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NAVY SAFETY AND OCCUPATIONAL HEALTH MANUAL, VOLUME I: NAVY SAFETY MANAGEMENT SYSTEM

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CHAPTER 3
ORGANIZATION AND STAFFING

0301. Purpose. This chapter provides guidance on functional organization, staffing and responsibilities. An effective and dynamic command safety organization requires a structure that provides all levels of the command with good lines of communication to the commanding officer for safety matters.

0302. Background. The Navy is viewed and held accountable as an Agency in the eyes of the Occupational Safety and Health Administration (OSHA). As required by regulation, activities associated with safety must be viewed from the Agency perspective. As such, the Navy has organized safety to function as a matrix organization with shared accountability, authority, responsibility, and subject matter expertise. Base Operating Support (BOS) Safety is provided to all commands, units, and activities on Navy installations or are identified as a special area in internet Navy Facilities Asset Data Store (iNFADS). In accordance with reference (ar), The level and quality of support services provided by BOS to receivers will be equivalent to the level and quality of support the supplier furnishes to its own mission. The BOS provider and receiver must agree to the level and quality of support if the level and quality differ from what the supplier furnishes to its own Component's organizations. This Chapter outlines how the accountability, authority, responsibility, and subject matter expertise are shared to fulfill the Agency compliance with OSHA. Figure 1 depicts the matrix relationship and how the Agency complies with OSHA. See online Web site for reference (ar):
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/400019p.pdf?ver=2017-11-30-142815-940

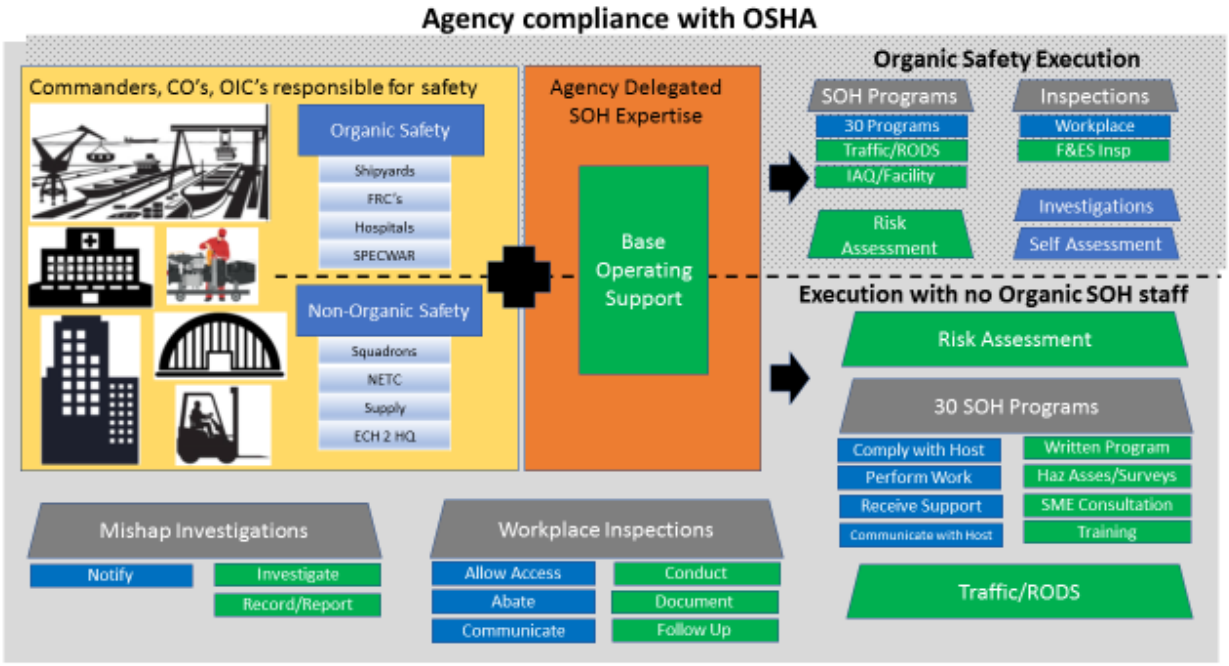

Figure 1

0303. Headquarters Commands Organization Functional Responsibilities, and Staffing Criteria of Safety Organizations. All headquarters commands, must designate a safety professional who will have sufficient authority and responsibility to represent effectively and support the headquarters commander in the management and administration of the safety program for all assigned personnel and subordinate commands. The designated safety professional must report directly to the headquarters commander. Headquarters command must provide adequate resources for the designated safety professional including sufficient staff to perform these task:

a. Guide and assist subordinate commands in establishing, coordinating, directing, and evaluating the effectiveness of safety policies, plans, programs and procedures.

b. Conduct oversight of subordinate commands to ensure effective SOH programs are in place. Evaluate base operating support (BOS) SOH services provided to commands, units, and activities, and determine effectiveness.

c. Serve as the focal point for SOH for the commander consolidating and communicating hazards, risks, and SOH information to the commander for the entire chain of command.

0304. Command, unit and activity Organization and Staffing Criteria.

a. Designation of Safety Personnel

(1) Every command, unit, and activity in the Navy must designate a safety professional or collateral duty safety officer (CDSO) which may be a military member or civilian. The designated safety professional or CDSO must report directly to the Commander, CO or OIC. The CDSO will complete, at a minimum, Introduction to NAVOSH Ashore. The CDSO may perform the same duties and functions as the designated safety officer or safety manager with the exception of any specific elements from reference (o) requiring specific qualification or experience. See online Web site for reference (o): https://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1960

b. Safety Staffing Models

(1) In addition to the designated safety professional or CDSO, each command, unit and activity, must be resourced and staff to fulfill the organization mission as outlined in the approved mission, function and tasks (MFT) containing the elements of who, what, when, where, and why. The approved MFT of the shore command is translated into position-level organizational and staffing requirements provided in the shore activity manpower document (AMD). Unit-level commands, units and activities funded for mission safety have structured safety billets on their AMD. With the MFT's specific to the individual missions, shore staffing varies throughout the Navy Enterprise.

(2) The listed are examples of organizations with organic safety structure to manage and execute a full safety program (not all inclusive):

(a) Fleet commands performing SOH functions in support of ship intermediate and maintenance work and high-risk training.

(b) Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM) subordinate commands are responsible for the global COMNAVFACENGCOM mission such as, military construction design and construction, contractor safety, and environmental cleanup.

(c) Chief, Bureau of Medicine and Surgery (BUMED) subordinate commands have mission critical safety services that are defined as The Joint Commission standards for employee, patient, and visitor safety.

(d) Commander, Naval Air Systems Command subordinate commands perform SOH functions in support of aircraft research, development, test and evaluation (RDT&E), acquisition, and intermediate and depot maintenance.

(e) Commander, Naval Sea Systems Command (COMNAVSEASYSCOM) subordinate commands perform SOH functions in support of ship intermediate and depot maintenance work, RDT&E, and acquisition and contractor oversight (i.e., supervisor of shipbuilding).

(f) Director, Strategic Systems Programs subordinate commands perform SOH functions at Strategic Weapons Facilities.

(g) Commander, Naval Supply Systems Command subordinate commands perform SOH functions at NAVSUP fuel depot locations.

(h) Commander, Naval Special Warfare Command subordinate commands performing SOH functions (operations and training) in support of US Special Operations Command.

(i) Commander, Navy Reserve Forces subordinate commands perform SOH functions in support of reserve aircraft intermediate maintenance operational units (including those with deployable units).

(1.) President Naval Postgraduate School, performing mission critical OSH functions in support of cutting edge research and education in science, physics, and engineering of current and future commissioned officers of the Naval Service and naval warfare systems.

(3) The listed are examples of organizations with safety structure that are used for other safety purposes and rely on BOS for day-to-day or programmatic support (not all inclusive):

(a) Commander, Naval Education Training Command have safety personnel solely dedicated to high risk training.

(b) Headquarters safety personnel performing limited mission safety related operations such as oversight to subordinate commands or managing programs or parts thereof unique to the command.

(4) The majority of commands, units, and activities in the Navy Enterprise do not warrant organic safety staff because safety support and services as outlined in paragraph 0305 are available through the base operating support structure.

NOTE: For the purpose of Figure 1, paragraphs 0305.b(1) and (2) are included in the non-organic safety execution paragraphs.

0305. Execution of Safety. Safety is an inherent responsibility of every Commander, CO, and OIC. As outlined, some aspects of the accountability, authority, responsibility, and subject matter expertise for safety is shared between host, who provides BOS safety services, and tenants. BOS Safety is a functional mission responsibility of CNIC. BOS Safety is defined as host installation safety functions provided as common-service (non-reimbursable) or cross service (reimbursable) support, and the services are normally provided at common output levels (COLS) to receiving tenant activities for the prevention of mishaps and mitigation of risk to the

lowest acceptable level. BOS safety will be provided to all commands, units and activities that are located on Navy installations or are identified as a special area in iNFADS. The only exceptions are those tenant commands, units and activities that submit a waiver request up the administrative chain of command for ultima0305te approval by CNO N09F. The specific services provided are based on the organic safety MFT of the tenant commands, internal self-assessment, and risk assessment completed with the BOS provider. In the event of limited BOS resources, services will be prioritized to allow those commands, units, and activities with the most risk to receive services first. Any services not provided must be communicated up the operational and administrative chains of command starting at the local level and elevating up from there.

a. Commands, units, and activities that have organic safety staff to manage and execute a full safety program like that usually found in Naval shipyards, Fleet Readiness Centers, and Hospitals will receive minimal services from BOS. Specific services include:

(1) Establish, coordinate, manage, and provide resources for an effective overall base wide traffic safety and RODS program.

(2) Assistance with OSHA inspections.

(3) Chair base safety council to share lessons learned, identified deficiencies, and best practices.

(4) Consultation support for indoor environmental quality, facility assessment components (structural, electrical, mechanical, or facility related SOH programs (e.g., fall protection anchorage points, hazard abatement program) or maintenance or sustainment issues owned by CNIC.

b. Commands, units, and activities that do not have organic safety staff (squadrons, supply, etc.) or have staff solely dedicated for other safety purposes (high risk training, echelon 2 staff, etc.) will receive more extensive safety services and program support. In fact, they will be the primary focus of installation BOS safety services and program support. Each BOS provider will strictly adhere to CNIC Headquarter policy and guidance for BOS execution to ensure consistent delivery of safety services across the Navy Enterprise. Deviations must be approved by CNIC Headquarters and CNO N09F.

(1) Specific BOS service authority and responsibility include:

(a) Risk assessment to determine gaps in the safety program requirements and what services are needed as outlined.

(b) Safety Inspections. Trained safety and occupational health inspectors will conduct and document safety inspections of all applicable installation and tenant work centers,

buildings, training facilities, and ranges in accordance with Chapters 5, 9, and 12 of this Manual. Inspections must include a review of applicable safety and occupational health programs, associated operations, and all assigned personnel.

(c) Establish, coordinate, manage, and provide resources for an effective overall base wide traffic safety and RODS program.

(d) Investigation and documentation of all reports of unsafe or unhealthful work conditions, including occupational health hazards identified in an industrial hygiene survey. Maintain a log of identified and potential safety and occupational health hazards, interim abatement actions, and date corrected.

(e) Mishap Investigations. Ensure all on and off duty mishaps and near misses are investigated, recorded and reported by qualified personnel in accordance with reference (m).

(f) SOH Program Support by subject matter experts

1. Written program/template of BOS Safety service provided to tenants.

2. Hazard assessment and surveys as appropriate by SOH program or operations.

3. Subject matter expertise and assistance for program elements such as procedures, training, or fit test.

(g) Personal Protective Equipment (PPE). During safety inspections and risk assessments, document PPE (e.g. head, sight, hearing, respiratory and foot protection) requirements and compliance. Ensure appropriate PPE training and fit testing is conducted, and that PPE is available, used, and maintained.

(h) Support Military Operations and Training. Provide qualified safety professionals for operational training, pre-deployment and deployment operations to ensure safety expertise, guidance, and assistance is available to identify hazards, assess risk, and develop and implement control measures to mitigate hazards.

(i) Safety Promotional Material. Ensure safety offices maintain a comprehensive public information program, which includes posters, booklets, handouts, and other means to promote safety programs and risk aboard the base.

(j) Accompany all external federal and/or state safety and occupational health inspectors on SOH inspections in accordance with Chapter 11 of this Manual.

(k) Collaborate with Injury Compensation Program Administrators (ICPA) to provide an assessment of the work relatedness of reported injuries and illnesses and a professional

opinion on workplace conditions and worker practices appropriate for light duty assignment as required to reduce DoD civilian personnel lost work time due to injury.

(l) Safety Training. Provide required safety training for all personnel on SOH programs covered in this Manual.

(m) Safety Consultation. Upon request, the BOS safety will provide professional support for special events and exercises for all organizations. Ensure the application of risk management principles for new construction, renovation projects, and service contracts.

(n) Conduct and document an annual self-assessment of installation core safety services capability and level of service required and delivered to ensure full implementation. Maintain documented self-assessments for three years for review by higher authorities.

(o) Host installation safety council meetings and invite all tenants.

(2) Specific tenant command, unit, or activity authority and responsibility include:

(a) Where cognizant echelon 2 has not provided specific written guidance, comply with host written programs or subject matter experts (SME).

(b) Commanding Officer or their designated representative attends installation safety council meeting. Members of the respective safety departments or offices will serve as advisors to the council.

(c) Allow access by BOS SME's.

(d) Designate and train program managers as required by this Manual when there are frequent or continuous operations making BOS support not feasible or practical. Where cognizant echelon 2 has not provided specific written guidance, comply with host risk assessment for periodicity.

(e) Request support from BOS provider for SOH issues or program questions.

(f) Abate identified deficiencies when within the authority of the command. Track abatement of deficiencies where command employees are exposed to hazards, regardless of who is responsible for abatement (e.g., NAVFAC repairing/removing damaged asbestos pipe insulation).

(g) Report mishaps to BOS provider.

(h) Ensure documented occupational health and industrial hygiene services are received from the local MTF.

(i) Track completion of safety related services provided and communicate to Headquarters.

0306. BOS Service Risk Assessment. Risk assessment is the primary process used to determine what services are provided to all commands, units, and activities in the Navy Enterprise.

a. Minimum of annually, BOS will conduct a risk assessment of all tenants on CNIC installations that include:

(1) An assessment of commands, units, and activities that have provided identification of organic safety personnel and corresponding MFT responsibilities for these safety personnel.

(2) Identification of SOH programs needed based on specific tenant MFT and operations.

(3) Determine the need for program managers or designated SOH personnel for high risk programs such as Energy Control, Electrical safety, confined space, fall, and respiratory protection.

(4) Listing of what services have been provided in the past and planned services for upcoming year.

b. The risk assessment format is provided by CNIC Headquarters must be used without modification by all BOS service providers.

c. The results of the risk assessment will be provided to the tenant, tenant Immediate Superior in Command (ISIC), and BOS ISIC.

d. Commander Navy Installation will provide a brief to the Safety Quality Council on an annual basis detailing the safety performance of BOS including what services were and were not provided to tenants.

0307. Organization and Staffing of the Safety Function.

a. Staffing Criteria. Commands, units and activities with more than 400 employees will assign, at a minimum, a full time safety manager and adequate clerical support unless support is provided in accordance with paragraph 0305. In the event non-mission commands, units and activities are not receiving BOS safety services, the safety professional staffing matrix must be followed. The real measure of adequate staffing is whether all designated functions are performed effectively and strong mishap prevention programs are implemented. Commands, units and activities must determine the number of professional (non-clerical) personnel needed to perform the primary functions previously listed by these methods:

(1) Use the equation provided, predicated upon the level of risk by major job hazard category and the number of personnel in each category. Most commands, units and activities will have more than one job hazard category. The total number of professional personnel needed to perform minimum functions in the safety organization is the sum of personnel specified for each category. Appendix C explains the job hazard categories. Commands, units and activities must evaluate actual needs based on support available from others and number of supported personnel.

(2) The equation for calculating the number of professionals on the safety staff is:

0.0033 X the first 1200 persons in Category A

\+ 0.0025 X the next 800 persons in Category A

\+ 0.0020 X the remaining persons in Category A

\+ 0.0020 X total number of persons in Category B

\+ 0.0016 X total number of persons in Category C

where 0.0033 = 1/300 (1 professional per 300 workers), 0.0025 = 1/400 (1 professional per 400 workers), 0.0020 = 1/500 (1 professional per 500 workers), and 0.0016= 1/600 (1 professional per 600 workers).

(3) An example of staffing using this equation is:

900 employees in Category A requires 3.0 staff

\+ 500 employees in Category B requires 1.0 staff

\+ 1200 employees in Category C requires 2.0 staff

= Six professional employees required for office plus clerical staff.

(4) The number of employees counted in each category includes all who receive full safety support (tenants and others). The equation does not include partial and part-time support (such as that provided students, reservists and tenants with safety staff). Organizations must account for this separately, based on local workload determinations.

(5) An assistant manager is required for an office with a total staff of ten or more. The staffing calculation in paragraph 0307a(2) includes the safety manager and assistant manager(s).

(6) Base clerical support on workload. At least one full-time base clerical support is required for all safety organizations supporting commands, units, and activities with a population exceeding 600.

e. Position Classification Considerations. The safety organization will have as its head, a fully qualified and trained safety professional supported by a staff of qualified professionals. Reference (p) describes qualification and training requirements for safety professionals. See online Web site for reference (p): http://www.public.navy.mil/navsafecen/Documents/training/cdp.pdf. Chapter 6 outlines the minimum core training required to be a Navy safety professional. Classification guidance is provided as listed:

(1) Safety manager positions range from GS-11 to GS-15; safety assistant managers from GS-11 to GS-14; specialists and technicians from GS-05 to GS-12 (the journeyman level is GS-11); and clerical support from GS-03 to GS-07. It is strongly recommended that every position at the GS-13 or GS-14 level (CDR/05) be filled by a Certified Safety Professional (CSP).

Appropriate military equivalents include Navy Officer Billet Codes include 0862 Industrial Hygiene Officer, 2740 Safety Engineer, 8656 Aviation Safety Officer and 8995 Staff Aviation Safety Officer.

Navy Enlisted Classifications (NECs) include 825A, SW-B22A, and 8301, from E-4 to E-9. Military equivalents must have acquired additional professional training appropriate to their assignment.

