain had on the mishap and/or the injuries or survivability of the crew.
- (10) Having the appropriate tools, equipment and administrative support to conduct, prepare and finalize the investigation.

3. MISHAP INVESTIGATION QUESTIONNAIRES. A number of questionnaires have been developed to assist the medical officer in gathering the necessary information to complete the MOR. These questionnaires are to be used as

facilitation tools and need only be completed if the conditions or situations indicate. Mishap investigation questionnaires include:

- a. GENERAL INFORMATION QUESTIONNAIRE. Collects vital demographics, work habits, social history and training on each member involved in the mishap.
  - b. MEDICAL OFFICER'S INJURY QUESTIONNAIRE. Collects valuable medical information, including autopsy findings, injury patterns and laboratory and radiological results on each member involved in the mishap.
  - c. HUMAN FACTORS CHECKLIST. This checklist provides medical and psychological profiles for member's involved in the mishap. It may also be provided to other unit personnel at the discretion of the medical officer.
  - d. 72-HOUR PRE-HISTORY. Is to be provided to each member involved in the mishap and is intended to collect a detailed history of the member's life during the three days preceding the mishap. This is a mandatory form and is not to be used in place of or replaced by the Human Factors Checklist or the Medical Officer's Questionnaire.
  - e. ESCAPE, EGRESS QUESTIONNAIRE. Provides data on egress procedures for each member that exited the mishap vessel or was extracted as a result of the mishap.
  - f. RESCUE AND SURVIVAL QUESTIONNAIRE. Provides vital information on rescue procedures, as well as the rescue equipment used by the crew before, during and after the mishap.
  - g. SURVIVAL AND PERSONAL PROTECTIVE EQUIPMENT QUESTIONNAIRE. Provides information on survival procedures and personal survival equipment.
  - h. MEDICAL OFFICER'S REPORT (TEMPLATE). A printable template is provided for the medical officer to complete the final report. The medical officer MUST complete all mandatory information in the pre-printed blocks.
4. INSTRUCTIONS FOR COMPLETING QUESTIONNAIRES.
- a. Each questionnaire should be completed for every member involved in the mishap.
  - b. Specify conditions particular to the member, such as actions taken before, during and after the mishap.
  - c. Indicate effect that actions taken by the member had upon the mishap.
  - d. Indicate what effect actions taken, or failed to be taken, by member had on survivability (i.e., egress procedures, escape systems, survival gear), injury patterns (i.e., cause, severity, prevention).

- e. Expand, whenever possible, on the effect that actions or failed actions by each individual member had on mishap causality.
- f. Describe how each event could have been prevented, modified or altered to prevent the mishap.
- g. Describe how findings can be used to prevent future mishaps.
- h. Make a determination on whether human factors identified in the mishap definitely contributed to the causality of injuries, rescue, egress, escape or survival efforts; were suspected as contributing factors to any phase of the mishap; or were present but had no contribution to any phase of the mishap.
- i. The member's medical record should be thoroughly reviewed for any significant changes on health status; the training record should also be reviewed noting any significant lapses in egress training procedures (i.e., HEEDS/Dunker).

Note: Records must be properly secured during and after the investigations.

This page left blank.

GENERAL INFORMATION QUESTIONNAIRE	
Name:	Date of Mishap:
Rate/Rank:	Mishap Category:
Duty/Position:	Mishap Number:

**1. Mishap Information:** include all pertinent information regarding mission and craft (aircraft/vessel).

a. Type of mission involved:

- (1) Routine Patrol (scheduled): \_\_\_\_\_
- (2) Familiarization: \_\_\_\_\_
- (3) Search and Rescue: \_\_\_\_\_
- (4) Training: \_\_\_\_\_
- (5) Demonstration/Parades (static display/airshow/boat shows): \_\_\_\_\_
- (6) Deployment/TAD support: \_\_\_\_\_
  - (a) TAD Unit: \_\_\_\_\_
  - (b) TAD Command: \_\_\_\_\_
  - (c) Deployment mishap status: \_\_\_\_\_
    1. Mishap occurred during predeployment:  Yes  No
    2. Mishap occurred \_\_\_\_\_ days into deployment.
    3. Deployment scheduled to last \_\_\_\_\_ days.

b. Type of craft(s) (aircraft/vessel) involved in mishap:

- (1) Type: \_\_\_\_\_
- (2) Size: \_\_\_\_\_
- (3) Designation: \_\_\_\_\_
- (4) Model: \_\_\_\_\_
- (5) Class: \_\_\_\_\_
- (6) Reporting Unit: \_\_\_\_\_
- (7) Command: \_\_\_\_\_
- (8) Craft Status at time of Mishap:
 

<input type="checkbox"/> Stationary	<input type="checkbox"/> Taxi Way	<input type="checkbox"/> Hanger	<input type="checkbox"/> Runway
<input type="checkbox"/> In-flight	<input type="checkbox"/> Docked	<input type="checkbox"/> En-route	<input type="checkbox"/> Harbor
<input type="checkbox"/> Open water	<input type="checkbox"/> Embarked	<input type="checkbox"/> Disembarked	<input type="checkbox"/> Solo craft
			<input type="checkbox"/> Formation

**2. Crew Information:** include all personnel involved in primary craft (aircraft/vessel) as well as any crews from secondary craft or bystanders involved in the mishap.

- Number of primary crew (aircraft/vessel) personnel involved: \_\_\_\_\_
- Number of primary crew (aircraft/vessel) personnel injured: \_\_\_\_\_
- Number of ALL personnel (bystanders/crewmembers) involved: \_\_\_\_\_
- Number of ALL personnel (bystanders/crewmembers) injured: \_\_\_\_\_



MEDICAL OFFICER'S INJURY QUESTIONNAIRE											
Name:	Date of Mishap:										
Rate/Rank:	Mishap Category:										
Duty/Position:	Mishap Number:										
<b>1. General Information:</b>											
A. Duty Status: <input type="checkbox"/> Active Duty <input type="checkbox"/> Reservist <input type="checkbox"/> Civilian    E. Days Grounded (aircrew only): _____ B. Injury Classn: _____    F. Unconscious: <input type="checkbox"/> Yes <input type="checkbox"/> No C. Days Hospitalized: _____    DURATION: _____ Hours/Days/Mins/Secs D. Days in Qtrs: _____    G. Smoking History: <input type="checkbox"/> Yes <input type="checkbox"/> No _____ packs per day											
<b>2. Injuries Incurred during Mishap:</b>											
(Use additional sheets if necessary)											
	ICD Code										
Body Part											
Diagnosis											
Specific Cause											
Body Part											
Diagnosis											
Specific Cause											
Body Part											
Diagnosis											
Specific Cause											
<b>3. Laboratory Test:</b>											
					Time Drawn	Elapsed Time	Lab Used	Tissue Used	Normal Range	Method Used	Results
mm/dd/yr	Date Drawn										
Carbon Monoxide											
Alcohol											
Drug Screen											
HgB/Hct											
Lactic Acid											
Glucose											
Other											
<b>4. Urinalysis:</b>											
_____ Specific Gravity    _____ Dipstick    _____ Microscopic											
_____ WNL    _____ Other											
Elapsed time after Mishap (hours): _____											
<b>5. Radiological Results:</b>											
Performed: <input type="checkbox"/> Yes <input type="checkbox"/> No    WNL: <input type="checkbox"/> Yes <input type="checkbox"/> No    Comments: (enclose results of pertinent)											

**MEDICAL OFFICER'S INJURY QUESTIONNAIRE (Con't)**

Name:	Date of Mishap:
Mishap Category:	Mishap Number:

**6. Pre-existing Diseases/Effects Present at Time of Mishap:**

DIAGNOSIS	Discovery Method (X)				Waivers as applicable	
	Annual Physical	Sick Call	Autopsy	Other	Authority	Date

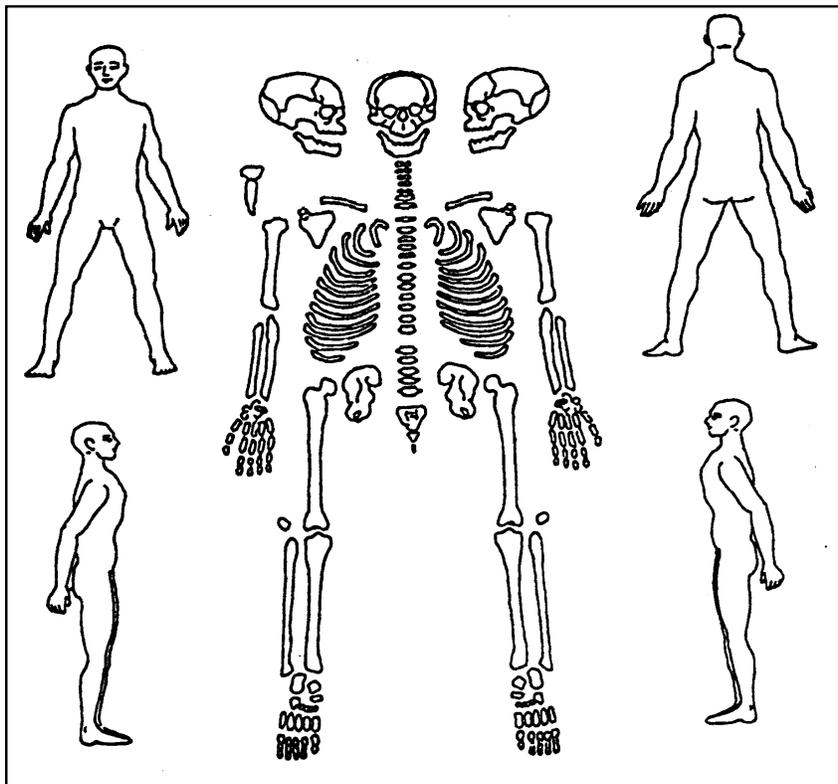
**7. Autopsy Data:** Conducted by/in Presence of (Check each applicable):