(2) Classification series that apply to Safety and Occupational Health Managers, Assistants, and Specialists include:

0018 Safety and Occupational Health Management
0081 Fire Protection and Prevention
0690 Industrial Hygiene
0803 Safety Engineering
0804 Fire Protection Engineering
Other series which safety is identified in the position description

f. It is strongly recommended that safety and occupational health professionals (i.e., military and civilian) obtain licensure, registration, or certification, as appropriate, in their respective disciplines. This list is not all inclusive – Associate Safety Professional (ASP®), Certified Safety Professional (CSP®), Certified Industrial Hygienist (CIH®), Safety Management Specialist (SMS®), Occupational Health and Safety Technologist (OHST®), Certified Safety & Health Manager (CSHM®), and Certified Hazardous Material Manager (CHMM®), Certified Occupational Health Nurse (COHN®), Certified Health Physicist (CHP®); licensed Professional Engineer (PE); Certified Audiologist (Certification of Clinical Competence in Audiology); Certified Professional Ergonomist (CPE®); and Occupational Hygiene and Safety Technician (OHST®).

0308. Organization and Staffing of the Occupational Health Function. Professional disciplines properly supervised are integral to the proper establishment of a comprehensive safety and occupational health program. The program disciplines of industrial hygiene, occupational medicine, occupational health nursing, and occupational audiology of those medical activities are responsible for providing complete occupational health support to all commands within their assigned area of responsibility. Successful occupational health programs require professional supervision and oversight by qualified occupational health professionals. The primary sources of support services are hospitals and medical clinics. The occupational health/industrial hygiene components of those medical activities are responsible for providing complete occupational health support to all commands, units and activities within their assigned area of responsibility (see chapter 8 for further details).

a. BUMED activities will ensure centralized technical management of industrial hygiene, occupational medicine, occupational health nursing, and occupational audiology services under their command, preferably within a Directorate of Public Health, and technical management must be performed by qualified occupational health professionals.

b. Functions. Refer to chapter 8.

c. Occupational Health Staffing Guides and Industrial Hygiene Laboratory Support Policy. Factors influencing the guidance provided are: previously published guides for similar programs, the anticipated demand for physician services when applicable DoD instructions are fully implemented, and a review of physician-to-population ratios at regional medical commands. The guidance provides a staffing level that allows implementation of all medical components of the program at a high level of quality consistent with progressive management of the Navy's industrial and fleet support programs. It conforms to the Federal Personnel Manual guidelines for physician staffing in the low-risk category and provides additional staffing for the high-risk category.

(1) Occupational Medicine Staffing Guide. The occupational medicine staffing guide applies to two specific professional categories: occupational health physicians and occupational health nurses. Disciplines contributing to occupational health programs, such as surgical and medical specialties, radiology, audiology, optometry, laboratory and technical or administrative support are not included. Minimal staffing of an OH clinic should include one occupational health technician and one administrative support personnel for each occupational health nurse. Expressed in mathematical notation, the staffing guide for occupational medicine is as listed:

MD = 0.0005A + 0.00033B + 0.00025C + 0.000125D + 0.000125E +0.000125F

Where:

MD = required number of full-time physicians

A = population in risk category "A"B = population in risk category "B"

C = population in risk category "C"

D = population in risk category "D"

E = population in risk category "E"

F = population in risk category "F"

Note: Appendix C describes population categories A through F with examples.

(a) The coefficients in the staffing formula represent the number of staff required to support one employee (e.g., 0.0005 physicians for one shipyard employee). The reciprocal of this coefficient expresses the number of employees supported by one physician or nurse (e.g., one physician for 2,000 shipyard employees).

(b) The staffing guide provides one physician for every 2,000 employees in category A, plus one for every 3,000 employees in category B, and one for every 4000 employees in category C, and one for every 8000 employees from other commands, units and activities." The guide provides half as many physicians for mobile populations as provided for the low risk category.

(c) A number of factors influence the required staffing, including local injury and illness rates, past accomplishments of the occupational health program and proximity to definitive care facilities. Local variation from the expected typical situation is likely. Where significant variation exists, make an appropriate adjustment, either up or down, to the staffing level calculated by the guide. Clinics must have sufficient staffing to meet applicable access to care standards, i.e., 28 days or less or periodic medical qualification or medical surveillance exams, and seven days or less for pre-placement or formal fitness for duty exams. Also, if population risk category data is unavailable, clinics can use access to care data to support staffing requirements.

(d) If the total population in categories A, B, C, D, E and F supported by a medical treatment facility is less than 6,000, then activities must base physician staffing on achieving minimum required capability and enhancing efficiency using a combination of physicians and occupational health nurses. In larger medical treatment facilities, where the calculation indicates the need for three or more physicians, commands, units and activities must substitute medical providers (physician's assistant or nurse practitioner) at the rate of four alternates for three physicians (recognizing that when these substitutions are made, some additional physician time is needed for supervision).

(e) When the population served is geographically distributed in groups smaller than 6,000 employees or where the occupational health staff of the commands, units and activities is dispersed among numerous small medical treatment facilities, commands, units and activities must use the guide to indicate fractions of full-time equivalents. Medical treatment facilities serving 400 or more employees should have a full-time nurse, and those serving 2,000 or more employees should

have a full-time physician. Rounding the staffing calculation at the medical treatment facility level rather than at a superior medical command level may yield a larger staffing requirement. The need for a specialized capability at remote locations justifies the additional requirement, even if met on a standby basis. This guide defines a remote location as one requiring more than 30 minutes of travel time from the nearest regional medical treatment facility during peak traffic load.

(f) Each medical treatment facility should have access to at least one physician with recognized credentials in occupational medicine, such as board certification in Occupational and Environmental Medicine by the American Board of Preventative Medicine (ABPM). However, the complement of physicians in an occupational health clinic may include family practice physicians, internal medicine physicians and general medical officers. Appendix 2-C provides a recommended grade level structure for direct support occupational medicine physicians at the line organizational level.

(2) Occupational Health Nurse Staffing Guide. Determine staffing for occupational health nursing staff by the listed formula:

OHN = 0.0006A + 0.0004B + 0.0003C + 0.00015D + 0.00015E + 0.00015F

Where:

OHN = required number of occupational health nurses

A = population in risk category "A"

B = population in risk category "B"

C = population in risk category "C"

D = population in risk category "D"

E = population in risk category "E"

F = population in risk category "F"

(3) Industrial Hygiene Staffing Guide. The cognizant medical command must be based on the total military and civilian personnel supported. Industrial Hygiene Department staffing (i.e., IHs, IHOs, IHTs, and Admin support) for BUMED organizations that directly support line activities will be based on reference (q) and BUMED approved updates. See online Web site for reference (q): http://www.med.navy.mil/directives/ExternalDirectives/5100.13F.pdf

(a) Most commands, units and activities will require at least one individual with skills

and experience expected at the GS-12 level (LCDR/04). Commands, units and activities that support activities with a wide range of industrial settings, including major industrial facilities or highly complex research and development environments, will require technical positions at the GS-13 level. Supervisory positions at the GS-13 or GS-14 level (CDR/05) are appropriate, depending on the size and complexity of the commands, units and activities programs. It is strongly recommended that all positions at the GS-13 or GS-14 (CDR/O5) level be filled by a Certified Industrial Hygienist (CIH).

(b) Although reference (q) predicts staffing requirements for BUMED activities:

1. Additional staff should be added to support remote facilities where the travel requirement exceeds 5 percent of total staff time.

2. Additional staff may be justified to place full-time industrial hygienists in remote facilities where the calculated requirement exceeds 0.5 people but is less than 1.0 person. The added increment would greatly enhance the program's effectiveness by reducing unproductive travel and enabling much quicker response time for evaluating intermittent operations, investigating employee complaints and conducting special surveys to monitor unusual or exceptional hazards.

3. Additional staff likely will be required to provide engineering design review and to develop operating procedures for major facility expansion efforts. Additional staff may also be required to support the Facilities Engineering Commands (FECs) in facilities acquisition and review of construction plans and specifications for the elimination or engineering control of health hazards in accordance with Chapter 12 of this Manual.

4. Additional staff as approved by BUMED may be required to provide Industrial Hygiene support to high hazard production facilities, major industrial facilities, highly complex research and development environments, or unique environments such as overseas or remote locations, as determined by workload analysis and assessment of current and historical IH staffing levels.

5. Additional IH staff as approved by BUMED may be required to support the implementation and sustainment of Defense Occupational and Environmental Health Readiness System – Industrial Hygiene (DOEHRS-IH).

(4) Industrial Hygiene Laboratory Support. The BUMED-owned Comprehensive Industrial Hygiene Laboratories operated by the Navy and Marine Corps Public Health Center (NMCPHC) must be the primary source of industrial hygiene chemical laboratory support for Navy and Marine Corps occupational health program offices.

(a) Recommendations made by Navy industrial hygienists, based on laboratory analysis of collected air samples, affect the health of employees. Laboratory results are used in the determination of appropriate respiratory protection for any given job or operation, the design or modification of equipment and engineering controls and to document worker exposure. Biological

samples, such as blood and urine collected by clinical personnel and analyzed by the laboratories, serve to evaluate the uptake of such toxic substances as lead and mercury.

(b) Analytical methods must conform to those validated by the Occupational Safety and Health Administration (OSHA) Laboratory or the National Institute for Occupational Safety and Health (NIOSH). The laboratory must also be capable of preparing non-routine sample media and performing any other related chemical or instrumental work in support of the industrial hygienist.

(5) Industrial Hygiene Laboratory Resource Guide.

(a) Navy Industrial Hygiene Laboratory Support Policy. Considering the Navy's projected needs for industrial hygiene laboratory support and the recommendations of occupational health program managers, the Navy must maintain two comprehensive laboratories, each to serve a specific geographical area. Each comprehensive industrial hygiene laboratory (CIHL) must maintain accreditation by COLA, Clinical Laboratory Improvement Program (CLIP), and American Industrial Hygiene Association (AIHA), as appropriate, and participate in all applicable round robin testing programs.

(b) Commands, units and activities must staff laboratories to meet the expected sample analysis requirements of Navy industrial hygienists and occupational health clinics, based on extrapolation of the trend in requested determinations performed by each laboratory. Each laboratory must also have one clerical billet to handle sample receipt, logging and administrative correspondence.

(c) Commands, units and activities that analyze environmental samples (such as indoor environmental quality or air toxins) may justify their staffing for these analyses based on evaluation of commercial prices for similar analyses.

(d) BUMED has CIHLs at these listed activities:

1. Navy Environmental and Preventive Medicine Unit Two, Norfolk, VA.

2. Navy Environmental and Preventive Medicine Unit Five, San Diego, CA.

(e) Medical activities having an industrial hygienist on staff must maintain or establish minimum laboratory capabilities for local usage or utilize the CIHLs for:

1. Asbestos identification using polarized light microscopy (PLM) and quantification using phase contrast microscopy (PCM). This capability is provided by the CIHLs and will be the primary lab for industrial hygiene sample analysis including asbestos sample analysis. Where analysis by the CIHL is not feasible, asbestos sample analysis may be secured through in-house capability, appropriately accredited contract or outside commercial laboratory, or Memorandum of Understanding (MOU).

2. Commands, units, and activities with an in-house asbestos laboratory performing fiber counting must enroll it in the proficiency analytical testing (PAT) program operated by the American Industrial Hygiene Association (AIHA). Each in-house laboratory performing asbestos bulk identification must participate in the Asbestos Bulk Identification Proficiency Testing Program operated by the AIHA. In-house laboratories may only perform asbestos analyses when they have achieved proficient ratings in each of the testing program. Local laboratories performing other analyses (e.g., mold) must enroll in and successfully maintain the appropriate accreditation program for that specialty.

3. Asbestos bulk and air sample analysis by BUMED IH department are not intended to support asbestos building management inventories, routine facility related projects or project planning. The CIHLs do not accept samples from contractors, or samples used for contracts.

4. Calibration equipment necessary to calibrate industrial hygiene sampling equipment.

(f) BUMED, through the NMCPHC, must ensure appropriate audit control and overall centralized management of the CIHLs.

(6) Emergency Industrial Hygiene Laboratory Support. Some samples will require rapid analysis because of the hazardous toxicants involved and potentially costly work stoppages. In such situations, commands, units and activities may use local commercial testing laboratories if:

(a) Such laboratories are accredited by AIHA and have a proficient rating through the PAT Program for the particular analyses of interest, (i.e., metals, organic solvents, free silica or asbestos).

(7) Occupational Audiology Staffing Guide. Proper executing and implantation of the Hearing Conservation Program (HCP) requires a mix of certified audiology technicians, senior hearing conservation systems analysts, Occupational Audiologists (OA) and medical administrative staff. The Occupational Audiology Staffing Model (OASM) developed by BUMED M14 will be used as guidance in determining appropriate HCP staffing levels. Each echelon 4 medical command requires a Hearing Conservation Program Manager (HCPM) be designated. OAs are HCP subject matter experts and are best suited to serve as the HCPM. Circumstances such as program size and geography may require more than one OA, HCPM or Assistance HCPMs to be designated.

CHAPTER 4
COUNCILS AND COMMITTEES

0401. Discussion.

a. Safety and occupational health (SOH) councils and committees at various organizational levels provide opportunities for groups and individuals to express multiple viewpoints and interests. Their purpose is to identify, define and assess issues, problems and needs, and to recommend corrective measures. New or revised policies, procedures and practices may develop from these recommendations to improve the effectiveness of the Navy SOH program.

b. Commands, units and activities will establish and maintain safety councils and committees that meet the requirements of references (a), (r) through (u), and 0404 of this chapter. See online Web sites for references (a), (r) through (u):
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605501p.pdf
http://www.archives.gov/federal-register/codification/executive-order/12196.html
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.12J.pdf
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-200%20Management%20Program%20and%20Techniques%20Services/5211.5E.pdf
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=11285

0402. Navy Executive Safety Board (NESB).

a. The Chief of Naval Operations (CNO) established the NESB as a collaborative and interactive decision-making forum of the Navy's senior leaders. The NESB provides oversight of the Navy's SOH programs and considers and approves initiatives and policies to improve SOH programs, prevent loss of life, reduce mishaps, injuries and enhance Navy readiness. The NESB will:

(1) Act as recorder for the executive safety board meeting.

(2) Provide broad oversight of the Navy's mishap reduction efforts.

(3) Identify shortfalls and evaluate the effectiveness of existing SOH programs and approve and direct improvements in programs and policies.

(4) Approve and direct implementation of new initiatives.

(5) Reconcile resourcing issues for existing and emerging SOH programs and initiatives.

(6) Ensure effective, Navy-wide communication of important SOH information.

b. Chaired by the Vice Chief of Naval Operations (VCNO), the NESB will be composed of senior Navy leaders (Flag/SES) from echelon 2 and 3 organizations.

0403. Safety Quality Council.

a. The NESB chartered the Safety Quality Council (SQC) to serve as the Action Officer level forum under the direction of the flag level NESB and NESB Steering Group (NESB SG). The SQC provides a forum to evaluate the effectiveness and viability of existing Navy SOH policies and programs, evaluate safety best practices, and to review and analyze the Navy's unit self-assessment data. All of these actions are taken for the purposes of identifying trends and actionable information and make recommendations for Navy SOH policy and program improvement.

b. The SQC is comprised of core members from commands represented on the NESB and chairs of all NESB Working Groups. SQC membership includes Action Officer representatives from: U.S. Fleet Forces Command, U.S. Pacific Fleet, Naval Sea Systems Command, Naval Air System Commands, Navy Installations Command, Naval Facilities Engineering Command, Naval Safety Center, Naval Education Training Command, Naval Special Warfare Command, Space and Naval Warfare Systems Command, Naval Reserve Forces, Bureau of Medicine and Surgery, Strategic Systems Programs, History and Heritage Command, Operation Test and Evaluation Force OPTEVFOR, Naval Supply, Commander Naval Personnel, Fleet Cyber Command and the Chair of each SQC Working Group. Various commands, units and activities will be called to serve as advisors on the Council as needed.

c. The SQC will convene at least semiannually. The SQC will:

(1) Annually, review safety data, conduct analysis, identify trends, and gather facts from Navy commands, units, and activities annual unit safety self-assessment data that have been consolidated and rolled up by the echelon 2 commands. Prepare a summary report to the NESB highlighting the key trends and issue results from the analysis of Navy unit self-assessment data.

(2) Evaluate the effectiveness and viability of existing Navy safety and occupational health policies and programs. Propose changes to policies and programs that have the potential to reduce mishaps and injuries.

(3) Evaluate safety best practices for the purpose of determining improvements to Navy safety policies and programs.

(4) Perform additional tasks assigned by the NESB and provide status reports as needed.

(5) Establish and support working groups such as fall protection, ergonomics system safety advisory board and National Transportation Safety Board (NTSB).

(6) Provide oversight of Mishap Prevention and Hazard Abatement (MPHA) fund execution and facilitate approval of projects by members.

0404. Councils and Committees.

a. Depending upon size, organization and mission, if considered necessary or desirable, the Budget Submitting Office (BSO) (headquarters level) may establish councils composed of both military members and civilian employees.

b. Safety councils will be established on all ships and submarines and at all Navy commands, units and activities that provide their own safety support. Commands, units and activities receiving Base Operating Support (BOS) Safety services are not required to establish their own formal safety councils, but may supply command representation to the host command safety council.

Note: The requirement for a safety council can be met by any formally established commands, units and activities board or council that addresses safety issues, even if it also addresses other issues, as long as such boards/councils meet the basic intent and criteria of this chapter and have similar attendance. For commands, units and activities that participate in OSHA's Voluntary Protection Program (VPP), the VPP Steering Committees may serve as the Safety Council.

Note: Commands, units and activities that are primarily administrative in nature, or have fewer than 100 employees, are not required to establish formal safety councils. However, heads of such commands, units and activities will ensure an open line of communication exists for all employees on safety matters, and use captain's calls, handouts, local newsletters, and other methods, as appropriate, for communication.

c. Squadrons, air stations, and other large aviation commands, units, and activities will form an Aviation Safety Council.

d. Safety Councils are chaired by the Commanding Officer or the Executive Officer, and facilitated by the appropriate SOH Manager.

e. Functions. Councils may perform the listed functions as determined by authority that establishes the council:

(1) Coordinate mutually beneficial mishap prevention and safety programs with local communities (e.g., locally assigned tenant commands, units and activities).

(2) Review mishaps and near-miss incidents, recommend improvements to the safety program, and/or identify corrective measures needed to eliminate or control recognized hazards.