AFIP PATHOLOGIST   
  CIVILIAN   
  PATHOLOGIST  
 FLIGHT SURGEON   
  OTHER Military Pathologist   
  Other: \_\_\_\_\_

**8. Injury profile:** Mark or draw injury profile on diagram.

**INJURY PROFILE**

Mark or draw injuries where applicable



<b>MEDICAL OFFICER'S INJURY QUESTIONNAIRE (con't)</b>																
Name:	Date of Mishap:															
Mishap Category:	Mishap Number:															
<b>9. Comments/Remarks:</b>																
<b>10. Instruction on Completing Questionnaire:</b>																
<p>a. This questionnaire should be completed for every member injured in the mishap or who incurred relevant medical findings.</p> <p>b. Injuries - Part 2: All injuries should be listed in decreasing order of severity, using standard medical terminology to describe body parts and conditions. In fatalities the primary cause of death should be listed. Any external factor that can be reasonably concluded to have affected the mechanism of injury should be accurately described. These factors can be listed under "specific causes". (See example below)</p> <p>c. ICD Codes - Part 2: ICD codes should be used to most accurately account for injuries incurred during the mishap.</p> <p style="margin-left: 20px;">Example:</p> <table border="1" style="margin-left: 40px; border-collapse: collapse; width: 80%;"> <tr> <td style="width: 20%; padding: 2px;">Body Part</td> <td style="padding: 2px;">Right tibia</td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> </tr> <tr> <td style="padding: 2px;">Diagnosis</td> <td style="padding: 2px;">Spiral hairline fracture</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="padding: 2px;">Specific Cause</td> <td style="padding: 2px;">Flexion-rotation motion/impact during egress</td> <td></td> <td></td> <td></td> </tr> </table> <p>d. <b>Laboratory Tests</b> - Part 3: Frozen samples of serum and urine should be retained for at least 90 days in case future use/verification is requires. The medical officer should note the importance or significance of the findings with relation to the mishap.</p> <p>e. <b>Urinalysis</b> - Part 4: Self-explanatory. Add additional comments as clinically indicated to describe the presence of blood, protein, and/or status of renal function.</p> <p>f. <b>Radiological Results</b> - Part 5: Radiological procedures may be required, as clinically indicated, according to the nature of the mishap, and egress/rescue procedures. In aviation mishaps involving crashes, forced egress or bailouts, spinal X-rays are required. A copy of the X-ray reports should be attached to this form.</p> <p>g. <b>Preexisting Diseases/Defects</b> - Part 6: All known preexisting diseases, defects and diseases present at time of mishap should be listed. This should include all auditory and visual defects. Note the process by which these defects/diseases were identified and verify the date and conditions of any waivers issued to that effect.</p> <p>h. <b>Autopsy</b> - Part 7: The medical officer should be careful to highlight all the individuals responsible for conducting or being part of the autopsy process. If the medical officer was present at the time of the autopsy or participated in the procedure this should also be noted. Any preliminary or final results should be attached to this form.</p> <p>i. <b>Injury Profile</b> - Part 8: The Injury Profile diagram should provide the exact location of the injuries, abrasions, contusions, fractures, amputations and dislocations, as well as the degree and nature of burnt injuries incurred during the mishap, egress and/or rescue process. This report should be supplemented with any photographs, video or any other supporting evidence, whenever possible. Supporting information including the aforementioned photos, videos and reports should be attached to this form upon submission.</p> <p>j. <b>Comments/Remarks</b> - Part 9: Use this section to add any additional material, describe injuries, explain laboratory findings, or any other information which may be related to the mishap.</p>		Body Part	Right tibia				Diagnosis	Spiral hairline fracture				Specific Cause	Flexion-rotation motion/impact during egress			
Body Part	Right tibia															
Diagnosis	Spiral hairline fracture															
Specific Cause	Flexion-rotation motion/impact during egress															
<b>" THE INFORMATION CONTAINED IN THIS QUESTIONNAIRE MAY ONLY BE RELEASED IN ACCORDANCE WITH THE FREEDOM OF INFORMATION AND PRIVACY ACT"</b>																

<b>HUMAN FACTORS CHECKLIST</b>	
Name:	Date of Mishap:
Rate/Rank:	Mishap Category:
Duty/Position:	Mishap Number:
<p><b>Following is a list of questions on conditions and situations prone to human-error. The medical officer may choose to ask these questions to obtain a better understanding of factors associated with or leading to the mishap.</b></p> <p><b>MEDICAL -PHYSIOLOGICAL FACTORS:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Use of alcohol or drugs</li> <li><input type="checkbox"/> Use of medications (prescribed/OTC); use of nutritional supplements</li> <li><input type="checkbox"/> Operating under stress/anxiety (hyperventilation)</li> <li><input type="checkbox"/> Fatigued/lack of rest/nutrition/hydration status</li> <li><input type="checkbox"/> Performing while ill/recent illness</li> <li><input type="checkbox"/> Physical fitness level/state of health</li> <li><input type="checkbox"/> Other</li> </ul> <p><b>COMMUNICATION / COORDINATION FACTORS:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Inadequate mission planning</li> <li><input type="checkbox"/> Failed mission brief/plan</li> <li><input type="checkbox"/> Failing to use /follow standard procedures</li> <li><input type="checkbox"/> Inadequate training</li> <li><input type="checkbox"/> Failing to use available resources</li> <li><input type="checkbox"/> Interpersonal crew conflicts</li> <li><input type="checkbox"/> Failed communication/coordination among crew members</li> <li><input type="checkbox"/> Language barrier</li> <li><input type="checkbox"/> Unacknowledged/misunderstood intentions</li> </ul> <p><b>PERFORMANCE /BEHAVIORAL FACTORS:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Failed to adequately perform (preoccupation)</li> <li><input type="checkbox"/> Complacency (inattention, distraction)</li> <li><input type="checkbox"/> Failed to follow standard operating procedures (misread, habit)</li> <li><input type="checkbox"/> Exceeded operational limits (over confident)</li> <li><input type="checkbox"/> Performed under command /peer pressure (expectations)</li> <li><input type="checkbox"/> Ignored safety warning parameters (misinterpretation, timing)</li> <li><input type="checkbox"/> Failed to adequately prioritize tasks (task saturation, judgment error)</li> <li><input type="checkbox"/> Inadequate knowledge of regulations/system/procedures</li> <li><input type="checkbox"/> Operating in non-current status/below proficiency level</li> <li><input type="checkbox"/> Operating under stress (anger/frustration/personal problems)</li> <li><input type="checkbox"/> Performance attitude (overassertive/nonassertive/failed confidence/too confident)</li> <li><input type="checkbox"/> Other</li> </ul>	

<b>HUMAN FACTORS (con't)</b>	
Name:	Date of Mishap:
Mishap Category:	Mishap Number:
<p><b>SUPERVISORY FACTORS:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Failed to establish work schedule/monitor assignments</li> <li><input type="checkbox"/> Failed to follow/monitor compliance with regulations</li> <li><input type="checkbox"/> Failed to follow craft limitations per mission requirements</li> <li><input type="checkbox"/> Failed to monitor crew training/performance levels</li> <li><input type="checkbox"/> Failed to remove poor performer</li> <li><input type="checkbox"/> Inadequate crew skill level per mission tasking/requirements</li> <li><input type="checkbox"/> Failed to recognize weak procedures/increased operational risks</li> <li><input type="checkbox"/> Failed to communicate problems to chain of command</li> <li><input type="checkbox"/> Excessive operational commitments</li> <li><input type="checkbox"/> Lax safety supervision</li> <li><input type="checkbox"/> Inadequate operating standards/procedures</li> <li><input type="checkbox"/> Failed to establish adequate mission standards/procedures</li> <li><input type="checkbox"/> Poor/inadequate command attitude</li> <li><input type="checkbox"/> Inadequate resources/facilities</li> <li><input type="checkbox"/> Inadequate Human Factors training</li> <li><input type="checkbox"/> Failed to establish/enforce crew training</li> <li><input type="checkbox"/> Failed to monitor crew rest/secondary assignments</li> </ul> <p><b>ENGINEERING FACTORS:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Inadequate/poor arrangement of controls</li> <li><input type="checkbox"/> Inadequate data display</li> <li><input type="checkbox"/> Difficulty interpreting/reading instruments</li> <li><input type="checkbox"/> Workplace (anthropometric) incompatibility - hard to reach controls</li> <li><input type="checkbox"/> Inadequate instructions</li> <li><input type="checkbox"/> Inappropriate automation/excessive complexity</li> <li><input type="checkbox"/> Failed to use appropriate control</li> <li><input type="checkbox"/> Failed response to warning signal</li> <li><input type="checkbox"/> Failed to manual override-over reliance on automated system</li> </ul> <p><b>ENVIRONMENTAL FACTORS:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Over exposure to elements (hypothermia/hyperthermia)</li> <li><input type="checkbox"/> Experienced vertigo/loss of consciousness</li> <li><input type="checkbox"/> Experienced hypoxia/hyperventilation</li> <li><input type="checkbox"/> Weather condition exceeded minimum operational safety standards</li> <li><input type="checkbox"/> Inadequate preparation per weather conditions (deicing)</li> <li><input type="checkbox"/> Inadequate established mission parameters (night/low altitude/NVG's)</li> <li><input type="checkbox"/> Experienced acceleration/deceleration forces (excess)</li> <li><input type="checkbox"/> Experienced sudden decompression/</li> <li><input type="checkbox"/> Experienced air turbulence/vibration</li> <li><input type="checkbox"/> Cockpit/cabin compromised (smoke/fumes/fire)</li> </ul>	
<p><b>"THE INFORMATION CONTAINED IN THIS QUESTIONNAIRE MAY ONLY BE RELEASED IN ACCORDANCE WITH THE FREEDOM OF INFORMATION AND PRIVACY ACT"</b></p>	

72 - HOUR PRE-MISHAP HISTORY	
Name:	Date of Mishap:
Rate/Rank:	Mishap Category:
Duty/Position:	Mishap Number:

**This chronological account of activities, of the 72 hours preceding the mishap, should be completed by the medical officer and included as part of the analysis for each member and for other persons who may have contributed to the mishap.**

**1. General Information:**

- a. Age: \_\_\_\_\_
- b. Date of Birth (mm/dd/yr): \_\_\_\_\_
- c. Sex:  Male  Female
- d. Marital Status:  Single  Married  Divorced  Separated
- e. Leave/TAD Information:
  - (1) Date Last Leave Began (mm/dd/yy): \_\_\_\_\_
  - (2) Duration of Last Leave (days): \_\_\_\_\_
  - (3) Type:  Regular  Emergency  Sick/Convalescent
  - (4) Date of Last TAD (mm/dd/yy): \_\_\_\_\_
  - (5) Duration of Last TAD (days): \_\_\_\_\_
- f. Work/Rest Information:
  - (1) Hours Worked in Last:  24 hours  48 hours  72 hours
  - (2) Continuous Duty Prior to Mishap (hours): \_\_\_\_\_
  - (3) Hours Continuously Awake Prior to Mishap: \_\_\_\_\_
  - (4) Hours Slept in Last:  24 hours  48 hours  72 hours
  - (5) Duration of Last Sleep Period (hours): \_\_\_\_\_
  - (6) Last Sleep Period Was:  Continuous  Broken
  - (7) Hours between Last Meal and Mishap: \_\_\_\_\_
  - (8) Time in Aircraft/Vessel Prior to Mission: \_\_\_\_\_
  - (9) Duration of Mission before Mishap occurred: \_\_\_\_\_

**2. Instructions:**

- a. The history should begin 72 hours prior to the time of the mishap and proceed in a chronological order. The medical officer should pay close attention to any alcohol consumption, physical activities, nutritional status (eating habits), emotional stress, personal problems, sleep habits, the use of medications/drugs and/or supplemental products (vitamins/minerals) and any other significant event affecting the member.
- b. An example on completing this form is provided:
  - Friday: 13 Dec 2002
  - 1800 Ate dinner at home: meatloaf, peas, rice, 2 glasses of wine, coffee and flan (custard).
  - 1900 Relaxed and watched TV, ate popcorn and pretzels, drank 1 beer.
  - 2300 Went to bed.

**72 - HOUR PRE-MISHAP HISTORY (con't)**

Saturday: 14 Dec 2002

0600 Woke up went to Gym.  
 0800 Showered ate breakfast: 1 egg, 2 slices of toast, orange juice and coffee.  
 0830 Worked at computer, read, relaxed.  
 0900 Worked around yard: cut grass, trim bushes pulled weeds.  
 1130 Ate lunch: ham and cheese sandwich, tea.  
 1200 Read a book, took nap, relaxed.  
 1700 Ate dinner: salad pizza: cheese/pepperoni -three slices, drank 2 glasses of beer.  
 1800 Watched television with family.  
 2200 Went to bed.

Sunday: 15 Dec 2002

0800 Woke up, read newspaper.  
 0900 Ate breakfast: glass orange juice, coffee, 2-egg ham and cheese omelet.  
 1100 Went to church.  
 1230 Lunch at friends home: 1 large steak, mashed potatoes, egg salad, and large Pepsi.  
 Played volleyball and Frisbee with kids.  
 1700 Returned home, watched TV.  
 1900 Ate dinner at home: spaghetti and meatballs, 2 glasses of wine, salad and garlic bread.  
 2100 Went to bed.

Monday: 16 dec 2002

0600 Woke up, showered, left for work.  
 0630 Ate breakfast in Officer's Mess.  
 0700 Office: Reviewed papers, sent e-mails.  
 0730 Brief for mission.  
 0930 Mission: Familiarization flight with student pilot.  
 1100 Landed at ATC Mobile.  
 1130 Debrief  
 1200 Office: paperwork  
 1230 Lunch: hamburger, fries, Pepsi.  
 1300 Officer's meeting.  
 1500 Brief for SAR.  
 1600 Take off.  
 1800 Noted ECS air at high temperature, fire-warning light, deteriorating engine indicators, smoke, emergency landing, flames extinguished--no injury.  
 1830 Recovered by HH-60 helo.  
 1900 Returned to ATC Mobile, visit health services clinic.

(Continue on additional sheets as necessary)

- c. **NOTE:** Include page 1 of this form and the completed chronological questionnaire as part of the final Medical Officer's Report

**" THE INFORMATION CONTAINED IN THIS QUESTIONNAIRE MAY ONLY BE RELEASED IN ACCORDANCE WITH THE FREEDOM OF INFORMATION AND PRIVACY ACT"**

**FIGURE - D**

<b>72 HOUR PRE-MISHAP HISTORY CHRONOLOGICAL QUESTIONNAIRE</b>	
Name:	Rate/Rank:
Duty/Position	Mishap Category:
Date of Mishap:	Time of Mishap:
This report <b>MUST</b> accompany the 72-hour General Information Page	
DAY: _____ : _____	
0500 hrs:	
0600 hrs:	
0700 hrs:	
0800 hrs:	
0900 hrs:	
1000 hrs:	
1100 hrs:	
1200 hrs:	
1300 hrs:	
1400 hrs:	
1500 hrs:	
1600 hrs:	
1700 hrs:	
1800 hrs:	
1900 hrs:	
2000 hrs:	
2100 hrs:	
2200 hrs:	
2300 hrs:	
2400 hrs:	
0100 hrs:	
0200 hrs:	
0300 hrs:	
0400 hrs:	
COMPLETED FOR ALL THREE DAYS PRECEEDING MISHAP CONTINUE ON ADDITIONAL SHEETS	
<b>"THE INFORMATION CONTAINED IN THIS QUESTIONNAIRE MAY ONLY BE RELEASED IN ACORDANCE WITH THE FREEDOM OF INFORMATION AND PRIVACY ACT"</b>	