(3) Identify resources to educate personnel in safety techniques, concepts and principles to maintain a healthful work environment and conduct operations (on and off duty, occupational and operational support) in a safe and healthful manner.

(4) Identify and assess risks to people, facilities and equipment and communicate findings and recommendations to responsible authorities of DoD operations.

(5) Identify and assess mishap causal factors and potentially unsafe practices or conditions, and recommend corrective actions to prevent mishap recurrence and reduce exposures to hazardous conditions.

(6) Update/implement commands, units and activities mishap prevention plan and safety initiatives.

(7) Update/implement commands, units and activities safety awareness programs with current, relevant, and user-friendly information developed and used to promote installation safety. Safety awareness programs include, but are not limited to, safety awards, safety initiatives, outreach programs, promotions, and marketing activities.

(8) Verify status of BOS Safety service delivery and determine way ahead to address tenant safety program needs and self-assessment gaps in command safety program.

(9) Establish mishap prevention goals and plans.

(10) Review command plans, policies, procedures, conditions and instructions to ensure their currency, correctness and responsiveness to safety recommendations.

(11) Review issues and recommendations identified by annual self-assessments or submitted by subordinate committee(s).

(12) Periodically review open issues from previous meetings/reviews.

(13) Review compliance with operational risk management (ORM) implementation in all applicable operations and evolutions.

f. Membership

(1) Host commands, units and activities safety council core membership is comprised of the installation host and tenant organizations represented by department heads from command and staff, air operations, port operations, public safety, environment, facility support, fleet and

family readiness; and locally assigned tenant command representatives. Commands, units and activities that do not have a safety staff and receive safety services from a BOS safety service provider may be asked to participate in the host command safety council meetings. Commands, units and activities that do not participate in the safety council must be provided minutes of the meetings as necessary.

(2) COs must designate, either by council charter or by title or position in a local instruction. Membership must include military and civilian personnel, when possible, as well as safety and health professionals. Civilian personnel must be represented on the council by union representatives if local labor-management agreements contain provisions concerning employee representation.

g. Meeting Frequency: commands, units and activities safety councils will meet at least quarterly. All other councils will meet at least twice a year and more often as situations dictate

h. Agenda: The council develops agendas and action items based on the nature of the commands, units or activities scope of operations and its hazard and mishap experience. Subject matter discussed by the council will include goals, program improvement plans, mishap prevention experience, requirements and initiatives, compliance issues and hazard abatement. The safety office will develop proposed agendas and presentations for the council and ensure meetings are scheduled on behalf of the Chairperson.

i. Minutes: Minutes of each meeting will be recorded (electronic or hard copy) and retained by the safety officer, with proof that the chair has reviewed and approved the minutes (initials, signature, or electronic record).

j. Traffic and motorcycle safety council will also be established in accordance with reference (s). This can be combined with other existing councils/committees.

k. Committees. Commands, units and activities with industrial or other hazardous operations are encouraged to organize additional committees at the supervisory and/or shop level. When such sub-level committees are formed, provisions will be made for their communication with the primary safety council.

0405. Field Federal Safety and Health Councils.

a. Field Federal Safety and Health Councils (FFSHCs) are cooperative interagency organizations chartered by the Secretary of Labor to facilitate the exchange of ideas and information about Occupational Safety and Health (OSH) in the federal government. The FFSHCs are designed to be dynamic forums for sharing knowledge, ideas, expertise, technology, and other OSH resources among participating agencies with the goal of reducing the incidence, severity, and cost of injuries and illnesses at federal facilities. These councils consist of representatives of local area federal agencies.

b. Commands, units and activities will support Field Federal Safety and Health Councils and coordinate mutually beneficial mishap prevention and safety programs with local communities to the maximum extent feasible under reference (t) and other applicable laws and regulations. See online Web site for reference (t). https://www.osha.gov/dep/ffshc/index.html

CHAPTER 5
HAZARD IDENTIFICATION

0501. Discussion. The Navy is viewed and held accountable as an Agency in the eyes of the Occupational Safety and Health Administration (OSHA). As required by regulation, activities associated with safety must be viewed from the Agency perspective. Specifically, the term Agency is all-inclusive of Navy personnel (Civ, Mil, FN) and their workspaces regardless of the assigned command. Similarly, buildings are viewed as "systems," which refers to facility infrastructure, affixed equipment and machines, internal operations, and resident employees and their work processes. To ensure Agency compliance and system integrity. The Navy uses a variety of planned and non-routine methods to accomplish hazard identification by trained and qualified specialists to meet the requirements of reference (a) and (o). See online Web site for reference (a) and (o):
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605501p.pdf
https://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1960.

As outlined in Chapter 3 of this Manual, accountability, authority, responsibility, and subject matter expertise is shared between host and tenant commands. For the purpose of Navy Enterprise workplace inspections, they will either be conducted by BOS or organic safety organization provided it is an essential duty covered in the MFT as outlined in paragraph 0305.a of this Manual.

0502. Hazard Identification Personnel. Navy safety professionals, who are Safety and health inspectors and specialists as defined by 29 CFR 1960, will receive training as outlined, in Chapter 6 of this Manual and qualifications as determined by CNO N09F or cognizant echelon 2. The listed civil service series conduct and oversee hazard identification activities: Safety and Occupational Health Manager/Specialist GS-018, Safety Engineer GS-803, Fire prevention Engineer GS-804, Industrial Hygienist GS-690, Fire protection and Prevention Specialist/Marshal GS-081, and Safety Technician GS-019. They are supported by military members and other civilian personnel that receive commensurate or task specific training.

0503. Hazard Identification Process. All management and supervisory personnel, trained and qualified safety and health inspectors, safety and health specialists, and other personnel supporting safety and occupational health (SOH) programs such as collateral duty safety officers must conduct hazard identification in an ongoing and proactive manner. This will be accomplished by inspections and non-routine activities. The focus is on hazards to any Agency personnel (military members, civilians, and foreign nationals), those in the vicinity of the workplace who can be affected by the activities of the organization, workers at a location not under the direct control of the organization, and potential emergency situations. It is the expectation that no hazard is left unaddressed once identified. When a hazard that could reasonably be expected to cause death or serious physical harm, it must be controlled immediately, usually through interim controls, and permanent abatement initiated as soon as

possible. Abatement must be accomplished by the responsible organization and it may be necessary to withdraw employees who are not necessary for abatement of the dangerous conditions. The hazard identification process is required to cover these principles:

a. How work is organized, social factors (including workload, work hours, etc.), leadership and the culture in the organization;

b. Routine and non-routine activities and situations, including hazards arising from:

(1) Infrastructure, equipment, materials, substances and the physical conditions of the workplace;

(2) Product and service design, research, development, testing, production, assembly, construction, service delivery, maintenance and disposal;

(3) Human factors;

(4) How the work is performed;

c. Past relevant incidents, internal or external to the organization, including emergencies, and their causes;

d. Involvement and engagement of employee representatives as outlined in 29 CFR 1960.

e. Other inspections including OSHA, SMS certification, Fire, Facilities, Explosives, and Environmental.

f. Other issues, including consideration of:

(1) Design of work areas, processes, installations, machinery/equipment, operating procedures and work organization, including their adaptation to the needs and capabilities of the workers involved;

(2) Situations occurring in the vicinity of the workplace caused by work-related activities under the control of the organization;

(3) Situations not controlled by the organization and occurring in the vicinity of the workplace that can cause injury and ill health to person’s in the workplace;

g. Actual or proposed changes in organization, operations, processes, activities and the SOH management system;

h. Changes in knowledge of, and information about, hazards.

i. Regardless of how identified (Fire, Facilities, Environmental, Industrial Hygiene, Zone Inspections, reports of unsafe unhealthful conditions, etc.), all hazards must be documented tracked to completion with interim controls put in place as applicable meeting the minimum element. The documentation will occur in ESAMS or other CNO N09F approved system until release of the Risk Management Information (RMI) Safety Program Management (SPM) module.

(1) Such notices of hazards will be issued not later than 15 days after completion of the inspection for safety violations or not later than 30 days for health violations.

(2) Notices must be in writing and will describe in detail the nature and degree of seriousness of the unsafe or unhealthful working condition, including a reference to the standard or other requirement involved; the notice will fix a reasonable time for the abatement of the unsafe or unhealthful working condition with;

(3) A copy of the notice must be sent to the official in charge of the workplace, the employee representative who participated in the closing conference, and/or the safety and health committee of the workplace, if any.

(4) The official in charge of a workplace must immediately post notice of all unsafe or unhealthy working condition as require by Title 29 CFR 1960.26(c)(2).

(5) Each notice of an unsafe or unhealthful working condition, or a copy thereof, will remain posted until the unsafe or unhealthful working condition has been abated or for 3 working days whichever is later. A copy of the notice will be filed and maintained for a period of five years after abatement at the establishment and made available to the Secretary of Labor upon request.

(6) Long term facility related SOH issues that are controlled by interim controls that are suitable or feasible until modernization must be entered into the internet Navy Facilities Asset Data Store (iNFADS) by the organization holding the maintenance UIC for the facility.

j. Conduct hazard abatement in accordance with the requirements listed in Chapter 12 of this Manual.

k. Safety councils and committees will evaluate identified hazards, interim controls, as well as assist with prioritization of abatement and communication of risks.

l. Sufficient unannounced inspections and unannounced follow-up inspections should be conducted by the agency to ensure the identification and abatement of hazardous conditions.

m. A qualified safety and health inspector will verify the hazard has been sufficiently abated prior to closure of the deficiency.

0504. Key Concepts. Paragraphs (a) through (h) are provided as clarification and amplifying guidance to help understand the scope, facilitate coordination and prevent duplication of work.

a. Workplace Inspection Scope – Workplace inspections will encompass the entire building and all Agency and affected personnel workplaces. Therefore, any area where an Agency employee may access or conduct work will be inspected including but not limited to mechanical rooms, roofs, locked areas, etc. This inspection is specifically intended to identify all safety and occupational health related hazards including but not limited to Safety, Fire, Industrial Hygiene, and Facilities related areas. As such inspection results from other safety and health inspection entities (e.g., fire prevention, facilities management specialists, environmental, or zone inspection team participants) may be used to support or even satisfy the Agency workplace inspection requirements in reference (o), provided they are trained and qualified to recognize the hazards to Agency personnel in those areas and assess from the holistic standpoint. There is no representative sampling of workplaces authorized. Each workplace must be thoroughly inspected.

b. Workplace Inspection Frequency - All areas and operations of each workplace, including office operations, will be inspected at least annually. More frequent inspections will be conducted in all workplaces where there is an increased risk of accident, injury, or illness due to the nature of the work performed.

c. Qualifications for personnel to conduct workplace inspections:

(1) Safety and health Inspector - Safety and Occupational Health Manager/Specialist GS-018, Safety Engineer GS-803, and Safety Technician GS-019 that has completed Introduction to Navy Occupational Safety and Health (Ashore), A-493-0050 or A-493-0550, General Industry Safety Standards, A-493-0061, Electrical Safety Standards, A-493-0033, NAVOSH Assessment Tools and Strategies, A-493-0089 or A-493-0889, Introduction to Industrial Hygiene for Safety Professionals, A-493-0035 or A-493-0335, and OSHA online course #6008 Intro to OSHA for Other Federal Agencies as well as any specific training needed to assess unique hazards of workplace (e.g., machine guarding, scaffolding, laser, etc.).

(2) Fire prevention Engineer GS-804 or Fire protection and Prevention Specialist/Marshal GS-081, or Industrial Hygienist GS-690 that have completed the training listed in 0502f(1) as well as PQS that includes sign off by qualified safety and health inspector if they will be performing holistic workplace inspections. If these personnel are only performing workplace inspections of areas that only contain hazards associated with their specialty/expertise, for which they are trained and qualified, no additional training is required.

(3) The requirements listed in 0502f(1) may be waived in writing for lower hazard locations as approved by the installation and operational chain of command. At a minimum, training must be sufficient to recognize the hazards associated with the workplace and recommend adequate abatement. A qualified safety and health inspector must conduct a baseline workplace inspection for any location where waivers will be used for the minimum training requirements.

d. Hazards, deficiencies, and risks identified by host and tenant personnel will be brought to the installation safety council to allow the Installation Commanding Officer a holistic view of hazards and risks across the installation. The Council will track deficiencies and hazards as well as assist or provide coordination to facilitate abatement. In addition, they will help ensure that all workplace inspections are accomplished in accordance with requirements from all commands on each CNIC installation and identified hazards are tracked through abatement to include ensuring interim controls and mitigations are appropriate. Overall safety performance will be reported up the CNIC and operational chains of command and discussed regularly installation level councils with ultimate visibility at the Safety Quality Council.

e. Figure 1 depicts the process flow for workplace inspections.

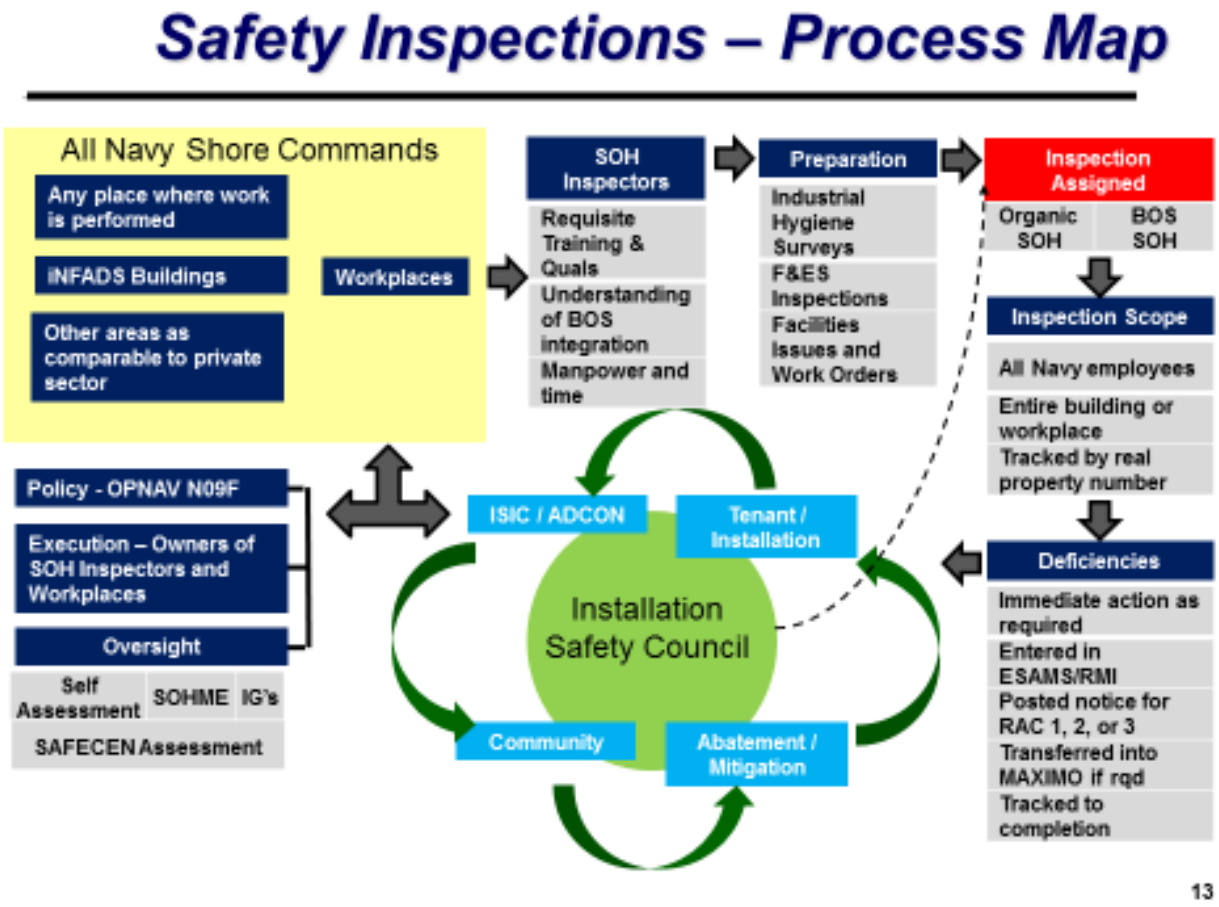
Safety Inspections – Process Map
All Navy Shore Commands
Any place where work is performed
iNFADS Buildings
Workplaces
Other areas as comparable to private sector
SOH Inspectors
Requisite Training & Quals
Understanding of BOS integration
Manpower and time
Preparation
Industrial Hygiene Surveys
F&ES Inspections
Facilities Issues and Work Orders
Inspection Assigned
Organic SOH
BOS SOH
Inspection Scope
All Navy employees
Entire building or workplace
Tracked by real property number
Deficiencies
Immediate action as required
Entered in ESAMS/RMI
Posted notice for RAC 1, 2, or 3
Transferred into MAXIMO if rqd
Tracked to completion
Policy - OPNAV N09F
Execution – Owners of SOH Inspectors and Workplaces
Oversight
Self Assessment
SOHME
IG's
SAFECEN Assessment
ISIC / ADCON
Tenant / Installation
Installation Safety Council
Community
Abatement / Mitigation
13

Figure 1

CHAPTER 6
TRAINING

0601. Discussion. This chapter establishes Navy implementing policy for safety and occupational health training. It identifies required training for specific billets as well as lists Navy safety and occupational health formal training courses. This chapter is applicable to all other chapters in this manual with regards to courses or other methods to provide training for the identified requirements. Not all courses required to fulfill all responsibilities and duties by SOH professionals are contained in this chapter.