<b>ESCAPE - EGRESS QUESTIONNAIRE</b>			
Name:	Date of Mishap:		
Rate/Rank:	Mishap Category:		
Duty/Position:	Mishap Number:		
<p><b>1. Location of Individual in craft/vessel:</b> <i>(Check appropriate box)</i></p> <p>a. General:</p> <p> <input type="checkbox"/> Cockpit    <input type="checkbox"/> Nav/Eng Compartment    <input type="checkbox"/> Cabin/Pax Compartment    <input type="checkbox"/> Outside on Ground  <input type="checkbox"/> On Deck    <input type="checkbox"/> On Bridge    <input type="checkbox"/> Outside in Flight (Hoisting)    <input type="checkbox"/> Below Decks    <input type="checkbox"/> Other                 </p> <p>b. Longitudinal Location:    <input type="checkbox"/> Forward    <input type="checkbox"/> Center    <input type="checkbox"/> Aft    <input type="checkbox"/> Unknown</p> <p>c. Lateral Location:    <input type="checkbox"/> Center    <input type="checkbox"/> Left/Port    <input type="checkbox"/> Right/Starboard    <input type="checkbox"/> Unknown</p> <p>d. Direction Facing:    <input type="checkbox"/> Forward    <input type="checkbox"/> Aft    <input type="checkbox"/> Sideward    <input type="checkbox"/> Unknown</p> <p>e. Use of Seat:    <input type="checkbox"/> In seat    <input type="checkbox"/> Not in seat    <input type="checkbox"/> In Bunk/Litter    <input type="checkbox"/> Unknown</p>			
<p><b>2. Escape Data:</b> <i>(Check appropriate box)</i></p> <p>a. Egress Attempted:    <input type="checkbox"/> Yes    <input type="checkbox"/> No    <input type="checkbox"/> Unknown</p> <p>b. Aircraft/Vessel Abandoned:    <input type="checkbox"/> NA - No Actual/Successful Egress    <input type="checkbox"/> After Impact/Landing    <input type="checkbox"/> Unknown</p> <p>c. Escape Method: <i>(Check only one method and specify from chosen selection)</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Accomplished (free of aircraft/vessel)  <input type="checkbox"/> Definitely Not Attempted  <input type="checkbox"/> Other Escape  <input type="checkbox"/> Underwater Egress  <input type="checkbox"/> Escape Unassisted (not emergency egress)  <input type="checkbox"/> Blown/Thrown Out  <input type="checkbox"/> Standard Emergency Abandon Ship  <input type="checkbox"/> Vessel to Vessel Raft Transfer                 </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Suspected Escape  <input type="checkbox"/> Unknown if Attempt was Made/Accomplished  <input type="checkbox"/> Standard Emergency Ground Egress  <input type="checkbox"/> Other Unsuccessful Escape Attempt  <input type="checkbox"/> Carried/Assisted Out  <input type="checkbox"/> Jumped/Fell from A/C (airborne)/Vessel (underway)  <input type="checkbox"/> Escape Method Unknown                 </td> </tr> </table> <p>d. Sequence of Actions: <i>(Describe )</i></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>e. Intent for Escape: <i>(Check appropriate box)</i></p> <p> <input type="checkbox"/> Intentional    <input type="checkbox"/> Unintentional/Self-induced    <input type="checkbox"/> Intent Unknown  <input type="checkbox"/> Unintentional/Mechanically Induced    <input type="checkbox"/> Unintentional/Other Induced                 </p> <p>f. Order of Escape: _____ of _____ members.</p> <p>g. Number of Previous: _____ escapes _____ other.</p> <p>h. Exits Used:    <input type="checkbox"/> Normal Exit    <input type="checkbox"/> Emergency Exit    <input type="checkbox"/> Other    <input type="checkbox"/> Unknown</p>		<input type="checkbox"/> Accomplished (free of aircraft/vessel) <input type="checkbox"/> Definitely Not Attempted <input type="checkbox"/> Other Escape <input type="checkbox"/> Underwater Egress <input type="checkbox"/> Escape Unassisted (not emergency egress) <input type="checkbox"/> Blown/Thrown Out <input type="checkbox"/> Standard Emergency Abandon Ship <input type="checkbox"/> Vessel to Vessel Raft Transfer	<input type="checkbox"/> Suspected Escape <input type="checkbox"/> Unknown if Attempt was Made/Accomplished <input type="checkbox"/> Standard Emergency Ground Egress <input type="checkbox"/> Other Unsuccessful Escape Attempt <input type="checkbox"/> Carried/Assisted Out <input type="checkbox"/> Jumped/Fell from A/C (airborne)/Vessel (underway) <input type="checkbox"/> Escape Method Unknown
<input type="checkbox"/> Accomplished (free of aircraft/vessel) <input type="checkbox"/> Definitely Not Attempted <input type="checkbox"/> Other Escape <input type="checkbox"/> Underwater Egress <input type="checkbox"/> Escape Unassisted (not emergency egress) <input type="checkbox"/> Blown/Thrown Out <input type="checkbox"/> Standard Emergency Abandon Ship <input type="checkbox"/> Vessel to Vessel Raft Transfer	<input type="checkbox"/> Suspected Escape <input type="checkbox"/> Unknown if Attempt was Made/Accomplished <input type="checkbox"/> Standard Emergency Ground Egress <input type="checkbox"/> Other Unsuccessful Escape Attempt <input type="checkbox"/> Carried/Assisted Out <input type="checkbox"/> Jumped/Fell from A/C (airborne)/Vessel (underway) <input type="checkbox"/> Escape Method Unknown		

<b>ESCAPE - EGRESS QUESTIONNAIRE (con't)</b>	
Name:	Date of Mishap:
Rate/Rank:	Mishap Category:
Duty/Position:	Mishap Number:
<p><b>3. Cockpit/Bridge/Cabin Condition Relative to Individual's Location:</b> <i>(check appropriate)</i></p> <p> <input type="checkbox"/> No Damage                        <input type="checkbox"/> Damaged-Definitely Habitable                        <input type="checkbox"/> Damage Unknown                        <input type="checkbox"/> Damaged-Probably Habitable  <input type="checkbox"/> Damaged-Probably Not Habitable                        <input type="checkbox"/> Destroyed-Definitely Not Habitable                 </p>	
<p><b>4. Emergency Egress Lighting Systems:</b> <i>(check appropriate)</i></p> <p> <input type="checkbox"/> Installed                        <input type="checkbox"/> Not Installed                        <input type="checkbox"/> Unknown                        <input type="checkbox"/> Aided in Location of Exit                        <input type="checkbox"/> Not Seen  <input type="checkbox"/> Did Not Aid in Location of Exit                        <input type="checkbox"/> Not Applicable                        <input type="checkbox"/> Unknown Effect in Locating Exit                 </p>	
<p><b>5. Aircraft/Vessel Parameters at Time of Escape:</b> <i>(if unknown, so indicate)</i></p> <p><b>Aircraft:</b>    Altitude(FT): _____ (MSL)/ _____ (AGL) _____</p> <p> <b>Velocity: Airspeed (KTS):</b> _____                        <b>Groundspeed(KTS):</b> _____                      Sink Rate (FT/MIN): _____    Climb Rate (FT/MIN): _____  <b>Pitch (DEG):</b> _____                        <input type="checkbox"/> Up    <input type="checkbox"/> Down    <i>(Check one)</i>                      Pitch Rate (DEG/SEC): _____                        <input type="checkbox"/> Up    <input type="checkbox"/> Down    <i>(Check one, unless Rate=0)</i>                      Bank Angle (DEG): _____    Direction:                        <input type="checkbox"/> Right    <input type="checkbox"/> Left    <i>(Check one, unless Rate=0)</i>                      Roll Rate (DEG/SEC): _____                        <input type="checkbox"/> Right    <input type="checkbox"/> Left    <i>(Check one, unless Rate=0)</i>                      Yaw (DEG) _____    Direction:                        <input type="checkbox"/> Right    <input type="checkbox"/> Left    <i>(Check one)</i>                      Yaw Rate (DEG/SEC): _____                        <input type="checkbox"/> Right    <input type="checkbox"/> Left    <i>(Check one, unless Rate=0)</i>                      Forces: Normal (G's) _____                        <input type="checkbox"/> Up    <input type="checkbox"/> Down    <i>(Check one)</i>                      Lateral (G's) _____                        <input type="checkbox"/> Right    <input type="checkbox"/> Left    <i>(Check one)</i>                      Other: <i>(Check all that apply)</i>                        <input type="checkbox"/> Nose Down Spin                        <input type="checkbox"/> Flat Spin                        <input type="checkbox"/> Oscillating Spin  <input type="checkbox"/> Upright on Ground                        <input type="checkbox"/> Inverted                        <input type="checkbox"/> Tumbling                        <input type="checkbox"/> Mushing  <input type="checkbox"/> Upright on Water                        <input type="checkbox"/> Disintegrating                        <input type="checkbox"/> Rolling                        <input type="checkbox"/> Under Water/Sinking  <input type="checkbox"/> Other: <i>(Describe)</i> _____                      _____                      _____                      _____                      _____                 </p>	
<p><b>Vessel:</b>    Velocity (KTS) _____</p> <p>Water Conditions: _____ ft seas.                        <input type="checkbox"/> Rough    <input type="checkbox"/> Calm    <input type="checkbox"/> Unknown</p> <p>Attitude:                        <input type="checkbox"/> Normal                        <input type="checkbox"/> Underwater/Sinking                        <input type="checkbox"/> Listing                        <input type="checkbox"/> Rolling                        <input type="checkbox"/> Capsized</p> <p>Direction/Position:                        <input type="checkbox"/> to Port                        <input type="checkbox"/> to Sea                        <input type="checkbox"/> In Harbor                        <input type="checkbox"/> at Pier  <input type="checkbox"/> Anchored                 </p>	

ESCAPE - EGRESS QUESTIONNAIRE (con't)																																																				
Name:	Date of Mishap:																																																			
Rate/Rank:	Mishap Category:																																																			
Duty/Position:	Mishap Number:																																																			
<p><b>6. Egress Problems:</b> <i>(See Instructions)</i></p> <p><b>PHASE:</b> B = before      D = during      A = after      (egress)</p> <p><b>TYPE:</b>    W = water      G = ground</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">PROBLEM</th> <th style="width: 15%;">PHASE</th> <th style="width: 15%;">TYPE</th> </tr> </thead> <tbody> <tr><td>Locating hatch/window exit release mechanism</td><td></td><td></td></tr> <tr><td>Mechan. releasing hatch/window exit</td><td></td><td></td></tr> <tr><td>Reaching hatch/window exit</td><td></td><td></td></tr> <tr><td>Confusion/Panic/Disorientation</td><td></td><td></td></tr> <tr><td>Darkness/Loss Visual Reference</td><td></td><td></td></tr> <tr><td>Fire/Smoke/Fuel</td><td></td><td></td></tr> <tr><td>Anthropometric Problem</td><td></td><td></td></tr> <tr><td>Obstruction</td><td></td><td></td></tr> <tr><td>Obstruction clothing/equipment/injuries</td><td></td><td></td></tr> <tr><td>Injuries: specify body area affected</td><td></td><td></td></tr> <tr><td>Hypothermia</td><td></td><td></td></tr> <tr><td>Inrush of Water</td><td></td><td></td></tr> <tr><td>Loss of Consciousness</td><td></td><td></td></tr> <tr><td>Environment wind/water/light(darkness)</td><td></td><td></td></tr> <tr><td>Entanglement</td><td></td><td></td></tr> <tr><td>Other</td><td></td><td></td></tr> </tbody> </table>		PROBLEM	PHASE	TYPE	Locating hatch/window exit release mechanism			Mechan. releasing hatch/window exit			Reaching hatch/window exit			Confusion/Panic/Disorientation			Darkness/Loss Visual Reference			Fire/Smoke/Fuel			Anthropometric Problem			Obstruction			Obstruction clothing/equipment/injuries			Injuries: specify body area affected			Hypothermia			Inrush of Water			Loss of Consciousness			Environment wind/water/light(darkness)			Entanglement			Other		
PROBLEM	PHASE	TYPE																																																		
Locating hatch/window exit release mechanism																																																				
Mechan. releasing hatch/window exit																																																				
Reaching hatch/window exit																																																				
Confusion/Panic/Disorientation																																																				
Darkness/Loss Visual Reference																																																				
Fire/Smoke/Fuel																																																				
Anthropometric Problem																																																				
Obstruction																																																				
Obstruction clothing/equipment/injuries																																																				
Injuries: specify body area affected																																																				
Hypothermia																																																				
Inrush of Water																																																				
Loss of Consciousness																																																				
Environment wind/water/light(darkness)																																																				
Entanglement																																																				
Other																																																				
<p><b>7. Explanation:</b> _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>																																																				
<p><b>8. Reasons for escape:</b> <i>(indicate all that apply)</i></p> <p> <input type="checkbox"/> Fire/Explosion/Smoke                        <input type="checkbox"/> Out of Fuel                        <input type="checkbox"/> Loss Control                        <input type="checkbox"/> Water Impact                        <input type="checkbox"/> Engine Failure  <input type="checkbox"/> Ground/Structure Impact                        <input type="checkbox"/> Structural failure                        <input type="checkbox"/> SHIPOPS Failure                        <input type="checkbox"/> Collision  <input type="checkbox"/> Other                        <input type="checkbox"/> Capsizing/sinking                        <input type="checkbox"/> Unknown                 </p>																																																				
<p><b>9. Communications:</b> <i>(Before egress)</i></p> <p> <input type="checkbox"/> Distress signal Transmitted                        <input type="checkbox"/> Position Fix Transmitted                        <input type="checkbox"/> Emergency IFF                        <input type="checkbox"/> Unknown                        <input type="checkbox"/> None                 </p>																																																				

<b>ESCAPE - EGRESS QUESTIONNAIRE (con't)</b>	
Name:	Date of Mishap:
Rate/Rank:	Mishap Category:
Duty/Position:	Mishap Number:
<p><b>10. Remarks:</b></p> <ul style="list-style-type: none"> <li>a. Complete this questionnaire for each person who successfully egressed as part of the mishap event and also for each person who unsuccessfully tried to egress.</li> <li>b. Location, part 1: indicate where this person was located at the time of the mishap by checking one selection from part A. Amplify with one selection each from parts B through E, as indicated.</li> <li>c. Escape Method, part 2 (A-C): indicate the type of escape and amplify from the adjacent selections. Use only the selections associated with the particular method.</li> <li>d. Sequence of Actions, part 2 D: list sequence of preparatory actions accomplished by this individual before actual egress. Examples: visor down, lap belt/shoulder harness straps adjusted, seat moved/adjusted, tightened mask, crew alert, etc.</li> <li>e. Cabin/Cockpit/Bridge Conditions after Impact, part 3: check the one selection that best describes the condition of the cockpit/cabin/bridge.</li> <li>f. Emergency Egress Lighting, part 4: indicate the presence or absence of emergency lighting and effect, contribution to the egress/escape procedure.</li> <li>g. Vessel Parameters at time of Escape, part 5: indicate all pertinent parameters/conditions and specify/expand on any possible impact, both positive and negative contributions these conditions would have had on egress procedures.</li> <li>h. Egress Problems, part 6: indicate the problem encountered and explain in the remarks section the nature, effect and result each problem had on the egress procedures. Specify the phase of the egress action the problem was encountered and the type of egress with the problem. Indicate difficulties in finding, reaching or releasing the emergency release mechanisms and whether this was caused by injuries obstructions caused by equipment, clothing, attitude of craft, external or internal forces, entanglement, etc. Be specific and detailed, part 7. Use additional sheets if necessary.</li> <li>i. Reasons for Escape, part 8: indicate all the reasons, which apply.</li> <li>j. Communications, part 9: indicate whether emergency procedures were followed in relating position, transmitting distress signal before initiating egress.</li> </ul>	
<p><b>"THE INFORMATION CONTAINED IN THIS QUESTIONNAIRE MAY ONLY BE RELEASED IN ACCORDANCE WITH THE FREEDOM OF INFORMATION AND PRIVACY ACT"</b></p>	

<b>RESCUE AND SURVIVAL QUESTIONNAIRE</b>																																																						
Name:	Date of Mishap:																																																					
Rate/Rank:	Mishap Category:																																																					
Duty/Position:	Mishap Number:																																																					
<p><b>1. Conditions Prevailing at Survival/Rescue Site:</b></p> <p>a. Temperature/Winds/Waves (if widely variable, give range):</p> <p>Water Temp: _____ deg F      Air Temp: _____ deg F</p> <p>Surface Wind: _____ kts      _____ deg</p> <p>Wave Height: _____ ft      _____ deg (mag)      Wave Freq: _____ per min</p> <p>b. Terrain: <i>(Check appropriate box)</i></p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Open Ground</td> <td><input type="checkbox"/> Woods/Jungle</td> <td><input type="checkbox"/> Mountains</td> </tr> <tr> <td><input type="checkbox"/> Desert</td> <td><input type="checkbox"/> Water</td> <td><input type="checkbox"/> Ice/Snow</td> </tr> <tr> <td><input type="checkbox"/> Swamp</td> <td><input type="checkbox"/> Other</td> <td><input type="checkbox"/> Unknown</td> </tr> </table> <p>c. Weather: <i>(Check appropriate box)</i></p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Clear</td> <td><input type="checkbox"/> Overcast</td> <td><input type="checkbox"/> Fog</td> </tr> <tr> <td><input type="checkbox"/> Rain</td> <td><input type="checkbox"/> Snow</td> <td><input type="checkbox"/> Sleet</td> </tr> <tr> <td><input type="checkbox"/> Hail</td> <td><input type="checkbox"/> Other</td> <td><input type="checkbox"/> Unknown</td> </tr> </table>		<input type="checkbox"/> Open Ground	<input type="checkbox"/> Woods/Jungle	<input type="checkbox"/> Mountains	<input type="checkbox"/> Desert	<input type="checkbox"/> Water	<input type="checkbox"/> Ice/Snow	<input type="checkbox"/> Swamp	<input type="checkbox"/> Other	<input type="checkbox"/> Unknown	<input type="checkbox"/> Clear	<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog	<input type="checkbox"/> Rain	<input type="checkbox"/> Snow	<input type="checkbox"/> Sleet	<input type="checkbox"/> Hail	<input type="checkbox"/> Other	<input type="checkbox"/> Unknown																																			
<input type="checkbox"/> Open Ground	<input type="checkbox"/> Woods/Jungle	<input type="checkbox"/> Mountains																																																				
<input type="checkbox"/> Desert	<input type="checkbox"/> Water	<input type="checkbox"/> Ice/Snow																																																				
<input type="checkbox"/> Swamp	<input type="checkbox"/> Other	<input type="checkbox"/> Unknown																																																				
<input type="checkbox"/> Clear	<input type="checkbox"/> Overcast	<input type="checkbox"/> Fog																																																				
<input type="checkbox"/> Rain	<input type="checkbox"/> Snow	<input type="checkbox"/> Sleet																																																				
<input type="checkbox"/> Hail	<input type="checkbox"/> Other	<input type="checkbox"/> Unknown																																																				
<p><b>2. Time Lapse Sequence for Actual Rescue Vehicles/Personnel:</b></p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2" style="width: 30%;"></th> <th rowspan="2" style="width: 15%;">Actual Time (24)hour Local Clock</th> <th rowspan="2" style="width: 15%;">Elapsed Time from Mishap</th> <th colspan="4" style="width: 35%;">Light Conditions (X)</th> </tr> <tr> <th>Dawn</th> <th>Day</th> <th>Dusk</th> <th>Night</th> </tr> </thead> <tbody> <tr> <td style="text-align: left;">Rescue personnel notified</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: left;">Rescue vehicle departed</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: left;">This individual located by rescue personnel</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: left;">This individual physically reached by rescue vehicle personnel</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: left;">This individual actually in rescue vehicle or rescue attempt abandoned</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: left;">Rescue completed (Person returned to station, hospital, etc.)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Actual Time (24)hour Local Clock	Elapsed Time from Mishap	Light Conditions (X)				Dawn	Day	Dusk	Night	Rescue personnel notified							Rescue vehicle departed							This individual located by rescue personnel							This individual physically reached by rescue vehicle personnel							This individual actually in rescue vehicle or rescue attempt abandoned							Rescue completed (Person returned to station, hospital, etc.)						
	Actual Time (24)hour Local Clock				Elapsed Time from Mishap	Light Conditions (X)																																																
		Dawn	Day	Dusk		Night																																																
Rescue personnel notified																																																						
Rescue vehicle departed																																																						
This individual located by rescue personnel																																																						
This individual physically reached by rescue vehicle personnel																																																						
This individual actually in rescue vehicle or rescue attempt abandoned																																																						
Rescue completed (Person returned to station, hospital, etc.)																																																						
<p><b>3. Time this Individual Spent:</b></p> <p>a. In water: _____ hrs      _____ min</p> <p>b. In raft: _____ hrs      _____ min</p> <p>c. On land: _____ hrs      _____ min      (unsheltered and/or exposed)</p>																																																						