0602. Requirements.

a. The Navy's safety and occupational health training requirements are established to implement efficient and effective training that provides the right training to the right people at the right time as required in support of Navy's mission. The Navy SOH Training Plan (SOHTP) supports the ability of U.S. naval forces to effectively operate worldwide in a safe and healthful environment with awareness of risks and hazard abatement, both ashore and afloat. The SOHTP identifies Navy safety and occupational health training needs, authorizes courses, and provides resources to develop safety and occupational health training courses.

b. SOHTP requirements are documented in the SOH Navy Training System Plan (NTSP), reference (l). The NTSP describes the roles and responsibilities in the development, execution, and management of the SOHTP and lists formal courses, electronic learning (eLearning), and other training vehicles authorized within the SOHTP. Between revisions of the NTSP, the Office of the Chief of Naval Operations, Special Assistant for Safety Matters (CNO N90F), in consultation with the SOHTP Working Group, may modify the program by authorizing new, modifying existing, or deactivating existing training. See online link for reference (l): https://intelshare.intelink.gov/sites/navsafe/onoffduty/Navy%20Safety%20and%20Occupational%20Health.pdf

0603. Navy Safety and Occupational Health Training Program Working Group. The SOHTP Working Group manages a process to update and maintain the NTSP as well as identify unmet safety and occupational health training needs, validate the need, and recommend whether SOHTP training should be developed. In addition, the working group must define the safety and occupational training requirements, recommend priorities for dedicated safety and occupational health training courses, assess the effectiveness and efficiency of the safety and occupational health training, and identify and recommend actions to resolve training issues. This committee is chaired by CNO (N09F) and is comprised of representatives from budget submitting offices (BSO), Fleet, SYSCOM's, BUMED, Commandant of the Marine Corps (Safety Division), the Naval Safety and Environmental Training Center (NAVSAFENVTRACEN), and others as invited by the chair. At its discretion, the SOHTP Working Group must appoint working groups to address specific issues.

0604. SOH Training Methodology. Creating and maintaining a well-rounded cadre of safety professionals and collateral duty safety officers is accomplished by a systematic approach to develop competencies and ensure that an appropriate level of proficiency is achieved and maintained by every individual military member and civilian. The Deputy Assistant Secretary of the Navy for Safety established competencies are provided on the NAVSAFECEN Web site under the Community Manager section. The listed requirements outline how to assess proficiency and develop the competencies:

a. Assess Proficiency

(1) Initial training is required for all primary duty and collateral duty safety personnel. The specific courses are outlined in paragraph 0607 through 0609. Initial training requirements may be waived by Safety Community Manager located at CNO N09F/COMNAVSAFECEN for those career SOH professionals that can demonstrate equivalent safety competencies through training, academic education/degree, experience, and professional certifications.

(2) Gap Analysis - A gap analysis must be performed by all civilian SOH professionals with the assistance and approval of their supervisor. The gap analysis will assess all competencies, at the appropriate proficiency level, detailed in documentation provided on the NAVSAFECEN Web site under the Community Manager section. The gap analysis will document illustrations required to demonstrate competency proficiency and any applicable training completed. In the event a sole safety professional works in an organization, the next higher Echelon Safety Director/Manager or Safety Community Manager can assist.

(3) Supervisors of SOH professionals must ensure that personnel filling safety and health positions receive training opportunities that are consistent with the guidelines established by this Manual and the Safety Community Manager. Supervisors are responsible for mentoring employees on individual career development. Managers will ensure that Individual Development Plans (IDPs) or Job Qualification Requirements (JQR) are established and implemented for each professional based on the gap analysis, and initial/organizational training requirements. Reference (v) should be used as a guide in competency development for personnel identified. Each SOH professional is responsible for managing his or her own career and professional development. Personnel will establish an individual development plan to document career goals (short-term objectives and long-term goals) consistent with required job series competencies. The IDP must include a list of competency development processes in order to meet the short- and long-term career goals. Examples are available on the Naval Safety Center Web site. Individuals and supervisors will review and update IDPs and gap analysis on an annual basis, preferably during annual performance evaluations. See online Web site for reference (v):
https://www.public.navy.mil/NAVSAFECEN/navsafenvtracen/Documents/NAVEDTRA-10076B.pdf

b. Develop Competencies. Competency development is achieved through a combination of:

(1) On-the-Job Training (OJT) - OJT must be oriented to providing exposure in all knowledge, skills, and abilities (KSA's). Safety professionals should actively participate in all SOH program functional areas during their developmental period. The goal of OJT assignments is to develop basic abilities and provide sufficient experience to perform effectively and independently at the appropriate level. OJT is situational and dependent upon the requirements and mission of the activity.

(2) Formal Classroom Training - (Self-Study, Distance Learning (DL) Course, Seminars, Classroom, College Courses) Specialized training in order to perform assigned tasks or manage programs. Training requirements for personnel assigned specific program responsibilities. The assigned supervisor working with the Safety Community Manager is responsible for ascertaining sources of approved training (federal and commercial) to meet training needs. The goal of formal classroom training is to provide the trainee with technical knowledge in all primary elements of the safety practice in the Naval environment.

(3) Annual Training & Continuing Education Units (CEUs).

(a) Full time SOH professionals must receive a minimum of seven (7.0) continuing education units (CEU) or equivalent of two weeks of training per year. The annual training must be consistent with the guidelines established by the SOH Career Manager and the individual's IDP.

(b) The International Association for Continuing Education and Training (IACET) defines one CEU as: "one (1) CEU equals ten (10) contact hours of learner interaction with the content of the learning activity." For example, a full 8-hour day of instruction that includes one hour of lunch only provides 7 hours of contact time. Therefore, the training only provides 0.7 CEUs (divide the number of contact hours by 10). A 5-day course (40hr) that includes an hour for lunch each day provides 35 hours of contact time and equals 3.5 CEUs. A typical two-week course is equivalent to 7.0 CEUs. Overall, the SOH professional is responsible for tracking his or her CEUs as the number of CEUs per training program is dependent upon the number of contact hours and lunch breaks provided during the training.

(4) Developmental Assignments - SOH professionals should receive orientations in each major functional element of an activity. Assignments are designed to familiarize the SOH professional with organization and functional requirements. The goal of the orientations is to provide exposure and experience with all elements of activity operations and Navy SOH program administration in order to meet overall KSA requirements and perform professionally at all levels. For small or tenant activities where major SOH programs (i.e. materials handling, crane operations, confined space entry, etc.) may not be applicable, rotating SOH professional should be strongly encouraged to other larger Naval activities providing the SOH professional exposure to a variety of SOH programs and processes at these activities.

(5) Mentorship – A mentor is someone who teaches or gives help and advice to a less experienced person. Mentorship programs convey to employees that management is willing to invest in its personnel, contribute to the development of a better-trained and engaged workforce, develop relationships across commands, educates employees on how to accept feedback in important areas, such as communications, technical abilities, change management, and leadership skills, and improves the employee's interpersonal relationship skills.

(6) Professional certification is a designation earned by an individual identifying that they have demonstrated a standard level of skill, experiences, and expertise within their field. Professional certifications are generally earned from a professional society with a certifying body and are granted based on a combination of education, experience, and knowledge, rather than solely by attending a course and passing an exam. Certification of individuals in their professional specialty is highly desirable and fully supported by the Department of Navy. Commanders and supervisors of SOH professional should encourage professional certification.

(a) The Navy SOH community only recognizes professional certifications accredited through third-party organizations such as the American National Standards Institute (ANSI), Council on Engineering Standards Boards (CESB), or the Institute for Credentialing Excellence (ICE). Examples of professional societies with an accredited certifying body include the Board of Certified Safety Professionals (BCSP), Institute for Safety and Health Management (ISHM), and the American Board of Industrial Hygiene (ABIH). Specific examples of professional certifications include Associate Safety Professional (ASP®), Certified Safety Professional (CSP®), Certified Industrial Hygienist (CIH®), Safety Management Specialist (SMS®)(experience based – no academic degree required), Occupational Hygiene and Safety Technician (OHST®), Certified Safety & Health Manager (CSHM®), and Certified Hazardous Material Manager (CHMM®). NAVSAFENVTRACEN offers CSP®, CIH®, or CHMM®.

(b) For full time SOH professionals, payment of costs associated with obtaining and renewing professional credentials including professional accreditation, state-imposed and professional licenses, and professional certifications, and examinations to obtain such credentials is authorized at the command, unit, or activity level. Given the availability of funding, an activity may pay for professional credentials that are necessary or beneficial for the civilian employee in the performance of official duties. See reference (w) for further details. See online Web site for reference (w): https://doni.documentservices.dla.mil/secnavmanuals.aspx

(c) Military personnel can obtain credentialing support via the Credentialing Opportunities On-line Web site at https://www.cool.navy.mil/index.htm. Military enlisted personnel should also refer to reference (x). Commands, units and activities must support personnel who achieved certification to ensure required certification points are obtained to maintain certification. See online Web site for reference (x): https://www.secnav.navy.mil/doni/Directives/01000%20Military%20Personnel%20Support/01-500%20Military%20Training%20and%20Education%20Services/1540.56B.pdf

(7) Academic Education / Degree. SOH community members are strongly encouraged to seek academic degrees and advanced degrees related to their job series competencies. Commanders and supervisors of SOH professionals should encourage academic education.

0605. Needs Assessment. Each year during the NAVSAFENVTRACEN needs assessment process, Commands, units and activities will submit, via their chain of command, SOH related training needs for the next year based on employee IDPs. In addition, Commands, units and activities will list all safety related training received from other sources to improve internal controls, oversight, and funding throughout the Navy.

0606. Equivalency. There are many different options to fulfill SOH training. Although the NAVSAFENVTRACEN, Norfolk, VA, is the primary source for formal classroom training for Navy safety professionals. CNO N09F/NAVSAFECEN, via the Safety Community Manager, will maintain a list of equivalent courses that are available to all Navy military and civilian personnel. Headquarters Commands can request any course to be added to the list by providing the title, name of vendor, and title of equivalent Navy training. For specialty classes like confined space and fall protection, the cognizant technical warrant holder or lead SYSCOM will determine equivalency in coordination with the Safety Community Manager. Primary options to complete the required training using other than NAVSAFENVTRACEN include:

a. OSHA Technical Institutes (OTI) education centers, National Safety Council, American Society of Safety Professionals, American Industrial Hygiene Association, universities/colleges, commercial safety training companies, various NIOSH Education & Research Centers, which are located throughout the nation. They offer many basic and advanced classes for safety and occupational health as well as CEU's for maintaining professional certifications or refresher training for maintaining competencies and skills.

b. Joint Service Safety and Occupational Health training program is operated by the US Army. Individuals completing this training obtain the CP-12 Professional Certificate which indicates completion of specific combinations of courses (similar to any university certificate program). The CP-12 is training on different subjects and specialties designed to work in conjunction with development assignments and practical application such as that associated with interns. This training is best for personnel in developmental or career ladder positions as well as those new to the profession. Personnel who have completed CP-12 are exempt from all minimum training requirements except Introduction to Navy Occupational Safety and Health (Ashore).

c. Professional certifications are encouraged and signify a certain level of knowledge and proficiency that has been validated by a third party and backed by national accreditation through ANSI. As such, Certified Safety Professionals (CSPs®) are exempt from all minimum requirements as outlined in paragraph 0607 except Introduction to Navy Occupational Safety and Health (Ashore) and Mishap Investigations; Certified Industrial Hygienists (CIHs®) are exempt

from all minimum requirements except Introduction to Navy Occupational Safety and Health (Ashore), and Mishap Investigations

0607. Initial Primary Duty/Safety Professional Training. For all Navy safety professionals, supervisors must prioritize the required initial training as outlined:

a. The first three training courses must be completed within one year or attend the next available course:

(1) Introduction to Navy Occupational Safety and Health (Ashore), A-493-0050 or A-493-0550

(2) General Industry Safety Standards, A-493-0061

(3) Mishap Investigation (Ashore), A-493-0078

b. The listed training courses, which is not an all-inclusive list to develop all safety competencies, should be prioritized by the commands organizational training requirements and incorporated into their gap analysis and IDP:

(1) Electrical Safety Standards, A-493-0033

(2) Introduction to Hazardous Materials (Ashore), A-493-0031 or A-493-0331

(3) Introduction to Industrial Hygiene for Safety Professionals, A-493-0035 or A-493-0335

(4) Navy Ergonomics Program, A-493-0085

(5) Machinery and Machine Guarding Standards, A-493-0073

(6) NAVOSH Assessment Tools and Strategies, A-493-0089 or A-493-0889

(7) OSHA online course #6008 Intro to OSHA for Other Federal Agencies

0608. Collateral Duty Safety Personnel. As a minimum, all collateral duty personnel or personnel that support safety, or conduct safety related functions listed, must complete the initial training as outlined in this paragraph within 1 year of assuming duties. Attempts will be made to take the training prior to assignment.

a. Military and civilian personnel assigned collateral duty responsibilities for safety management must satisfactorily complete Job Qualifications Requirements (JQR) as well as

attend any training provided by the base operating support safety organization as required by their echelon 2.

b. Collateral duty safety officers will also receive training commensurate with the scope of their assigned responsibilities. Such training will include: Navy occupational safety and health program; section 19 of the Act; Executive Order 12196; 29 CFR 1904, 1910, and 1960; Navy procedures for the reporting, evaluation and abatement of hazards; Navy procedures for reporting and investigating allegations of reprisal, the recognition of hazardous conditions and environments; identification and use of occupational safety and health standards, and other appropriate rules and regulations. CDSO's will also receive any initial training as required in other chapters of this Manual for assigned duties such as Intro to Hazmat Ashore, NAVOSH Assessment Tools and Strategies, Ergonomics, Electrical Safety, Machine Guarding, Fall Protection, and Confined Space.

c. Collateral duty safety personnel who investigate mishaps or near mishaps.

(1) Mishap Investigation (Ashore), A-493-0078 or

(2) Aviation Safety Officer Course (CIN S4J-3302), or equivalent

0609. Embedded Safety and Occupational Health Training. In addition to SOHTP, many Navy training courses have safety and occupational content embedded into their curricula. Although the safety and occupational health content may constitute a small portion of these training courses, the accuracy and completeness of the safety and occupational health content must be maintained. NAVSAFENVTRACEN will continually update these courses to ensure the inclusion of current safety and health laws, regulations, E.O.s, and DoD and DON policies. Curriculum Control Authorities (CCA) are responsible for course content and will ensure safety and occupational health content in non-safety and occupational health training courses are appropriate, accurate, and complete. When curricula are under development or revision, CCAs may request participation by a SOHTP PM or their representative as a quality assurance check on the accuracy and completeness of the safety and occupational health content.

0610. Safety Indoctrination Briefing. Commands, units and activities will ensure newly arriving personnel receive a safety indoctrination briefing, generally within 30 days of arrival or before being exposed to any new occupational or local area hazards. At a minimum, this briefing will include:

a. Brief description of the Command's safety organization / policy / POCs

b. Local hazard and mishap reporting procedures

c. Safety rights and responsibilities (employee and supervisors)

d. Common safety references (e.g. OPNAVINST 5100 series, CFRs, etc.)

e. Required safety training (specific to the new individual)

f. Required personal protective equipment (PPE).

g. Local and workplace occupational (hazard communication, life safety, emergency management, noise, etc.) and environmental (water, diving, etc.) hazards.

h. The safety indoctrination briefing is best accomplished as a two-part briefing; one general part addressing those hazards common to all new personnel, and a second, detailed brief for specific hazards found in the individual employee's worksite. Web based training and electronic methods are acceptable.

0611. Specific Safety and Occupational Health Training.

a. All Navy personnel will be provided and must complete SOH related training in those areas needed to safely execute their job duties and tasks. In general, this training will address:

(1) Any PPE required to be used

(2) Safety requirements particular to the operation/task.

(3) Risk mitigation techniques and controls

(4) Lessons / experiences from previous related operations/tasks

(5) Accident / incident reporting procedures

(6) Discussion on all known or perceived hazards associated with the task

(7) In addition, safety training will contain mandatory or directed elements from applicable federal or state standards (e.g. 29 CFR 1960, 29 CFR 1910, 29 CFR 1915, etc.) and consensus body standards (e.g. NFPA, NEC, ANSI, etc.), in addition to any elements the Command deems necessary for safe task and duty accomplishment.

b. Non-Supervisory Personnel

(1) Commands, units and activities must provide training to non-supervisory personnel consistent with reference (y) that includes process specific safety and health training appropriate to the work performed by the employee. This training must include a review of the relevant standards, an analysis of the material and equipment hazards associated with the worksite and standard operating procedures for specific tasks. Commands, units and activities must also

provide instructions on employee rights and responsibilities under relevant statutes, regulations, and the safety program. Electronic training methods are acceptable. See online Web site for reference (y): https://www.osha.gov/laws-regs/regulations/standardnumber/1960/1960.54

(2) Safety offices must tailor specialized training to the individual's worksite.

(3) Commands, units and activities must make arrangements to provide training to all new personnel as close to the time of assuming their responsibilities as possible. The initial training provided for new employees must include as applicable:

(a) Command and or local policy on SOH;

(b) Work unit policy on SOH;

(c) Individual responsibility for safety and health;

(d) Employee reporting procedures for hazardous operations and conditions;

(e) Awareness of hazards common to the individual's worksite, trade, occupation or task;

(f) Specific hazards of chemicals and materials used in the workplace and the command or activity's HAZCOM plan;

(g) An introduction to the local occupational health program, including how to obtain occupational medical assistance, audiology evaluations, and required medical evaluations and procedures to follow in case of occupational illness or injury;

(h) PPE requirements for the job.

(i) Mishap reporting procedures.

c. Management Personnel. Navy Leaders, Commanders, Directors, Supervisors or Managers will be provided specialized SOH training to enable them to properly execute their SOH duties and responsibilities (SOH Leadership Training). Commands, units, and activities must provide management personnel with sufficient training, consistent with reference (y), to enable them to actively and effectively support programs in their specific areas of responsibility.

Note: Additional training tools can be found on the Naval Safety Center Web site at: https://intelshare.intelink.gov/sites/navsafe/Pages/Home.aspx

d. Supervisors and Employee Representatives

(1) Supervisory personnel are defined as military personnel (E-5 or above) and civilian personnel who give direction to one or more military and or civilian personnel. Commands, units and activities must provide training for supervisory personnel and employee representatives, which will include introductory and specialized courses to enable them to recognize and resolve unsafe and unhealthful working conditions and practices in the workplace.

(2) Commands, units and activities must provide newly assigned supervisors with safety training as soon as possible (but no later than 180 days) after becoming a supervisor.

0612. Reserve Component Safety and Occupational Health Training. Commanders and COs of Naval reservists will ensure safety and occupational health training appropriate for mobilization duties is obtained.

0613. Recordkeeping. All SOH related training and briefings will be recorded in the person's official training folder, the Command safety information management system, or local files. In all cases, a course title or number, provider, who attended, date and short training synopsis or outline must be available for inspection/review by inspectors or other SOH professionals. OSHA training standards may stipulate additional training record requirements. If training is received from any source other than NAVSAVENVTRACEN, supervisors must ensure SOH professionals and collateral duty safety personnel upload their training records into the human resources system of records.