<b>RESCUE AND SURVIVAL QUESTIONNAIRE (con't)</b>	
Name:	Date of Mishap:
Rate/Rank:	Mishap Category:
Duty/Position:	Mishap Number:
<p><b>4. Personnel/Vehicles Performing Rescue:</b></p> <p>a. Vehicle Performing Actual Pickup of This Person:            Organization: _____ Type/Model: _____            Location When Alerted: _____            Duty When Alerted: _____            Distance to Victim(s) (miles): _____ straight line _____ actual miles traveled.</p> <p>b. SAR Report Information: SAR Report Attached <input type="checkbox"/> Yes <input type="checkbox"/> No            Report # _____ Available from: _____</p> <p>c. Did Rescue Personnel Leave Vehicle to Assist in Rescue: <input type="checkbox"/> Yes <input type="checkbox"/> No            If yes, how: <input type="checkbox"/> Jumped <input type="checkbox"/> Lowered by Hoist <input type="checkbox"/> Descended Line/Ladder/Net  <input type="checkbox"/> Into Water/Onto Ground (no jump) <input type="checkbox"/> Other _____</p>	
<p><b>5. Personnel/Vehicles Assisting/Attempting Rescue:</b></p> <p>Organization: _____ Type/Model: _____            Problems: <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, explain in remarks)  <b>List</b> additional vehicles participating/standing by in remarks or attach additional sheet.</p>	
<p><b>6. Rescue Alerting Means (use numbers to show sequence):</b></p> <p><input type="checkbox"/> Witnessed <input type="checkbox"/> Crash Phone <input type="checkbox"/> Other Telephone <input type="checkbox"/> Radio MAYDAY Call  <input type="checkbox"/> Survival Radio <input type="checkbox"/> Other Radio Report <input type="checkbox"/> Radar Surveillance <input type="checkbox"/> Overdue Report to SAR  <input type="checkbox"/> Airborne Rapid Relay <input type="checkbox"/> Visual Signaling Equipment <input type="checkbox"/> Survivor Report <input type="checkbox"/> Loss of Radio Contact  <input type="checkbox"/> Smoke/Fire/Crash Scene <input type="checkbox"/> Audio Signaling Equipment <input type="checkbox"/> Other (describe) _____</p>	
<p><b>7. Alerting Communications Problems :</b></p> <p><input type="checkbox"/> Poor Radio Reception <input type="checkbox"/> Telephone Line Busy <input type="checkbox"/> Poor Radio Discipline <input type="checkbox"/> Acft Radio/Iff Eqpt Inop  <input type="checkbox"/> Poor Radio Procedures <input type="checkbox"/> Language Problems <input type="checkbox"/> Incompatible Radio Frequency <input type="checkbox"/> None  <input type="checkbox"/> Other <input type="checkbox"/> IFF</p>	
<p><b>8. Delays in Departure of Rescue vehicle(s):</b></p> <p><input type="checkbox"/> Vehicle Operator Not Available <input type="checkbox"/> Vehicle Not Ready <input type="checkbox"/> Vehicle Crew Not Available  <input type="checkbox"/> Communication Breakdown <input type="checkbox"/> Completing Previously Assigned Duties  <input type="checkbox"/> Lack of Information on Crash Site <input type="checkbox"/> Nature of Terrain <input type="checkbox"/> Nature of Terrain  <input type="checkbox"/> None <input type="checkbox"/> Other _____</p>	