0614. Responsibilities.

a. Office of the Chief of Naval Operations Special Assistant for Safety Matters (CNO N09F):

(1) Provide overall program management for SOHTP;

(2) Coordinate with the resource sponsor(s) for SOHTP training courses. Ensure billets and funding for SOHTP execution is provided through the planning, budgeting, and execution process;

(3) Chair the SOHTP Working Group;

(4) Maintain the list of dedicated safety and occupational health training courses and annually issue an updated list of SOHTP courses and other training vehicles;

(5) Establish policy for SOH training programs;

(6) Develop and maintain the SOH NTSP/SOH Navy Career Management Guide; and

(7) Provide resources for the SOH training courses provided and/or administered by the NAVSAFENVTRACEN as outlined in the NTSP.

b. BSOs or Echelon 2's as appropriate will:

(1) Provide representation on the SOHTP Working Group;

(2) Ensure funding is provided to their commands to accomplish necessary safety and occupational health training;

(3) Ensure officer, enlisted personnel, and civilian safety and occupational health awareness training is accomplished during initial accession or employment; and

(4) Provide subject matter experts (SME) to assist in training execution and course review.

c. Naval Education and Training Command (NETC)

(1) Integrate safety and occupational health as appropriate into all formal military Navy training; and

(2) Evaluate training to ensure courses meet the training guidelines.

(3) Develop and maintain training course curricula to ensure accuracy with regulatory, policy, and technical information;

(4) Periodically review approved courses to ensure curricula technical accuracy and completeness. The review must include SMEs not affiliated with the school and ensure the course meets the needs of the target audience and accomplishes learning objectives;

(5) Provide representation on the SOHTP Working Group; and

d. NAVSAFENVTRACEN must:

(1) Direct, coordinate, execute, monitor and evaluate safety training as outlined in reference (l).

(2) Implement assigned actions in the SOH NTSP; and

(3) Develop and maintain training course curricula to ensure accuracy with regulatory, policy, and technical information;

(4) Ensure safety courses are listed in the Catalog of Naval Training, NAVEDTRA 10500 (see reference (z)). See online Web site for reference (z). https://www.public.navy.mil/netc/Development.aspx

(5) Periodically review approved courses to ensure curricula technical accuracy and completeness using the Training Requirements Reviews (TRR) process. The review must include NAVSAFECEN SOH SME's as well as SMEs not affiliated with the school and ensure the course meets the needs of the target audience and accomplishes learning objectives;

(6) Conduct a training needs assessment via Echelon 2 commands, to be completed by 1 September each year.

(7) Must perform the executive agent function for the annual Professional Development Symposium (PDS).

(8) Provide programming and budgeting information to CNO (N09F); and

(9) Provide representation on the SOHTP Steering Committee.

e. Commander, Naval Safety Center and Commander, NETC must maintain a memorandum of agreement to establish appropriate policies, responsibilities, and execution of SOH training.

f. Naval Inspector General and President, Board of Inspection and Survey should include evaluations of safety training programs as a part of all inspections.

g. Commanders of Echelon 2 and Other Headquarters Commands must:

(1) Establish programs to provide safety training to personnel under their authority.

(2) Participate in the TRR courses taught by the NAVSAFENVTRACEN.

(3) Complete and submit the Training Needs Assessment including subordinate command(s) input to NAVSAFENVTRACEN by 1 September each year.

(4) Include training and competency development course and activity completion by safety professionals and collateral duty personnel in oversight inspections and evaluations.

h. Commanders, Commanding Officers, and Officers in Charge

(1) Budget for safety and occupational health training as required; and

(2) Identify local safety training requirements and sources for training appropriate for personnel and operations under their cognizance;

(3) Ensure all personnel receive job specific safety and occupational health training so compliance with safety and occupational health laws, regulations, E.O.s, and DoD and DON policies.

(4) Accomplish training consistent with the command or activity needs and the requirements of this chapter as set forth in a local written training plan; and

(5) Maintain local training records.

CHAPTER 8
OCCUPATIONAL HEALTH

0801. Discussion

a. Navy personnel perform activities and operations which involve potential exposure to chemical, physical and biological hazards which can cause occupational illness and disease if not effectively controlled. The primary objective of the Navy Occupational Health (OH) Program is to ensure a safe and healthful work environment for all Navy personnel, through the identification, assessment, and control of exposure hazards, and through the recognition, diagnosis, treatment, prevention and control of occupational illness and disease caused by exposures to these hazards.

b. Three major disciplines, in the Bureau of Medicine and Surgery (BUMED), comprise the OH program and oversee OH program services at all echelon levels in the Navy and Marine Corps. The disciplines are Industrial Hygiene (IH), Occupational and Environmental Medicine (OEM), and occupational audiology. Occupational audiology encompasses hearing loss prevention, diagnosis, disposition, and Hearing Conservation Program Management. (See Chapter 18 of this manual.) The Occupational Safety professional's role in the OH program is to support commands, units, and activities in establishing exposure abatement or control programs, risk assessment and inspection programs, and training programs. Successful implementation of the OH Program requires the close and continuing teamwork of Safety and OH personnel. These specialties, working together, form the basis for an active Occupational Health (OH) program. Their integration at the local level provides a valuable tool in preventing, identifying and treating occupational injuries and illnesses. Refer to paragraph 0808 for detailed guidance on the role Occupational Safety in supporting the Navy OH Program.

c. This chapter applies to occupational health efforts at all Naval shore commands, units and activities including those that support Marine Corps commands, units and activities. Reference (ag) covers occupational health for forces afloat. Major functional components not included in this chapter are contained in other chapters of this Manual. See online Web site for reference (ag):
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.19E%20-%20Volume%20I%20Part%20I.pdf

d. Priorities for OH support are determined by exposure risk and the availability of the customer or patient. Generally, Department of the Navy (DON) operational and industrial activities have the highest priorities. OH services may be provided to other Department of Defense (DoD) activities and then to other federal activities as resources allow, and if interservice support agreements are established as required by reference (ar). See online Web site for reference (ar):

http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/400019p.pdf?ver=2017-11-30-142815-940

0802. Industrial Hygiene

a. Navy industrial hygiene personnel anticipate, recognize, evaluate, and make recommendations to control and prevent unacceptable workplace exposures. Exposure assessment of Navy workplaces requires a sound, logical strategy and must be based on references (c) and (as) through (ax). See online Web sites for reference (c) and (as) through (ax): http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605505p.pdf?ver=2017-11-21-114053-293 https://doni.documentservices.dla.mil/manuals-secnav.aspx https://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=1910 https://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=1915 https://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1926 https://usaphc.amedd.army.mil/PHC%20Resource%20Library/HowtoHandleCensoredIndustrialHygieneData_TIP_No_55-039-0615.pdf http://www.med.navy.mil/sites/nmcphc/industrial-hygiene/industrial-hygiene-field-operations-manual/Pages/default.aspx https://www.aiha.org/publications-and-resources/TheSynergist/AIHANews/Pages/Just-Published-Fourth-Edition-of-A-Strategy-for-Assessing-and-Managing-Occupational-Exposures.aspx

The purpose of such a strategy is to accomplish at least four goals:

(1) To assess potential health risks faced by Navy personnel by understanding their exposures, to differentiate between acceptable and unacceptable exposures, and to control unacceptable exposures.

(2) To establish and document a historical record of exposure levels for Navy personnel and to communicate exposure monitoring results.

(3) To ensure and demonstrate compliance with safety and health exposure criteria.

(4) To provide a basis for hazard based medical surveillance examinations.

b. The occupational exposure assessment strategy is the plan for recognizing, evaluating, and documenting all exposures, and for developing controls for occupational exposures that are judged unacceptable. There are five major steps in setting up a functioning occupational exposure assessment program:

(1) Basic characterization

(2) Exposure Assessment

(a) Define similar exposure groups (SEG)

(b) Define exposure profiles for each SEG

(c) Judge acceptability of the exposure profile for each SEG

(d) Recommend control strategies

(3) Further information gathering

(4) Communications and Documentation

(5) Reassessment

c. All Navy shore commands, units, and activities must have a current comprehensive industrial hygiene exposure assessment of each workplace, in accordance with reference (c), conducted by the BUMED IH, unless the command, unit, or activity receives IH services through a supporting DOD Field Activity or other DOD Agency (e.g., another service under a joint basing agreement). The level of IH services is collaboratively determined by the supporting DOD Field Activity or other DOD Agency and the supported command, unit, or activity.

d. Basic Characterization of the Workplace (Walk-through Survey). The first step in the Navy's exposure assessment strategy is to characterize the workplace, workforce and environmental agents. The cognizant IH must conduct a survey of each workplace to obtain, as a minimum, this information:

(1) A list of equipment used in the workplace that presents significant risk.

(2) Descriptions of operations, tasks and work practices that take place in the workplace (e.g., welding, spray painting). For fixed locations the description may include a layout sketch incorporating relevant aspects of the factors listed, along with the number of persons assigned to the operation or task and the specific work area(s) occupied. For other work locations where similar operations are completed, the IH must account for any changes in the work process that could potentially expose the workers to different or a different level of hazards. The IH must note the frequency and duration of events taking place within all workplaces.

(3) A list of hazardous materials (HM) used in the workplace that present significant risk. The list must include a description of use at each workplace. Reproductive and development hazards as well as carcinogens must be specifically identified.

Note: IH's must have access to a copy of the authorized use list for the workplaces being surveyed.

(4) A list of physical hazards (e.g., noise, ergonomic stressors, non-ionizing radiation, etc.) in the workplace that present significant risk including a brief description of their source(s).

(5) A description of existing controls (e.g., industrial ventilation, fall protection equipment, and personal protective equipment).

e. Exposure assessment. The BUMED IH will assess exposures using all the information available. The outcomes include: groupings of workers having similar exposures, definition of an exposure profile for each similarly exposed group and judgments about the acceptability of each exposure profile.

(1) Define Similar Exposure Groups (SEG) - The BUMED IH will group workers having the same general exposure profile by the similarity and frequency of the tasks they perform, the materials and processes with which they work, and the similarity of the way they perform the tasks.

(2) Define Exposure Profiles for each SEG - The BUMED IH will use all quantitative and qualitative data to determine the degree of personnel exposure (i.e. perform qualitative risk assessment to estimate the exposure intensity and how it varies over time for each SEG). Estimates of the actual exposure levels for the SEG will be made whenever feasible. Exposure monitoring is the primary means of quantifying exposure levels for use in profile acceptability.

(3) Make judgments on acceptability of the exposure profile for each SEG. The BUMED IH must judge the SEG exposure profile as acceptable, uncertain, or unacceptable as defined in reference (c), and (ar) through (ax).

(4) Make Control Strategy Recommendations - The BUMED IH must make appropriate recommendations regarding the workplace, workforce and environmental agents based on the results of the exposure assessments by using accepted industrial hygiene practices, which comply with appropriate regulatory requirements.

f. Further information gathering. Exposure profiles that are not well understood, or for which acceptability judgments cannot be made with high confidence must be further characterized by collecting additional information. Information needs may be quantitative or qualitative depending on the exposure profile and judgment.

(1) Quantitative Exposure Monitoring - Monitoring the workplace for toxic substances and harmful physical agents is the primary means of assessing:

(a) Personnel exposures

(b) The need to control exposures

(c) The effectiveness of measures directed at reducing or eliminating health hazards.

An IH must accomplish these assessments using data gathered from representative sampling programs in the workplace. Analysis and interpretation of the data from this sampling assists in the timely assessment of hazards, in making recommendations for changes to existing conditions, and in recommending medical surveillance of exposed personnel.

(2) Qualitative Exposure Decisions – Judgments or decisions made in the absence of quantitative exposure data. Examples include professional judgment, exposure modeling, or biological monitoring. The BUMED IH must determine the appropriate information needed, gather it, and evaluate it so that an acceptable or unacceptable exposure assessment is reached and appropriate controls and recommendations can be implemented.

g. Communications and Documentation. Exposure assessment reports and records are critical elements of the exposure assessment process. Reports and records are needed to ensure effective communication of workplace findings and successful continuity of the industrial hygiene program.

(1) The cognizant BUMED IH must maintain documentation on:

(a) Workplace basic characterization

(b) Exposure profiles

(c) Exposure assessment judgments and findings

(d) Health hazard controls

(e) Recommendations

(f) Reassessment frequency

(2) The BUMED IH must document assessments, SEGs, which SEGs require medical surveillance, and quantitative and qualitative determinations as specified by BUMED policy guidance and the Industrial Hygiene Field Operations Manual, reference (aw).

(3) The cognizant BUMED IH must prepare and implement an exposure monitoring plan to:

(a) Fulfill regulatory sampling requirements.

(b) Collect sufficient data to allow statistically valid exposure assessments.

(c) Track workplace exposures to determine trends.

(d) Validate professional judgments of unchanged exposure assessments.

The exposure-monitoring plan may be included in the Periodic Industrial Hygiene Survey (PIHS). If the BUMED IH used this methodology, he or she must include the following information:

1. What must be sampled

2. How often the sampling should be performed

If the BUMED IH does not include the exposure-monitoring plan in the PIHS, he or she may use OPNAV 5100/14 or a computer-generated facsimile (i.e., containing data fields of OPNAV 5100/14) for developing the exposure-monitoring plan. When the BUMED IH performs the exposure monitoring, he or she may incorporate the exposure-monitoring results in the PIHS.

IHs (or IH technicians or exposure monitors under the technical direction of an IH) must conduct all exposure monitoring per reference (aw). Exposure monitors must successfully complete the industrial hygiene techniques and exposure-monitoring course and a period of on-the-job training as appropriate.

h. Reassessments. Assessments of supported commands, units and activities will occur using a complementary two tier approach: 1) PIHS and 2) shop specific supplement to the PIHS as outlined:

(1) Periodic Industrial Hygiene Survey (PIHS): This periodic survey is intended to provide supported activities with a comprehensive overview and summary of the command's IH and OH program. Each command, unit and activity will be provided with a PIHS that contains the elements outlined in reference (aw). The BUMED IH must, at a minimum provide a PIHS for each supported command, unit or activity at these frequencies:

(a) Category I (High Hazard) commands, units or activities-Annually;

(b) Category II (Moderate Hazard) shore commands, units and activities-Every 2 years;

(c) Category III (Low Hazard) commands, units and activities-Every 4 years.

(2) Shop Specific Supplements to the PIHS: The BUMED IH must, at a minimum, conduct periodic exposure assessments of supported command, unit and activity shops, and provide each supported command, unit and activities with a shop specific supplement to the PIHS that contains the elements outlined in reference (aw). Shop surveys must be performed using shop prioritization criteria outline in reference (aw) at these frequencies:

(a) Priority 1 (High Hazard) shops – Annually;

(b) Priority 2 (Moderate Hazard) Shore shops – Every 2 years;

(c) Priority 3 (Low Hazard) shops – Every 4 years

(3) Exceptions: All afloat activity shops will be designated as Priority 2 shops and will receive a comprehensive PIHS every 3 years, as outlined in reference (aw). All Reserve Center shops will be designated as Priority 3 shops and will receive a singular combined command, unit or activity shop-based PIHS every 4 years. Reserve Centers with industrial process changes, changes to work practices, or other occupational health concerns should contact their supporting industrial hygiene activity for consultation or possible evaluation.

0803. Retention and Access to Sampling Records (Disposition).

a. The BUMED IH must forward individual exposure monitoring information to the cognizant OEM staff (or medical department supporting operational commands, units, or activities) for review and placement into the individual's medical record (paragraph 0807 discusses medical records).

b. BUMED must retain survey, evaluation and sampling records for a minimum of 40 years (except where specific applicable standards require retention for a longer time).

c. Whenever an employee or designated representative requests access to a record, the supporting medical activity must assure that access is provided in a reasonable time, place and manner as required by reference (ay). See online Web site for reference (ay): https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1020

0804. Occupational Exposure Registry and Data Bank.

a. The Defense Occupational and Environmental Health Readiness System-Industrial Hygiene (DOEHRS-IH) information management system is used for documenting longitudinal exposure, recordkeeping, and reporting.

(1) The BUMED IH personnel are required to use DOEHRS-IH to create a comprehensive record of occupational hazards, shop and process information, controls,

potentially exposed populations, similar exposure groups (SEGs), sampling/exposure monitoring data, SEG exposure assessments, and recommendations.

(2) The BUMED IH personnel will establish SEGs in DOEHRS-IH. SEGs must be populated with data from PIHS and exposure monitoring to include personnel assignments. SEG personnel assignments must be fully populated, and include a unique personal identifier to track the longitudinal exposures of individuals and SEGs. In support of this requirement BUMED IH staff is required and authorized to collect and record the name, date of birth (DOB) and personal identifier (i.e. DoD ID number and/or social security number/foreign national number as necessary) for military, civil service, and foreign national employees.

b. Sampling survey forms contained in reference (aw) may be downloaded at: http://www.med.navy.mil/sites/nmcphc/industrial-hygiene/industrial-hygiene-field-operations-manual/Pages/default.aspx

0805. OEM Program.

a. OEM is a critical part of the multidisciplinary approach to the prevention of work-related injuries and illnesses and in the promotion of healthful work practices throughout the Naval workforce. A comprehensive OEM program is defined in references (ba) through (bc). See online Web sites for reference (ba) through (bc):
https://www.med.navy.mil/sites/nmcphc/Documents/oem/OEM_FOM_05-April-2017.pdf
https://www.gpo.gov/fdsys/pkg/CFR-2011-title5-vol1/xml/CFR-2011-title5-vol1-part339.xml
https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/500002p.pdf?ver=2018-11-29-141535-923

A comprehensive OEM program includes but is not limited to:

(1) Treatment and referral (if indicated) of work-related injuries and illnesses;

(2) Medical surveillance program management including:

(a) Validation of personnel identified for medical surveillance programs based on industrial hygiene data and specific functions and job tasks performed by the individual (e.g., forklift operators, sanitation worker, etc.);

(b) Medical surveillance examinations in accordance with reference (az) (use form referenced in paragraph 0805.c(1));

(3) Fitness for duty medical evaluations (e.g., ordered by civilian personnel managers on the basis of observed unacceptable performance); must be performed in accordance with reference (c);

(4) Medical qualification examinations in accordance with reference (ba) ((e.g., pre-placement, job certification, return-to-work, etc.);

(5) Worksite consultations and non-regulatory inspections;

(6) Epidemiological assessments of available injury and illness data to assist with prevention efforts and reduction of lost work time;

(7) Occupational injury and illness case management to restore workers to optimal health and productivity;

(8) Occupational audiology services in support of the hearing conservation program as outlined in Chapter 18;

(9) Appropriate immunizations, chemoprophylaxis, and other measures to prevent disease due to occupational exposure; and

b. For more details of program requirements see reference (bb).

c. Commands, units and activities must identify personnel requiring medical surveillance, ensure their enrollment in the applicable program(s), and track them in a roster or equivalent database. The workplace supervisors must coordinate with the cognizant medical department representative to enroll personnel performing operations identified in the IH survey as requiring medical surveillance to ensure guidance in references (az) and (bc) are followed. See online Web site for reference (az): http://www.public.navy.mil/NAVSAFECEN/Documents/OSH/MedicalSurv/Medical_Surveillance_Procedures_Manual_and_Medical_Matrix_2015.pdf

(1) The Supervisors Medical Surveillance and Certification Exam Referral and Disposition Form (SECNAV Form 5100/1), provides commands, units and activities a basic means of tracking this information and must be used by commands, units and activities to refer all military and federal civilian personnel with medical surveillance and/or certification requirements to the supporting occupational health clinic.

(2) The Supervisors Medical Surveillance and Certification Exam Referral and Disposition Form can be found on the Naval Safety Center's Medical Surveillance Toolbox webpage at http://www.public.navy.mil/navsafecen/pages/osh/medsurv.aspx

0806. Consultative Assistance Teams.

To facilitate OH program support, consultative assistance teams (CATs) from BUMED are available to provide timely, high quality, technical and professional assistance to field activities. CATs are available for all aspects of OH including industrial hygiene, occupational medicine, and occupational audiology.

a. The 3 types of CATs are:

(1) Type I. Provides assistance for situations that are beyond the professional capability of local resources and which may threaten or have adverse health effects to naval personnel or their working environment.

(2) Type II. Provides professional and administrative personnel to evaluate program management, effectiveness of program implementation and management of resources.

(3) Type III. Augments local staff to provide required services beyond the capabilities of the requesting activity.

b. Requesting a CAT. Medical activities requiring CAT assistance must submit requests to Navy Medicine command, unit or activity commanders via the chain of command by letter or message. After receiving a request, the command, unit or activity medical commander must contact the requesting activity and determine scope of work and funding. If the request is beyond the scope of the command, unit or activity, the medical commander will forward the request to the next level in their chain of command. In emergency situations, a request by telephone or email is acceptable with a follow-up confirmation letter or message.

c. Limitations. CATs must not conduct pre-Navy Inspector General SOH program oversight reviews. Requesting commands, units and activities are ultimately responsible for all required sampling and surveys. CATs will not normally conduct thorough routine PIHS, but will assist in evaluating new processes or environments.

0807. Medical Records. Maintenance, retention, and disposition of occupational medical records must be performed following references (c), (az), and (ba).

0808. Occupational Safety Personnel. Occupational safety personnel are jointly responsible for identifying work areas where workers need medical examinations because of specific hazardous exposures. In coordination with one another, industrial hygienists and safety personnel identify potentially hazardous products and processes to assess risk of exposure hazards and prioritize mitigation of exposure hazards. Safety personnel perform these requirements in support of the Occupational Health Program:

a. Risk Assessment – Safety personnel obtain industrial hygiene exposure assessments provided in PIHS. Based on the results in the PIHS, safety personnel provide an onsite safety risk assessment to prevent harmful employee exposures to recognized exposure hazards associated with workplace operations.

b. Written Programs – Safety personnel develop written compliance and exposure control programs based on the current PIHS. The command's latest PIHS identifies specific written

program requirements, where exposures to specific Occupational Safety and Health Administration (OSHA) regulated substances trigger written program requirements. Examples of written programs requirements are found in the OSHA specific substance standards, HAZWOPER standard, and the Respiratory Protection standard, as shown in the table or reference (az). The table only lists General Industry requirements. Construction and Shipyard specific substance requirements are found 29 CFR 1926 and 29 CFR 1915, respectively. Refer to the latest PIHS for applicable programs.

Lead	29 CFR 1910.1025
Asbestos	29 CFR 1910.1001
Inorganic Arsenic	29 CFR 1910.1018
Benzene	29 CFR 1910.1028
Beryllium	29 CFR 1910.1024
Cadmium	29 CFR 1910.1027
Chromium (VI)	29 CFR 1910.1026
Coke Oven Emissions	29 CFR 1910.1029
Cotton Dust	29 CFR 1910.1043
13 Carcinogens (Suspect)	29 CFR 1910.1003
1,2,-dibromo-3-chloropropane	29 CFR 1910.1044
Acrylonitrile	29 CFR 1910.1045
Ethylene oxide	29 CFR 1910.1047
Formaldehyde	29 CFR 1910.1048
Butadiene	29 CFR 1910.1051
Methylene Chloride	29 CFR 1910.1052
Methylenedianiline	29 CFR 1910.1050
Vinyl Chloride	29 CFR 1910.1017
Noise	CH18 of this Manual
Respiratory Protection	29 CFR 1910.134
HAZWOPER	29 CFR 1910.120
Blood-Borne Pathogens	29 CFR 1910.1030
Hazardous Chemicals in Laboratories	29 CFR 1910.1450

c. Program Evaluation – Safety personnel provide an evaluation of occupational health hazard controls and medical surveillance requirements for DON and OSHA regulated exposure control programs identified in the PIHS to identify compliance gaps and track required corrective action. Refer to the command's PIHS for medical surveillance requirements.

d. Training – Safety personnel provide support to schedule and conduct occupational health training for supervisory and collateral duty safety officer personnel on occupational health hazards, exposure assessments, and medical surveillance requirements for potentially exposed employees identified in the PIHS. Training includes Occupational Health program guidance on

employee enrollment, tracking and medical surveillance compliance reporting. Refer to Chapter 6 of this Manual for specific training requirements.

e. Means of Protection – Safety personnel evaluate compliance status for medical surveillance requirements, and the implementation status of exposure controls identified in the latest PIHS, as determined by risk assessment and annual self-assessment findings.

f. Recordkeeping – Safety personnel document completion of Occupational Health training of supervisors, in accordance with Chapter 6 of this Manual, and monitor status of self-assessment reporting of medical surveillance completion with command leadership.

0809. Responsibilities.

a. Chief, Bureau of Medicine and Surgery (BUMED), through its commands, units or activities as well as echelon 3, 4, and 5 activities, must provide OH support Navy-wide including:

(1) A comprehensive industrial hygiene exposure assessment program as defined in paragraph 0802 including:

(a) A comprehensive IH exposure assessment of each workplace in accordance with reference (c), using guidance in reference (aw), unless the command, unit, or activity receives IH services through a supporting DOD Field Activity or other DOD Agency (e.g., another service under a joint basing agreement). The level of IH services is collaboratively determined by the supporting DOD Field Activity or other DOD Agency and the supported command, unit, or activity;

(b) Exposure monitoring as identified in the exposure monitoring plan, except as noted in 0808.c.

(c) Technical direction of exposure monitoring programs, including training, procedures, sampling and analytical methods, sample analysis and interpretation;

(2) Occupational Health clinic or medical department notification to the employee's supervisor in writing using the form in paragraph 0805.c.(1) or electronic means (email, electronic safety management system, etc.) in these cases:

(a) Medical surveillance examination accomplishment including the due date for the next scheduled medical surveillance examination;

(b) When results of a medical surveillance exam require an individual to be removed or disqualified from a job or assigned duty.

(3) A comprehensive occupational medical program as defined in paragraph 0805.

(4) The establishment, in coordination with each activity, of appropriate records relating to all OH aspects of the activity's safety program;

(5) Participation in Workers' Compensation Working Group as requested; and

(6) Other consultative occupational health support (e.g., anticipate and prevent hazards through design reviews), as requested by the command, unit, or activity commander, commanding officer, or officer in charge to meet the requirements of this Manual.

(7) Occupational audiology and Hearing Conservation Program services and support as delineated in Chapter 18.

(8) Maintain PIHS electronically. Provide access to these reports to any cognizant command, unit, or activity.

b. Commands, Units or Activities must provide a safe and healthful workplace for their employees and coordinate with the cognizant BUMED IH activity for the provision of the OH services described in this chapter. Commands, units, and activities must:

(1) Ensure their workplaces receives PIHS in accordance with reference (c) and as outlined in this chapter, unless the command, unit, or activity receives IH services through a supporting DOD Field Activity or other DOD Agency. Results of the exposure assessment should be included in the sites job hazard analysis or equivalent safety risk assessment.

(2) Coordinate exposure monitoring with the cognizant BUMED IH activity to perform the required monitoring identified on the exposure monitoring plan, except as noted in 0809.c. Coordination requires workplace supervisors to track operations identified in the exposure monitoring plan and schedule exposure monitoring with the cognizant BUMED IH activity when operations occur. Completion of exposure monitoring is a shared responsibility between the command, unit, or activity and BUMED.

(3) Implement recommendations from industrial hygiene exposure assessment reports to prevent harmful exposures to employees. Recommendations may include implementing engineering, administrative, and workpractice controls; the use of respirators and personal protective equipment; developing and implementing applicable written compliance programs; and providing applicable employee information and training.

(4) Enroll personnel into the medical surveillance or certification exam who perform operations where these exams are required as identified in the current PIHS. Supervisors must identify and enroll the affected personnel, and track personnel completion of medical surveillance and certification exams in accordance with paragraph 0805(c). Supervisors are

responsible to ensure personnel report to the OH clinic for their medical surveillance or certification exams.

(5) Ensure an evaluation of exposure control programs and medical surveillance enrollment and compliance is conducted during safety and occupational health inspections and program evaluations

(6) Monitor medical surveillance using the formula listed in reference (c) to calculate a completion rate of required exams for each medical surveillance program as applicable.

(7) When non-medical activities perform services outlined in this chapter, they will perform those services per, and under the technical oversight of BUMED.

c. Commanders of Naval Shipyards and other industrial command, units, and activities with mission IH support must supplement BUMED programs by assisting in their exposure monitoring programs. The priority for these activities will be to conduct OSHA compliance monitoring identified in the exposure monitoring plan for specific stressors expected to exceed an action level or occupational exposure limit. In coordination with the cognizant BUMED industrial hygiene program office, these activities will provide additional support to assist in the accomplishment of the exposure monitoring plan.

CHAPTER 9
SAFETY ASSURANCE

0901. Discussion. Safety assurance (SA) is the process to monitor, measure, and evaluate the performance of programs, goals, processes and systems. SA identifies system deficiencies and opportunities for improvement, identifies new hazards, measures the effectiveness of and the conformity with risk controls, and ensures compliance with regulatory requirements. Safety assurance concentrates on validating operations, processes, or systems through collection and analysis of objective evidence and data. SA is one of the pillars of the Navy's Safety Management System (SMS). Evaluation, review and monitoring data tracking and analysis, and investigations. This assures commands, units and activities of compliance with SMS requirements, and guides continuous improvement efforts. Safety assurance is accomplished using these elements:

a. Evaluation and Reporting Action. Evaluate SMS conformance and performance through, inspections, assessments and evaluations.

b. Self-Assessment. The review is for leadership to conduct a strategic and critical evaluation of the conformance and performance of their SMS and to recommend improvements. Results and action items from this review must be documented, prioritized, communicated to affected organizations and tracked to completion.

c. Monitoring. Commanders, Commanding Officers, and Officers in Charge will determine whether the system is performing effectively and meeting regulatory requirements by monitoring the status of corrective and preventive actions, injury or illness metrics, findings of incident investigations (including mishaps), inspections, assessments, audits, performance measures and trend analysis.

0902. Evaluations (Inspections and Assessments).

a. Safety evaluations assess echelon 2 program management compliance and oversight of subordinate organizations' safety programs, providing an independent perspective of the effectiveness and efficiency of the evaluated organization's safety program.

(1) Naval Inspector General (NAVINSGEN) will conduct safety evaluations of headquarters staffs at intervals not to exceed 60 months. A written report will be prepared by the IG for each evaluation and sent to the commander and the safety staff of the echelon 2 being evaluated.

(2) President, Board of Inspection and Survey (PRESINSURV). PRESINSURV is responsible for the oversight inspections of forces afloat and must maintain close liaison with the NAVINSGEN for matters of common interest concerning the program.

b. Safety Management System (SMS) Program Evaluations. Headquarters commands will conduct evaluations of subordinate commands and field activities at a minimum of every 36 months to ensure safety management conformance and performance. Whenever possible, these evaluations will be part of a command inspection. The evaluation must incorporate a continuous evaluation methodology that reviews all aspects of the SMS.

(1) The headquarters commands at all levels must ensure that appropriate evaluations of program effectiveness are conducted at subordinate commands, units and activities at a minimum of every 36 months in accordance with reference (a). See online Web site for reference (a): http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605501p.pdf

Submissions to the management review process must include, among other information:

(a) Progress in the reduction of risk;

(b) Effectiveness of processes to identify, assess, and prioritize risk and system deficiencies;

(c) Effectiveness in addressing underlying causes of risks and system deficiencies;

(d) Submissions from personnel;

(e) Status of corrective and preventive actions and changing circumstances;

(f) Follow-up actions from SMS audits, inspections and previous management reviews;

(g) The extent to which objectives have been met; and

(h) The performance of the SMS relative to expectations, taking into consideration changing circumstances, resource needs (staffing. Competencies of SOH personnel staffing, competencies of SOH personnel), alignment of the business plan and consistency with the Safety and Occupational Health policy.

(i) SMS management evaluations must also:

1. Evaluate the results of mishap prevention efforts;

2. Include a quality assessment of the safety services provided by commands, units or activities;

3. Review compliance with program requirements, including this Manual; and

4. Evaluate mishap trends.

(j) Evaluate effectiveness of safety support services if received by subordinate commands.

c. Additional guidance is available on the Naval Safety Center Web site at: https://www.public.navy.mil/NAVSAFECEN/Pages/index.aspx

0903. Acquisition Program Assessment and Reviews. Acquisition programs are required to develop programmatic safety, environmental evaluations (that are summarized in the acquisition strategy) and evaluated by external program reviewers. System safety plans and hazard tracking are required by references (bd), (be) and (bf). See online Web sites for references (bd), (be) and (bf):
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/500002_dodi_2015.pdf?ver=2017-08-11-170656-430
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-00%20General%20Admin%20and%20Management%20Support/5040.3A.pdf
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-400%20Organization%20and%20Functional%20Support%20Services/5430.57G.pdf

0904. Workplace Inspections. Commanders, commanding officers (CO), and officers in charge (OIC's) must ensure that workplace inspections are conducted by trained and competent safety inspectors and the cognizant medical activities provide occupational health support as necessary. Refer to Chapter 3, paragraph 0305 of this Manual regarding execution of safety. Day to day SOH inspections and surveillances may be conducted by line managers, supervisors, or other collateral duty personnel.

a. All workplaces must be inspected by trained and competent safety inspectors at least annually. They must inspect high hazard areas more frequently based upon an assessment of the potential for injuries, occupational illnesses, or damage to Navy property.

b. Safety and health inspectors will be qualified in accordance with Chapter 6 and reference (bg). Inspectors must thoroughly familiarize themselves with the equipment and work practices at the workplace. The term "safety and health inspector" means a safety and or occupational health professional who has met the Office of Personnel Management (or military equivalent) standards, and who has the equipment and competence to recognize safety and or health hazards in the workplace. The Navy must base qualifications for inspectors on the degree of hazard and complexity of the inspection areas or operations. Inspectors must examine who, what, where, when and how; with particular attention to items most likely to develop unsafe or unhealthful conditions because of stress, wear, impact, vibration, heat, corrosion, chemical reaction or misuse. Inspect the entire workplace area each time. Include areas where no work is done

regularly, such as parking lots, rest areas, office storage areas and locker rooms. Inspectors will look at all workplace elements the environment, the equipment and the process. The environment includes such hazards as noise, vibration, lighting, temperature, and ventilation. Equipment includes materials, tools and apparatus for producing a product or a service. The process involves how the worker interacts with the other elements in a series of tasks or operations. See online Web site for reference (bg).
https://www.osha.gov/laws-regs/regulations/standardnumber/1960/1960.26

c. Types of workplace hazards include:

(1) Physical hazards

(2) Biological hazards

(3) Chemical hazards

(4) Ergonomic hazards.

d. At shore installations, the BOS safety service provider will inspect all workplaces unless there are commands, units and activities with adequate organic safety professional staff as outlined in Chapter 3. Inspectors must be provided with appropriate technical test equipment, where required, from commands, units and activities.

e. Inspectors must conduct inspections in a manner to preclude unreasonable disruption of the operations of the workplace. Inspections must be consistent with the operational concepts of the Navy commands, units and activities. Commands, units and activities may conduct these inspections with or without prior notice.

f. Inspectors may deny the right of accompaniment to any person whose participation interferes with a fair and orderly inspection or who lacks the required security clearance.

g. Inspectors must discuss matters affecting safety and health with employees or employee representatives and offer them the opportunity to identify unsafe or unhealthful working conditions while remaining anonymous.

h. When an inspector discovers an imminent danger situation during an inspection, he or she must immediately notify affected employees and the command, unit, or activity CO in accordance with reference (bh). All commands, units and activities must initiate immediate abatement action or terminate the operation.

i. Inspectors must provide deficiency notices to the official in charge of the operation within a reasonable time, but not later than 15 working days after the inspection. Inspectors must provide a written report of the inspection, including administrative findings and recommended

corrective actions to the official in charge of the operation within 15 calendar days of completion of the inspection. For notification purposes, they must use OPNAV 5100/12 Safety and Occupational Health (SOH) Deficiency Notice https://www.public.navy.mil/navsafecen/Pages/instructions/Forms.aspx or computer generated equivalent. Inspectors can group multiple identical deficiencies in the same organization (jurisdiction of the same supervisor) or worksite into a single notice. Inspectors will conduct follow up inspections to ensure deficiencies have been corrected.

j. Commands must correct valid violations of standards and other deficiencies found during inspection.

k. Assign risk assessment codes to inspection deficiencies and the control and abatement of deficiencies in accordance with Chapter 12.

l. Commands, units and activities must conduct follow-up workplace inspections to verify that completed corrections have been made or that actions addressing specific problem areas were taken. When deficiency notices have been prepared, commands, units and activities must use section C of OPNAV 5100/12 or equivalent computer database to document follow-up inspections. They must develop procedures for correcting unsafe or unhealthful working conditions that include a follow-up, to the extent necessary, to determine whether the correction was made.

m. Commands, units and activities must retain inspection records for a period of 3 years from the date of inspection.