<b>RESCUE AND SURVIVAL QUESTIONNAIRE (con't)</b>			
Name:	Date of Mishap:		
Rate/Rank:	Mishap Category:		
Duty/Position:	Mishap Number:		
<p><b>9. Rescue Vehicle Problems En Route:</b></p> <p> <input type="checkbox"/> Headwind    <input type="checkbox"/> Poor Visibility    <input type="checkbox"/> High Sea State    <input type="checkbox"/> Mechanical Problems    <input type="checkbox"/> Nature of Terrain  <input type="checkbox"/> Rescuers Lost    <input type="checkbox"/> Weather    <input type="checkbox"/> Other Obstructions (fences, etc.)    <input type="checkbox"/> None  <input type="checkbox"/> Other (specify) _____                 </p>			
<p><b>10. Problems in Locating Individual or Keeping Individual in Sight:</b></p> <p> <input type="checkbox"/> Heavy Seas    <input type="checkbox"/> Trees    <input type="checkbox"/> Fog/Clouds    <input type="checkbox"/> Precipitation    <input type="checkbox"/> Darkness    <input type="checkbox"/> Radio Interference  <input type="checkbox"/> Loss of Radio/Radar Contact    <input type="checkbox"/> Inadequate/Improper Search    <input type="checkbox"/> Confusion Due to Other Lights  <input type="checkbox"/> Malfunction of Directional Equipment    <input type="checkbox"/> Lack of Correct Information on Location of Survivor  <input type="checkbox"/> Inability to Visually Distinguish Survivor from Terrain    <input type="checkbox"/> Survivor's Failure to Use Signaling Equipment  <input type="checkbox"/> None    <input type="checkbox"/> Other (specify) _____                 </p>			
<p><b>11. Rescue Equipment Used:</b> <i>(use numbers to show sequence)</i></p> <p> <input type="checkbox"/> Rescue Strap    <input type="checkbox"/> Seat    <input type="checkbox"/> Cargo Net    <input type="checkbox"/> Rope    <input type="checkbox"/> Life Ring    <input type="checkbox"/> Basket    <input type="checkbox"/> Boom Net  <input type="checkbox"/> Davit    <input type="checkbox"/> Raft    <input type="checkbox"/> Webbing Cutters    <input type="checkbox"/> Grapnel    <input type="checkbox"/> Boarding Ladder    <input type="checkbox"/> Makeshift Carrier/Support  <input type="checkbox"/> First Aid Equipment    <input type="checkbox"/> Forest Penetrator    <input type="checkbox"/> Helicopter Platform    <input type="checkbox"/> Stretcher  <input type="checkbox"/> Cable Cutter    <input type="checkbox"/> Helicopter Rescue Boom    <input type="checkbox"/> Knife/Axe/Saw    <input type="checkbox"/> Billy Pugh Net  <input type="checkbox"/> Other (describe) _____                 </p>			
<p><b>12. Survival Problems Encountered by This Person:</b> <i>(number in the sequence experienced)</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top; padding: 5px;"> <input type="checkbox"/> Inadequate Flotation Gear  <input type="checkbox"/> Lack of Signaling Equipment  <input type="checkbox"/> Entanglement  <input type="checkbox"/> Entrapment in Aircraft  <input type="checkbox"/> Unfamiliar with Equipment  <input type="checkbox"/> Incapacitated by Injury  <input type="checkbox"/> Exposure (Heat, Cold, Sunburn)  <input type="checkbox"/> Weather  <input type="checkbox"/> Darkness  <input type="checkbox"/> Hampered by Helo Downwash  <input type="checkbox"/> Thirst  <input type="checkbox"/> Insects, Snakes, Animals, etc.  <input type="checkbox"/> Proximity to Ship (_____ Yards)  <input type="checkbox"/> None                 </td> <td style="width: 50%; vertical-align: top; padding: 5px;"> <input type="checkbox"/> Inadequate Cold Weather Gear  <input type="checkbox"/> Lack of Other Equipment  <input type="checkbox"/> Dragging  <input type="checkbox"/> Unfamiliar with Procedure  <input type="checkbox"/> Confused, Dazed, Disoriented  <input type="checkbox"/> Poor Physical Condition  <input type="checkbox"/> Fatigue  <input type="checkbox"/> Topography(Swamps, Mountains, Deserts, etc.)  <input type="checkbox"/> Thrown Out of Raft  <input type="checkbox"/> Problem Boarding Rescue Vehicles  <input type="checkbox"/> Hunger  <input type="checkbox"/> Sharks  <input type="checkbox"/> Hampered by Injuries  <input type="checkbox"/> Other(Describe) _____                 </td> </tr> </table>		<input type="checkbox"/> Inadequate Flotation Gear <input type="checkbox"/> Lack of Signaling Equipment <input type="checkbox"/> Entanglement <input type="checkbox"/> Entrapment in Aircraft <input type="checkbox"/> Unfamiliar with Equipment <input type="checkbox"/> Incapacitated by Injury <input type="checkbox"/> Exposure (Heat, Cold, Sunburn) <input type="checkbox"/> Weather <input type="checkbox"/> Darkness <input type="checkbox"/> Hampered by Helo Downwash <input type="checkbox"/> Thirst <input type="checkbox"/> Insects, Snakes, Animals, etc. <input type="checkbox"/> Proximity to Ship (_____ Yards) <input type="checkbox"/> None	<input type="checkbox"/> Inadequate Cold Weather Gear <input type="checkbox"/> Lack of Other Equipment <input type="checkbox"/> Dragging <input type="checkbox"/> Unfamiliar with Procedure <input type="checkbox"/> Confused, Dazed, Disoriented <input type="checkbox"/> Poor Physical Condition <input type="checkbox"/> Fatigue <input type="checkbox"/> Topography(Swamps, Mountains, Deserts, etc.) <input type="checkbox"/> Thrown Out of Raft <input type="checkbox"/> Problem Boarding Rescue Vehicles <input type="checkbox"/> Hunger <input type="checkbox"/> Sharks <input type="checkbox"/> Hampered by Injuries <input type="checkbox"/> Other(Describe) _____
<input type="checkbox"/> Inadequate Flotation Gear <input type="checkbox"/> Lack of Signaling Equipment <input type="checkbox"/> Entanglement <input type="checkbox"/> Entrapment in Aircraft <input type="checkbox"/> Unfamiliar with Equipment <input type="checkbox"/> Incapacitated by Injury <input type="checkbox"/> Exposure (Heat, Cold, Sunburn) <input type="checkbox"/> Weather <input type="checkbox"/> Darkness <input type="checkbox"/> Hampered by Helo Downwash <input type="checkbox"/> Thirst <input type="checkbox"/> Insects, Snakes, Animals, etc. <input type="checkbox"/> Proximity to Ship (_____ Yards) <input type="checkbox"/> None	<input type="checkbox"/> Inadequate Cold Weather Gear <input type="checkbox"/> Lack of Other Equipment <input type="checkbox"/> Dragging <input type="checkbox"/> Unfamiliar with Procedure <input type="checkbox"/> Confused, Dazed, Disoriented <input type="checkbox"/> Poor Physical Condition <input type="checkbox"/> Fatigue <input type="checkbox"/> Topography(Swamps, Mountains, Deserts, etc.) <input type="checkbox"/> Thrown Out of Raft <input type="checkbox"/> Problem Boarding Rescue Vehicles <input type="checkbox"/> Hunger <input type="checkbox"/> Sharks <input type="checkbox"/> Hampered by Injuries <input type="checkbox"/> Other(Describe) _____		

<b>RESCUE AND SURVIVAL QUESTIONNAIRE (con't)</b>																									
Name:	Date of Mishap:																								
Rate/Rank:	Mishap Category:																								
Duty/Position:	Mishap Number:																								
<p><b>13. Problems that Complicated Rescue Operations:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top; padding: 5px;"> <input type="checkbox"/> Failure of Rescue Vehicle (Mechanical Problems)  <input type="checkbox"/> Failure of Rescue Equipment (Hoist, etc.)  <input type="checkbox"/> Inadequacy of Rescue Personnel (Know/Training)  <input type="checkbox"/> Inadequate Medical Facilities  <input type="checkbox"/> Rescue Crewman Assist Hesitancy  <input type="checkbox"/> Entrapment in Aircraft  <input type="checkbox"/> Physical Limitations of Person Being Rescued  <input type="checkbox"/> Rescue Vehicle Accident  <input type="checkbox"/> Communications Problems, etc.  <input type="checkbox"/> Interference from Other Vehicles  <input type="checkbox"/> Weather  <input type="checkbox"/> Weight/Drag Problem  <input type="checkbox"/> Floating Debris  <input type="checkbox"/> Awaiting Further Attempts by Other Rescuers  <input type="checkbox"/> Inadequate Rescue Procedures/Pre-Mishap Plans  <input type="checkbox"/> Poor Suitability of Rescue Equipment  <input type="checkbox"/> Poor Coordination of Rescue Efforts  <input type="checkbox"/> Panic/Inappropriate Actions of Person Being Rescued  <input type="checkbox"/> Inadequate Knowledge of Personal Equipment Releases/Actuators  <input type="checkbox"/> Other (describe) _____                  _____                  _____             </td> <td style="width: 50%; vertical-align: top; padding: 5px;"> <input type="checkbox"/> Inadequacy/Lack of Rescue Vehicle  <input type="checkbox"/> Inadequacy/Lack of Rescue Equipment  <input type="checkbox"/> Inadequate Medical Equipment  <input type="checkbox"/> Vehicle Operator Factor (Poor Procedures)  <input type="checkbox"/> Fire/Explosion  <input type="checkbox"/> Physical Limitations of Rescue Personnel  <input type="checkbox"/> Carelessness of Rescue Personnel  <input type="checkbox"/> Topography (Rough Seas, Mountains)  <input type="checkbox"/> Victim Pulled Away by External Forces  <input type="checkbox"/> Darkness  <input type="checkbox"/> Hampered by Personal/Survival Equipment  <input type="checkbox"/> Primary Rescuer Delayed  <input type="checkbox"/> Hampered by Helicopter Downwash  <input type="checkbox"/> Poor Availability of Rescue Equipment  <input type="checkbox"/> Poor Survivor's Techniques  <input type="checkbox"/> Inadequate Training of Rescue  <input type="checkbox"/> None             </td> </tr> </table>		<input type="checkbox"/> Failure of Rescue Vehicle (Mechanical Problems) <input type="checkbox"/> Failure of Rescue Equipment (Hoist, etc.) <input type="checkbox"/> Inadequacy of Rescue Personnel (Know/Training) <input type="checkbox"/> Inadequate Medical Facilities <input type="checkbox"/> Rescue Crewman Assist Hesitancy <input type="checkbox"/> Entrapment in Aircraft <input type="checkbox"/> Physical Limitations of Person Being Rescued <input type="checkbox"/> Rescue Vehicle Accident <input type="checkbox"/> Communications Problems, etc. <input type="checkbox"/> Interference from Other Vehicles <input type="checkbox"/> Weather <input type="checkbox"/> Weight/Drag Problem <input type="checkbox"/> Floating Debris <input type="checkbox"/> Awaiting Further Attempts by Other Rescuers <input type="checkbox"/> Inadequate Rescue Procedures/Pre-Mishap Plans <input type="checkbox"/> Poor Suitability of Rescue Equipment <input type="checkbox"/> Poor Coordination of Rescue Efforts <input type="checkbox"/> Panic/Inappropriate Actions of Person Being Rescued <input type="checkbox"/> Inadequate Knowledge of Personal Equipment Releases/Actuators <input type="checkbox"/> Other (describe) _____ _____ _____	<input type="checkbox"/> Inadequacy/Lack of Rescue Vehicle <input type="checkbox"/> Inadequacy/Lack of Rescue Equipment <input type="checkbox"/> Inadequate Medical Equipment <input type="checkbox"/> Vehicle Operator Factor (Poor Procedures) <input type="checkbox"/> Fire/Explosion <input type="checkbox"/> Physical Limitations of Rescue Personnel <input type="checkbox"/> Carelessness of Rescue Personnel <input type="checkbox"/> Topography (Rough Seas, Mountains) <input type="checkbox"/> Victim Pulled Away by External Forces <input type="checkbox"/> Darkness <input type="checkbox"/> Hampered by Personal/Survival Equipment <input type="checkbox"/> Primary Rescuer Delayed <input type="checkbox"/> Hampered by Helicopter Downwash <input type="checkbox"/> Poor Availability of Rescue Equipment <input type="checkbox"/> Poor Survivor's Techniques <input type="checkbox"/> Inadequate Training of Rescue <input type="checkbox"/> None																						
<input type="checkbox"/> Failure of Rescue Vehicle (Mechanical Problems) <input type="checkbox"/> Failure of Rescue Equipment (Hoist, etc.) <input type="checkbox"/> Inadequacy of Rescue Personnel (Know/Training) <input type="checkbox"/> Inadequate Medical Facilities <input type="checkbox"/> Rescue Crewman Assist Hesitancy <input type="checkbox"/> Entrapment in Aircraft <input type="checkbox"/> Physical Limitations of Person Being Rescued <input type="checkbox"/> Rescue Vehicle Accident <input type="checkbox"/> Communications Problems, etc. <input type="checkbox"/> Interference from Other Vehicles <input type="checkbox"/> Weather <input type="checkbox"/> Weight/Drag Problem <input type="checkbox"/> Floating Debris <input type="checkbox"/> Awaiting Further Attempts by Other Rescuers <input type="checkbox"/> Inadequate Rescue Procedures/Pre-Mishap Plans <input type="checkbox"/> Poor Suitability of Rescue Equipment <input type="checkbox"/> Poor Coordination of Rescue Efforts <input type="checkbox"/> Panic/Inappropriate Actions of Person Being Rescued <input type="checkbox"/> Inadequate Knowledge of Personal Equipment Releases/Actuators <input type="checkbox"/> Other (describe) _____ _____ _____	<input type="checkbox"/> Inadequacy/Lack of Rescue Vehicle <input type="checkbox"/> Inadequacy/Lack of Rescue Equipment <input type="checkbox"/> Inadequate Medical Equipment <input type="checkbox"/> Vehicle Operator Factor (Poor Procedures) <input type="checkbox"/> Fire/Explosion <input type="checkbox"/> Physical Limitations of Rescue Personnel <input type="checkbox"/> Carelessness of Rescue Personnel <input type="checkbox"/> Topography (Rough Seas, Mountains) <input type="checkbox"/> Victim Pulled Away by External Forces <input type="checkbox"/> Darkness <input type="checkbox"/> Hampered by Personal/Survival Equipment <input type="checkbox"/> Primary Rescuer Delayed <input type="checkbox"/> Hampered by Helicopter Downwash <input type="checkbox"/> Poor Availability of Rescue Equipment <input type="checkbox"/> Poor Survivor's Techniques <input type="checkbox"/> Inadequate Training of Rescue <input type="checkbox"/> None																								
<p><b>14. Individual's Physical Condition:</b></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 20%; text-align: center;">During Rescue <i>(Check one)</i></th> <th style="width: 20%; text-align: center;">After Rescue <i>(check one)</i></th> </tr> </thead> <tbody> <tr> <td>1. Fully Able to Assist</td> <td></td> <td></td> </tr> <tr> <td>2. Partially Able to Assist</td> <td></td> <td></td> </tr> <tr> <td>3. Immobile or Unconscious</td> <td></td> <td></td> </tr> <tr> <td>4. Fatal on Recovery-Due to Injuries</td> <td></td> <td></td> </tr> <tr> <td>5. Fatal on Recovery-Drowned</td> <td></td> <td></td> </tr> <tr> <td>6. Recovered Alive-Died From Injuries</td> <td></td> <td></td> </tr> <tr> <td>7. Lost During Rescue Attempt-Apparently Injured or Drowned</td> <td></td> <td></td> </tr> </tbody> </table>			During Rescue <i>(Check one)</i>	After Rescue <i>(check one)</i>	1. Fully Able to Assist			2. Partially Able to Assist			3. Immobile or Unconscious			4. Fatal on Recovery-Due to Injuries			5. Fatal on Recovery-Drowned			6. Recovered Alive-Died From Injuries			7. Lost During Rescue Attempt-Apparently Injured or Drowned		
	During Rescue <i>(Check one)</i>	After Rescue <i>(check one)</i>																							
1. Fully Able to Assist																									
2. Partially Able to Assist																									
3. Immobile or Unconscious																									
4. Fatal on Recovery-Due to Injuries																									
5. Fatal on Recovery-Drowned																									
6. Recovered Alive-Died From Injuries																									
7. Lost During Rescue Attempt-Apparently Injured or Drowned																									