0905. Self-Assessments and Improvement Plans. All commands must perform a self-assessment of the commands Safety and Occupational Health program at least annually using self-assessment guidance developed by their headquarters command. Alternatively, commands, units and activities that hold or are seeking Voluntary Protection Programs (VPP) certification may use the annual program evaluation processes outlined in OSHA VPP guidance. Additional guidance can be found on the Commander, Naval Safety Center Web site at: https://intelshare.intelink.gov/sites/navsafe/Pages/SMS.aspx

a. The self-assessment must include, as a minimum, mishap statistics, inspection records, hazard reports and risk assessments, evaluations of compliance posture, and the industrial hygiene exposure assessment reports outlined in Chapter 8 of this Manual. Further background information on self-assessments is available at: https://intelshare.intelink.gov/sites/navsafe/Pages/safetyassessments.aspx

b. Commands, units and activities will develop specific improvement strategies for each area identified as needing improvement. For each strategy, commands, units and activities must define performance or measurement standards and establish target completion dates. The command, unit and activity safety council, where established, will review the progress achieved

in implementing improvement actions at least annually. For commands, units and activities not requiring a safety council, the commander, CO, or OIC will review and approve the annual self-assessment and improvement plans.

c. Headquarters commands will review subordinate command; unit or activity self-assessments plans of action to develop improvement plans for their overall chain of command's safety program.

d. The self-assessment schedule and summary elements for all commands, units and activities including headquarter commands, are as listed:

(1) The Safety Quality Council (SQC) will establish what will be rolled up annually.

(2) Commands, units, and activities must complete their annual self-assessments by 31 December using previous fiscal year data. In an effort to leverage risk management as a resource, ORM will be broken out clearly in the annual self-assessment to include risk to mission and risk to force and provide clarity concerning gaps and seams that require intervention/guidance to resolve. Commands, units and activities must formulate improvement plans as a part of the self-assessment process and must take all necessary steps to correct hazards and deficiencies when discovered. Additionally, commands, units, and activities must roll up at each command, unit, and activity level in the chain of command up to the echelon 3 commander. echelon 3 commands must consolidate input from subordinate commands.

(3) Echelon 2 commands must consolidate this information and forward submissions to the Navy Executive Safety Board (NESB) via the Safety Quality Council (SQC) no later than 1 May.

(4) The SQC must evaluate and consolidate echelon 2 reports and prepare a written report and brief for the next scheduled NESB meeting. The report will focus on actionable information gained from echelon 2 submissions and recommend appropriate actions.

0906. Monitoring. Navy commands, units and activities will conduct mishap reporting, investigation, and record keeping in accordance with reference (m). This paragraph contains additional requirements related to mishap review and analysis that is fundamental to the safety assurance pillar of the SMS.

a. All commands, units, and activities need a plan with recommended checklist to follow when a mishap occurs, with which key personnel are familiar. A mishap plan describes the steps that must be taken when a mishap occurs. Anticipate all reasonable eventualities and devise measures to cope with them. Deficiencies may be identified through periodic drills designed to ensure the plan's smooth execution when a mishap occurs. A copy of the commands, units, or activities plan and this Manual should be available to all investigators. This plan may also be

included in the command, unit, or activities anti-terrorism/force protection plan or disaster preparedness plan.

b. Commanders, commanding officers and officers in charge, or their respective deputies, chiefs of staff, or executive officers, must review mishaps. The command, unit or activity head, or his or her designee, with the safety manager must decide which mishaps to review. At a minimum, commands, units and activities must review any mishap that requires submission of a mishap investigation report (MIR) in accordance with reference (m). The specific review mechanism is left to the command's discretion and can take many forms. This review will include the cognizant first-line supervisor and/or next level of management, and the injured employee if needed for amplifying information. The review must involve safety, medical, compensation, and other management personnel, as appropriate. The object of the review is to identify the underlying cause(s) of the mishap and take corrective action to prevent recurrence. See online Web site for reference (m): https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5102.1D%20w%20CH-2.pdf

c. Commands, units and activities must conduct detailed analyses of their mishap experiences and develop annual fiscal year (FY) or calendar year (CY) mishap reduction goals. The safety department is to analyze mishap data, including “near miss” data, on a regular basis to identify significant trends and utilize these trends to adjust safety program efforts, training requirements as well as identify goals, accountability issues, and potential failures of command, unit, and activity infrastructure. They must include these goals in command goals and specific strategies and measurement standards and develop actions for goal attainment.

CHAPTER 18
HEARING CONSERVATION

1801. Discussion. Noise injury is a continuing concern within the Department of Navy, both ashore and afloat. The goal of the Hearing Conservation Program (HCP) is twofold; reduce hazardous noise sources through acquisition and engineering controls and ensure auditory fitness for duty in the military members and civilian workforce in accordance with references (a), (c), (ag), (az), (cr) through (cz) ,(da) and (db). Hearing acuity is critical to individual medical readiness and mission success. Noise reduces productivity, efficiency, readiness, and hearing acuity. All levels of leadership will proactively pursue HCP to optimize operational readiness and hearing preservation during federal service. Hearing loss is the most prevalent service-connected disability with costs exceeding one billion dollars annual. These costs only weakly reflect diminished operational effectiveness and the human costs of hearing loss, and impaired quality of life. See online Web sites for references (a), (c), (ag), (az), (cr) through (cz), (da) and (db):
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605501p.pdf
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605505p.pdf?ver=2017-11-21-114053-293https://doni.documentservices.dla.mil/manuals-secnav.aspx
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.19E%20-%20Volume%20I%20Part%20I.pdf
http://www.public.navy.mil/NAVSAFECEN/Documents/OSH/MedicalSurv/Medical_Surveillance_Procedures_Manual_and_Medical_Matrix_2015.pdf
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605512p.pdf
http://www.med.navy.mil/sites/nmcphc/Documents/oem/TM6260_51_99-2_September2008.pdf
https://ibr.ansi.org/Standards/iso.aspx
https://www.cdc.gov/niosh/docs/79-117/
http://static.e-publishing.af.mil/production/1/af_a4/publication/afm19-10/afm19-10.pdf
https://www.denix.osd.mil/shf/references/military-standards/mil-std-1472f-human-engineering/
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/500002_dodi_2015.pdf?ver=2017-08-11-170656-430
https://www.wbdg.org/FFC/DOD/UFC/ARCHIVES/ufc_3_600_01_2016_c1.pdf
https://ibr.ansi.org/Standards/iso.aspx

Note: For environmental and community noise, see Chapters 20, Noise Prevention Ashore and 21 Environmental Compliance Afloat (Section 22-14) of reference (c).

1802. Hearing Conservation Program

a. The HCP will be implemented when personnel are occupationally exposed for at least 1 day per year to:

(1) Continuous or intermittent noise as an 8-hour time-weighted average (TWA) of 85 decibels on the A-weighted scale (dBA) or greater.

(2) Impulse or impact noise of 140 dB peak (dBP) sound pressure level or greater.

(3) Other determined to be at risk.

(4) Ultrasonic exposures, which occur under special circumstances that require specific measurement and hazard assessment calculations, in accordance with reference (cr).

b. The HCP includes these elements:

(1) Noise Hazard Assessment

(2) Noise Abatement and Engineering Controls

(3) Hearing Protection Devices (HPDs)

(4) Training and Education

(5) Medical Qualifications Standards and Audiometric Testing

(6) Hearing Injury Reporting & Investigation

(7) Program Performance Evaluation

(8) Recordkeeping

1803. Noise Hazard Assessment

a. An initial baseline and a Periodic Industrial Hygiene Survey (PIHS) must be conducted to determine if personnel exposures to occupational noise and potential noise hazard areas equal or exceed the occupational exposure limits (OELs) for noise:

(1) For an 8-hour TWA, the OEL is 85 dBA. Where exposure times exceed 8 hours, calculate allowable noise exposure in dBA using the guidance in reference (aw). See online Web site for reference (aw):
http://www.med.navy.mil/sites/nmcphc/industrial-hygiene/industrial-hygiene-field-operations-manual/Pages/default.aspx

(2) For impact or impulse noise, the OEL is 140 dB dBP sound pressure level.

b. To effectively assess exposures and control sound pressure levels, it is necessary to accurately measure personal exposures and sound pressure levels in accordance with reference

(aw). Qualified persons will conduct initial and periodic monitoring. Persons qualified to perform exposure monitoring are specified in Chapter 8 of this Manual.

c. Industrial hygienist will identify and assess exposure to ototoxic chemicals. Follow the guidance in reference (aw) for assessing chemical exposures.

d. Employee Notification of Monitoring Results. The employer will notify each employee exposed at or above an 8-hour TWA of 85 dBA of the results of the monitoring in accordance with reference (as). This means that results of personal noise dosimetry monitoring that are at or above 85 dBA as an 8-hour time-weighted average must be forwarded to the command, unit, or activity Commanding Officer. Employee notification must be forwarded to the command, unit or activity Commanding Officer. Actual notification of employees remains a command, unit, or activity responsibility. See online Web site for reference (as): https://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=1910

e. For acquisition and development of new systems, identify prospective sound pressure levels from historical data from existing systems; modeling of anticipated noise levels; and measurement of sound pressure levels in new or modified systems; and equipment during the test and evaluation stage in accordance with Military Standard (MIL-STD) 1474E and reference (cu).

1804. Labeling of Hazardous Noise Areas and Equipment

a. All potentially hazardous noise areas must be clearly identified by signs located at their entrances or boundaries. The designation of hazardous noise areas and equipment will be based on this criteria:

(1) Any work area or equipment where the sound pressure level is 85 dBA or above (continuous or intermittent) will be considered noise hazardous.

(2) Any work area or equipment where the sound pressure level is 140 dBP or greater (impulse or impact) will be considered noise hazardous.

b. Each tool or piece of equipment producing sound pressure levels of 85 dBA or greater, including vehicles, will be conspicuously marked to alert personnel of the potential hazard. The exception will be when an entire space is designated as a hazardous noise area and the equipment is stationary. Exteriors, but not interiors, of military combatant equipment are excluded from this requirement. Professional judgment and discretion will be exercised when labeling tools and equipment.

1805. Noise Abatement and Engineering Controls

a. Noise Abatement programs will include implementation of noise assessment and engineering control measures through the systems engineering and systems safety process in accordance with reference (cv) when:

(1) Legacy systems have measured noise exposure concerns as indicated by personnel exposures at or above 85 dBA or 140 dBP.

(2) New systems are considered likely to create noise exposures at or greater than 85 dBA or 140 dBP.

(3) Communication is anticipated to be potentially impaired by equipment noise.

b. Engineering controls will be the primary choice for eliminating personnel exposure to potentially hazardous noise, in accordance with reference (cr). Noise generation, personnel exposures, and signal control will be considered in the context of life-cycle risk management and combat capability. Hazard Control and Abatement guidance is located in Chapter 12.

c. Procurement of new tools and equipment for purchase will incorporate "buy quiet" requirements in accordance with references (cw) and (cx), i.e. those with lowest sound emission levels which are technologically and economically feasible and compatible with performance and environmental requirements.

d. The secondary means of protecting people will be administrative, i.e. limiting times of exposure or enforcing safe stay times. Administrative controls (i.e., the adjustment of work schedules to limit exposure) are effective only under strict supervisory control and in consultation with safety, industrial hygiene or occupational audiology. Use of personal protective equipment (PPE) (e.g., ear plugs, muffs, etc.) will be temporary or a last resort solution and only after noise studies have determined engineering or administrative controls are not feasible. Appendix H contains a chart to demonstrate administrative control of noise exposure with HPD maximum stay times.

1806. Training and Education

a. Supervisors and managers of personnel in noise hazardous areas will receive training on their role in preserving the mission's hearing readiness. Elements of this education should include responsibility to support effective noise control by enforcement, design, engineering controls, as well as operational impacts of hearing impairment and miss-communications.

b. Hearing Conservation Program enrolled personnel and their supervisors must receive documented initial and annual hearing loss prevention training. Initial training will be provided by the command, unit or activity prior to assignment to duty in a designated noise hazardous environment.

c. All personnel enrolled in the HCP will receive initial and annual training. Training will include:

(1) The impact of hazardous noise on the hearing system;

(2) The purpose of hearing protection;

(3) The advantages, disadvantages, and attenuation of various hearing protectors;

(4) Instructions on selection, fit, use, and care of personal HPDs including demonstrations of proper HPD fittings and techniques for obtaining an effective fit;

(5) Mandatory requirement and administrative actions for failure to wear HPD;

(6) The purpose of audiometric testing;

(7) An explanation of the audiometric test procedures;

(8) The personal and professional impact of hearing loss and;

(9) HPD use during off-duty activities.

d. Annual training will be coordinated by the noise hazard command, unit, or activity. Where available, commands, units, and activities should seek training assistance from medical treatment facility (MTF) occupational audiologists, who are subject matter experts on noise-induced hearing loss and HCP.

1807. Medical Qualification Standards and Audiometric Testing

a. Hearing Tests and Medical Evaluation. Entry of personnel into a HCP will be based on the results of the industrial hygiene exposure assessment and relevant criteria found in reference (ag) and relevant criteria found in 1802 and 1803 in this chapter. Individuals that meet the criteria for exposure intensity and frequency are considered at risk and must be included in HCP and receive annual audiometric testing. The PIHS identifies tasks, processes, operations or similar exposure groups where exposures are above the OEL.

b. The cognizant MTF will conduct periodic hearing tests and diagnostic and medical qualification evaluations as well as provide HCP data to assist commands, units and activities with monitoring the effectiveness of the HCP.

c. For military or civilian personnel who experience a STS, commands, units, and activities will evaluate their personal hearing protection to confirm adequacy of the fit and the resulting amount of attenuation using one of these instructions:

(1) Use a field attenuation estimation, commonly called a fit-test system (individual fit testing is recommended as best practice when possible); or

(2) When needed, commands, units, and activities may request assistance from the local medical personnel to apply appropriate Occupational Safety and Health Administration (OSHA) or National Institute for Occupational Safety and Health derating to the reported attenuation of the hearing protector (current ANSI S12.6 does not require derating) as described in reference (aw).

d. Personnel with pre-existing hearing loss that exceeds enlistment or employment standards or those with a demonstrated increased susceptibility to noise-induced hearing loss may be removed or excluded from occupations with noise exposure above the OEL. Occupational audiologists and occupational medicine physicians will determine medical qualification. These determinations and recommendations are provided to the employee's command, unit, or activity and may have an adverse impact on the member's employment. Detailed criteria and disposition processes are defined in reference (c).

e. Disposition. Hearing loss with a suspected medical cause is routed through the appropriate referral process in accordance with references (ag). Proactive detection of temporary thresholds shifts facilitates early intervention before a confirmed permanent STS occurs.

(1) Significant Threshold Shifts (STS) and OSHA Recordable Hearing Loss are defined in reference (cr) and (cs). Personnel demonstrating unresolved STS after appropriate auditory rest will be notified, along with his or her command, unit or activity within 21 days of a confirmed permanent standard threshold shift (STS).

(2) Work-related STSs are considered OSHA recordable when an occupational audiologist, otologist, or occupational medicine physician determines the shift toward deteriorated hearing, is permanent, is consistent with an occupational origin, and the threshold average is 25 dB or more at 2000, 3000, and 4000 Hz in either ear. See reference (ct) for additional details on reporting STS.

(3) The individual, his or her supervisor, and command, unit or activity will be notified by MTF when either an STS or an OSHA recordable STS occurs.

f. Termination Hearing Test. All military personnel regardless of enrollment in the HCP will receive a termination hearing test within 12 months of military separation. Within 12 months prior to separation from the command, unit or activity or transfer to a non-noise hazardous position, civilians enrolled in the HCP will receive a termination hearing test

1808. Hearing Protection Devices (HPDs)

a. HPDs consists of insert type (e.g., ear plugs) and circumural type (e.g, ear muffs) and are considered an interim protective measure while installing engineering control measures. HPDs

will constitute a permanent measure only if engineering controls are not technologically, economically, or operationally feasible.

b. Hearing protection will be worn by all personnel when they enter or work in an area where the operations generate:

(1) Continuous or intermittent sound pressure levels greater than 85 dB(A)

(2) Impulse or impact noise at 140 dBP sound pressure level or greater.

c. A combination of insert type and circumaural types of hearing protection devices (double hearing protection) will be worn where sound pressure levels are 104 dBA or greater, for continuous and interment noise, or 165 dBP or greater, for impulse and impact noise, unless an occupational audiologist, IH, or occupational medicine physician has determined that the single protection (insert or circumural types) is adequate for the anticipated duration of exposure.

d. Personnel required to wear HPDs will be provided with the appropriate type and size of HPD. A selection of sizes and types (e.g., ear plugs or ear muffs) will be available to personnel. HPDs will be provided at no cost to personnel entering designated hazardous noise areas. HPDs will be replaced as necessary whenever they become damaged, hardened, or otherwise determined to be no longer functional. When hazardous noise sources are operating, personnel will wear HPDs regardless of exposure time. Safety personnel, industrial hygienists or occupational audiologists will be consulted for guidance regarding assessment of HPD attenuation.

e. HPDs provided and worn singly or in combination will reduce exposures below an 8-hour TWA of 85 dBA and below 140 dB for peak sound pressure levels. For all situations where hearing protection is required, assess whether the HPDs are adequate using any accepted method for assessing attenuation as described in Appendix B, Section 1910.95 of Title 29, CFR or the ANSI S12.6 in accordance with reference (cr). Refer to Appendix H of this manual for HPD attenuation methods. Use of field attenuation estimation systems, commonly called a fit-test system are accepted and recommended as best practice, when possible. Field attenuation estimation using the fit-test system should be performed by a trained safety professional or industrial hygienist.

f. The administrative control of limiting exposure time will be implemented in cases where HPDs alone do not provide sufficient attenuation below an 8-hour TWA of 85 dB(A) for continuous or intermittent noise, or 140 dBP sound pressure level for impulse or impact noise. Refer to Appendix H Hearing Protection Devices for HCP requirements and stay times.

g. All personnel exposed to gunfire in a training situation (e.g., weapons qualification) or live fire operational training (e.g., gunfire, artillery or missile firing) will wear HPDs. Commanders will dictate the use of hearing protection in combat and combat simulations, based

on mission requirements and the ability of the hearing protection to facilitate communication and situational awareness.

h. Use of custom earplugs is authorized. Only audiologists or other professionally trained medical personnel will take ear impression of the ear necessary to make the custom earplugs. Non-medical, but professionally trained staff may take ear-mold impressions under the supervision of an audiologist or qualified physician. Medical personnel trained to fit preformed and custom earplugs must examine the fit and condition of preformed and custom earplugs at least annually. As with all personal protective equipment, cost is the responsibility of the individual commands, units or activities.

i. Preformed sized earplugs will be fitted and issued only under the supervision of personnel specifically trained to fit earplugs. For recruits and officer candidates the designated time to initially fit appropriate hearing protection and provide education on the prevention of hearing loss is during basic training and prior to any exposures to hazardous noise. All commands, units and activities will ensure proper initial fitting and supervise the correct use of HPD. The Navy and Marine Corps Public Health Center (NMCPHC) Web site will provide guidance and links to sites with additional information on selecting HPDs. Consult occupational audiologist or industrial hygienist for specifics in accordance with references (ag) and (cr).

j. The use of portable music players with headphones or ear buds is prohibited in industrial areas and in work areas where high noise hazards have been identified. Such equipment provides limited effective protection and actually contributes to noise exposure by creating sound pressure levels in excess of ambient levels.

k. Hearing aids may not be used in conjunction with or in place of HPDs except as approved by an audiologist or otolaryngologist on a case-by-case basis. Refer to Appendix H Hearing Protection Devices for HCP requirements and stay times.