<b>PERSONAL PROTECTIVE EQUIPMENT QUESTIONNAIRE (con't)</b>	
Name:	Date of Mishap:
Rate/Rank:	Mishap Category:
Duty/Position:	Mishap Number:

**Mark with an X in the appropriate box. Note any irregularities in the remarks section.**

Designation	Required	Optional	Available	Utilized	Type/Model
Helmet/Neoprene					
PFD (personal flotation device)					
Survival vest					
Strobe light					
Signal Mirror					
Whistle					
Rain Gear					
Boat shoes					
Gloves/inserts/cold weather					
Goggles/sunglasses					
Knife					
Boots (insulated, safety, waterproof)					
Coveralls (anti-exposure)					
Balaclava					
Watch cap					
Personal EPIRB					
Underwear (reg, thermal, polar)					
Socks (reg, thermal)					
Dry suit/MSD900					
<b>Signaling Devices:</b>					
Mark 79					
Mark 124					
<b>Other Equipment:</b>					
Oxygen mask, regulator					
Life raft					
Survival Kit					
Restraint System (lap belts, shoulder harness)					

<b>PERSONAL PROTECTIVE EQUIPMENT QUESTIONNAIRE (con't)</b>	
Name:	Date of Mishap:
Rate/Rank:	Mishap Category:
Duty/Position:	Mishap Number:
<b>Remarks:</b>	
<b>INSTRUCTIONS</b>	
<p>Submit this questionnaire on each survivor who was rescued as a result of a search-and-rescue (SAR) operation.</p> <ol style="list-style-type: none"> <li>1. Indicate the availability of equipment, knowledge of use, operational training, working condition.</li> <li>2. Indicate equipment, which may have assisted in rescue/survival, had it been available.</li> <li>3. Make note of special equipment, seasonal clothing and gear (i.e., 3-layer cold weather gloves; layer1 or layer 2 thermal underwear; polar fleece, etc.).</li> <li>4. Obtain list of standard operating equipment for particular aircraft/vessel and cross check against equipment available/used at time of mishap.</li> <li>5. Be specific as to type, model, number of equipment.</li> <li>6. Note any modifications to standard equipment.</li> <li>7. Note use of any personal, unauthorized gear, equipment and impact on rescue, survival, and/or mishap.</li> </ol>	
<b>" THE INFORMATION CONTAINED IN THIS QUESTIONNAIRE MAY ONLY BE RELEASED IN ACCORDANCE WITH THE FREEDOM OF INFORMATION AND PRIVACY ACT"</b>	

**FIGURE - H**

<b>MEDICAL OFFICERS'S MISHAP REPORT (MOR)</b>		<b>Part - 1</b>
Name:	Date of Mishap:	
Rate/Rank:	Mishap Category:	
Duty/Position:	Mishap Number:	
<i>USE ADDITIONAL SHEETS OF (PART -1) IF NECESSARY</i>		Page ____ of ____

<b>MEDICAL OFFICER'S MISHAP REPORT (MOR)</b>		<b>Part - 2</b>
Name:	Date of Mishap:	
Rate/Rank:	Mishap Category:	
Duty/Position:	Mishap Number:	
Medical Officer's Name:	Date Report Submitted:	
Rank/Grade:	E-mail Address:	
Phone Number:	Hours Spent on Investigation:	
<b>"THE INFORMATION CONTAINED IN THIS REPORT MAY ONLY BE RELEASED IN ACCORDANCE WITH THE FREEDOM OF INFORMATION AND PRIVACY ACT"</b>		
(Final) Page _____ of _____		

## FIGURE - H

### MEDICAL OFFICERS'S MISHAP REPORT (MOR)

#### INSTRUCTIONS

The Medical Officer should submit this report as part of the mishap investigation whenever any of the following factors apply:

1. Human factor error is suspected as part of the investigation.
2. Personal injuries or other significant medical findings result from the mishap.
3. Egress from an operational aircraft/vessel has occurred, attempted whether successful or not.

The MOR should include all pertinent information and supporting documentation. However, information gathered in the following questionnaires should constitute the basis for the summation, conclusions and recommendations formulated in the MOR.

1. General Information Questionnaire
2. Medical Officer's Injury Questionnaire
3. Human Factors Checklist
4. 72-Hour Pre-Mishap History
5. Escape-Egress Questionnaire
6. Rescue and Survival Questionnaire
7. Utilize Part -1 as initial page of report and for additional pages if needed, provide current page number and total pages of report at the bottom of the form. (example: Page 1 of 5)
8. Part - 2 is to be used for the final page of the MOR, provide total pages in report. (example: Page 5 of 5)

Note: Aforementioned questionnaires are inclusive to Enclosure (3) of the Safety and Environmental Health Manual, COMDTINST M5100.47 (series)