1809. Hearing Injury Reporting and Investigation

a. Hearing loss occurring cumulatively over time from an occupational exposure is considered an occupational illness. Hearing loss that occurs from an instantaneous event (i.e., acoustic trauma from an explosion) is considered an injury. Military and civilian occupational illness and injury will be documented appropriately in designated Navy and Marine electronic tracking systems

b. Upon receipt of STS reports from the MTF, commands, units, and activities will ensure a mishap investigation in accordance with OPNAVINST 5102.1D is completed so causes of hearing loss can be established and deliberate, concrete action to prevent future hearing injuries can be taken. Commands, units and activities will collaborate with MTF Occupational Audiologists and industrial hygienists for assistance with worksite assessments, HCP training, and HPD selection/fittings.

1810. Recordkeeping

a. Commands, units and activities will maintain records of PIHS identifying noise hazardous operations, equipment and areas, as well as roster of all personnel enrolled in the HCP, in accordance with reference (cr) and this Chapter.

b. Commands, units and activities will maintain and annotate OSHA 300 logs for civilian personnel and an equivalent log for exposed military personnel whenever it is reported by the MTF that personnel have a confirmed permanent STS.

c. All hearing conservation audiometric testing data, notifications of STS and OSHA recordable hearing loss will be maintained by MTF in accordance with references (a), (ag), (ct), and (cy).

1811. Program Performance Evaluation

a. Commands, units and activities with noise hazards and/or personnel enrolled in a HCP will evaluate their HCP effectiveness annually through examination of program performance metrics in accordance with reference (cr) and implement steps to mitigate program weaknesses and shortfalls.

b. In accordance with reference (cr) the Chain of Command will report metrics annually: number of HCP enrolled personnel, compliance rate for annual audiograms, and hearing injury rate (STS rate) to cognizant echelon 2 commands, units and activities (both raw numbers and rates) by 31 Dec for the previous fiscal year.

c. Acquisition program evaluations are required to consider the effectiveness of programs in managing risk in accordance with references (az), (cu) and (cv). Feasibility will be evaluated and tracked using the methodology of reference 18-13 and residual risks communicated to appropriate management levels.

1812. Responsibilities

a. Headquarters' Commands in addition to complying with paragraphs 1802 through 1810 will:

(1) In coordination with Chief, Bureau of Medicine and Surgery (BUMED), provide technical assistance and engineering guidance to subordinate commands, units and activities in accordance with paragraph 1805.

(2) Provide appropriate technical and engineering control guidance. Consider, design, and engineer noise control features into existing and future ships, aircraft, weapons, weapon systems, equipment, materials, supplies and facilities.

(3) Ensure commands, units and activities maintain training records in accordance with Chapter 6 of this document.

(4) Ensure chain-of-command evaluates HCP during oversight processes to verify and document commands, units and activities compliance with this Chapter. Program oversight reports, along with required aforementioned metrics data, will be available for review by Naval Inspector General (IG).

(5) As major Systems Command in the position to effectively reduce a high number of noise hazards affecting a large Navy worker population through the acquisition process, NAVAIR and NAVSEA will:

(a) Ensure incorporation of feasible noise engineering controls into hazard abatement plans.

(b) At least annually, request their aviation depots and naval shipyards to provide an analysis of their high noise measurements with recommendations for work processes and equipment in need of noise control.

b. Commanders, Commanding Officers and Officers in Charge for commands, units and activities will take these actions:

(1) Use the current PIHS to identify hazardous noise areas and equipment. The PIHS may be used by commands, units and activities as the current inventory of all potentially hazardous noise areas and operations. It will be available to supervisors and employees. This inventory will as a minimum identify noise levels, IH assigned health Risk Assessment Codes (RACs), and the types of control measures. Safety specialists or supervisors will designate hazardous noise areas and equipment in accordance with the current PIHS. In cases where measured noise exposures represent equipment or systems with widespread navy use, summarized data will be communicated to responsible technical authorities in systems commands, units and activities and/or acquisition system (platform) program managers in collaboration with organizations receiving industrial hygiene support. BUMED will collaborate with these efforts in accordance with paragraph 1811c.

(2) Local Commands, units and activities are responsible for establishing and maintaining a roster of all personnel enrolled in their hearing conservation and noise abatement program. Supervisors and safety specialists using the current PIHS will identify individuals assigned to operations associated with hazardous noise. Each command, unit and activity will maintain a comprehensive roster of enrolled personnel in accordance with reference (cr) and update it every six months or more frequently as changes occur among personnel. Commands, units and activities rosters will be monitored and used by both MTF and Navy supported commands, units and activities to ensure personnel are trained and receive annual audiometric testing.

(3) Commands, units and activities with noise hazards and/or personnel enrolled in a HCP will evaluate their HCP effectiveness annually through examination of program performance data and criteria and implement steps to mitigate program weaknesses and shortfalls.

(4) As needed, request the cognizant MTF or Navy Environmental and Preventive Medicine Unit (NEPMU) Occupational Audiologist to assist local commands, units and activities in annually monitoring program effectiveness such as providing onsite workplace assessments, trend analysis, and identification of program weaknesses and program improvement recommendations.

(5) Local commands, units and activities will review annual cognizant MTF or NEPMU trend analysis results, implement recommended program improvements, and correct identified program weaknesses.

(6) The preferred marking for equipment and/or power tools is the standard hazardous noise label. They may also be individually and permanently marked via a stencil (painted) or engraved with the words "Produces Hazardous Noise." To minimize foreign object damage, flight line tools should be stenciled as noise hazardous.

(7) Commands, units and activities will label designated hazardous noise areas and equipment that produce sound pressure levels equal to or 85 dBA or greater or 140 dBP sound pressure level.

(8) Commands, units and activities will have the option of using additional means to alert employees to noise hazardous operations. These may include posting barriers or using flashing lights to indicate hazardous noise conditions.

(9) Commands, units and activities will issue personal HPDs at no cost to all personnel working or training in hazardous noise environments and in operational settings.

(10) The use of administrative controls or rotation of employees under strict supervisory control in consultation with safety, industrial hygiene or occupational audiology is an acceptable alternative means to reducing noise exposure when engineering controls are not feasible. Provide personal HPDs, and ensure proper usage by personnel where administrative or engineering controls are not feasible or ineffective.

(11) Commands, units and activities will request and document training provided by hearing conservation subject matter experts, such as occupational audiologists, occupational medicine, occupational nurses, industrial hygiene specialists, or safety specialists, in accordance with Chapter 6 of this Manual.

(12) Abatement of Existing Noise Hazards.

(a) The commands, units and activities will undertake the abatement of hazardous noise levels, to the extent possible or practicable in accordance with 1805. Consult subject matter experts such as acoustic engineers or industrial hygienists for guidance.

(b) Conduct engineering control feasibility studies for those areas where continuous sound pressure levels exceed 100 dBA and personnel are exposed for 4 hours or more even though protected by HPDs.

c. Chief, Bureau of Medicine and Surgery (BUMED) will:

(1) Manage the medical (i.e., industrial hygiene, occupational audiology, occupational medicine, and occupational nursing) aspects of the HCP. Support a research and development effort in the medical aspects of hearing conservation. BUMED will coordinate hearing conservation and noise mitigation efforts and report status to senior management through the Navy Executive Safety Board in accordance with references (a) and (cz).

(2) Occupational audiology will develop and maintain collaborative working relationships with supported commands, units and activities in order to implement effective workplace practices and procedures to prevent noise induced hearing loss. This support includes audiometric monitoring, comprehensive diagnostic evaluations, and medical qualification assessments, annual HCP performance reports, hearing injury reports, hearing protection consultations, worksite technical assist visits, and hearing conservation outreach and training evolutions.

(3) Provide advice to other Headquarters commands as requested to assist them in meeting their hearing conservation and noise abatement responsibilities.

(4) Ensure results of medical surveillance and diagnostic hearing tests performed for hearing conservation and personal noise dosimetry documentation become a permanent part of an individual's electronic medical record.

(5) Industrial hygienist or occupational audiologist will assess the adequacy of HPDs, as requested, when HPDs are used in very high noise environments or for extended exposure periods in accordance with reference (ag).

(6) Train individuals to fit preformed earplugs.

(7) Provide commands, units, and activities with hearing injury rates annually as well as notification of STS and OSHA recordable hearing loss.

(8) Industrial hygienist will identify and assess exposure to ototoxic chemicals. Follow the guidance in reference (aw) for assessing chemical exposures.

(9) Work environments or equipment found to have sound pressure levels equal to or greater than 85 dBA for continuous or intermittent noise, or 140 dBP sound pressure level for impact will be analyzed to determine the potential hazard and will be resurveyed within 30 days of any significant modifications or changes in work routine which could impact or alter the noise intensity and exposure level.

(10) Noise exposure assessments will be recorded in Defense Occupational and Environmental Health Surveillance System - Industrial Hygiene (DOEHRS-IH) and conducted in accordance with reference (cr) for all personnel routinely working in hazardous noise areas and performing hazardous noise operations. The exposure assessment will identify which work areas, processes, and equipment produce unacceptable levels of noise, determine the type of hearing protection necessary, i.e. single or double, and identify similarly exposed groups at risk.

(11) Paragraph 1802 outlines the criteria used to determine the degree of compliance with applicable standards.

(12) When personal dosimetry is conducted, the results of the testing and other pertinent information will be documented by industrial hygienists in DOEHRS-IH and provided to the cognizant MTF for inclusion of results into the personnel's medical record.

(13) Measurements using sound level meters and noise dosimeters will be part of the industrial hygiene workplace exposure assessment process and placed in DOEHRS-IH and -HC in accordance with Chapter 8 of this Manual. For noise areas exceeding the capability of double hearing protection, octave band analysis should be provided to assist in noise abatement efforts.

(14) Assess noise in all potentially hazardous noise work areas initially and reassess when operations change using the risk management process in accordance with reference (cy).

(15) Assign RACs to all potentially hazardous noise areas and operations as identified on the PIHS in accordance with reference (da). In cases where measurements appear consistent with risks relevant to a class of systems or defense platforms, these data will also be communicated to relevant technical authorities and/or program (acquisition) or product/equipment managers. Headquarters commands and commands, units and activities commanders, commanding officers, and officers in charge will support and help in coordination of risk communication. Acquisition program managers may be identified via system safety leads for each systems command and/or relevant Assistant Secretary of Navy for Research, Development and Acquisition (ASN RDA) databases (See http://acquisition.navy.mil/home/programs). Product managers and service points of contact for standard stock (NSN) products may be identified via the SD-1 publication available on the Assist database (https://assist.dla.mil/online/start/). See online Web site for reference (da): https://www.wbdg.org/FFC/DOD/UFC/ufc_3_450_01_2003.pdf

(16) Provide hearing readiness data upon request by local commands, units and activities for inclusion in electronic data systems, such as the Medical Readiness Reporting System

(MRRS), Navy and Marine Corps consolidated safety data repository, Web Enable Safety System (WESS) and the Enterprise Safety Applications and Management System (ESAMS).

(17) Provide diagnostic occupational audiology evaluations, disposition assessments, hearing loss prevention recommendations, and consultative medical advice for HCP referred personnel.

(18) Provide appropriate professional and technical hearing conservation guidance and assistance to the Naval Education and Training Command (NETC).

(19) Provide:

(a) Guidelines for Personnel conducting sound level measurements.

(b) Certification of personnel performing hearing conservation audiometry.

(c) Certification of audiometric test chambers.

(d) HCP medical surveillance audiometer calibration.

(20) Maintain DOEHRS Hearing Conservation (DOEHRS-HC) database to measure program effectiveness in accordance with reference (cr) and use to monitor prevalence of hearing loss and provide input to noise control engineering decisions.

(21) DOEHRS Industrial Hygiene Program Offices will use DOEHRS-IH for documentation of noise exposure assessments to include sound level measurements, identification and quantification of noise hazard sources.

(22) Report HCP metrics annually to the Naval Safety Center by 1 Dec for the previous fiscal year.

(23) As requested, evaluates the effectiveness of commands, units and activities HCP based on STS rates, audiograms completion rates, and permanent STS rates in accordance with reference (cr).

(24) Ensures Navy and Marine Corps Public Health Center maintains and promulgates Reference (ag), (aw), and (db). See online Web site for reference (db): https://ibr.ansi.org/Standards/iso.asp

CHAPTER 27
CONFINED SPACE ENTRY (CSE) PROGRAM (NON-MARITIME)

2701. Discussion

a. Confined spaces are enclosures that have limited means of entry and exit, and although they are large enough to get into, they are not designed for continuous employee occupancy. Examples include storage tanks, pits, vaults, vats, water towers, chemical reactors, process vessels, and manholes.

b. his Manual explains the minimum requirements for an acceptable written, site-specific confined space program in situations where a conflict exists, the most restrictive requirement prevails. This chapter establishes Navy policy and minimum procedures for confined space operations under the requirements of reference (gi) for general industry and standards that have been incorporated by reference that are listed in Appendix L. See online Web site for reference (gi).
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9797

2702. Applicability

a. The provisions of this chapter apply to all Navy personnel performing entry into permit-required confined spaces. This chapter does not apply to construction or shipyard employment (except as noted).

b. Naval maritime facilities (NMF) such as naval shipyards, Ship Repair Facilities (SRFs), Regional Maintenance Centers (RMCs), Intermediate Maintenance Facilities (IMFs), Trident Refit Facilities (TRFs), and other Navy commands, units, and activities (including Navy shore non-maritime commands, units, and activities as well as ship's force during maintenance availabilities) that perform shipbuilding, ship repair, or ship breaking are governed by reference (gj). See online Web site for reference (gj).
http://www.dcfpnavymil.org/GFE-FM/gfe-fm/pubs/S6470-AA-SAF-010.pdf

(1) NMF personnel entering land side permit-required confined spaces to perform work related to shipbuilding, ship repair, or ship breaking are governed by reference (gj). All other entry into permit-required confined spaces will follow the requirements of this Manual.

(2) Navy shore non-maritime commands, units, and activities (such as NAVAIR VRTs and NSWCs) performing ship repair operations must comply with reference (gj) Except that those commands, units, and activities Confined Space Program Manager (CSPM) will perform applicable training, administrative duties, and responsibilities applicable to reference (gj) requirements. Navy Competent Person duties must be performed by personnel who have

completed the training and OJT specified in reference (gj). Except that the amount of required shipbuilding, ship repair, or ship breaking experience and OJT may be limited to the appropriate types of operations to be performed by the command, unit, or activity as determined by the CSPM and verified by the NMF GFE or Maritime CSPM where work is to be performed. A certified NFPA Marine Chemist or Board Certified Navy GFE must still be used as required by chapter B8 of reference (ag). See online Web site for reference (ag). https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.19E%20-%20Volume%20I%20Part%20I.pdf

c. Gas free engineering operations for ship's force personnel aboard Naval ships afloat are governed by reference (gk).

d. Aircraft fuel cell requirements are found in reference (gl). See online Web site for reference (gl). http://www.navair.navy.mil/index.cfm?fuseaction=home.displayPlatform&key=E7E98B14-04C5-4315-BB74-95B73C0511C1&highlight=natec

2703. Program Management

a. Commanders, commanding officers, or officers in charge are ultimately responsible for all safety and health issues at their commands, units, and activities. In cooperation with other members of their management team, they must provide continuing support, both motivational and financial; to ensure that an installation's confined space entry program remains effective. They must appoint a qualified CSPM.

b. The CSPM is the only person authorized to amend an installation's confined space program. They have the full authority to make necessary decision to ensure the program's continued success.

c. The CSPM must successfully complete course number A-493-0030, Confined Space Safety, conducted by the Naval Occupational Safety and Health and Environmental Training Center (NAVSAFENVTRACEN), or equivalent. The command, unit or activity OSH office must keep verification of such training on file along with the written appointment to the position. In addition to formal classroom training, the command, unit, or activity must establish a proficiency program to ensure that the CSPM possess the understanding, knowledge, and skill necessary for the safe performance of their duties. The evaluation must be in writing and document any findings/recommendations as result of the evaluation. The command, unit, or activity must take actions based on the evaluation to ensure the safe performance of the duties of the CSPM. The confined space program evaluation must be performed within 6 months of appointing the CSPM, and as part of the periodic echelon 2 Safety and Occupational Health Management Evaluation (SOHME).

d. The CSPM has the authority to appoint additional personnel as necessary to perform duties in support of the confined space program as listed:

(1) Assistant Confined Space Manager (ACSPM). The ACSPM must meet the same qualifying criteria as the CSPM. The CSPM must appoint the ACSPM in writing.

(2) Qualified Person (QP). A Qualified Person is a person who has received formal classroom or proficiency training conducted by the CSPM or ACSPM, must perform duties as assigned by the CSPM or ACSPM. The CSPM must appoint the QP in writing. The QP must be re-appointed annually by the CSPM through demonstration that the individual has been actively engaged in confined space work (i.e. performed atmospheric testing in confined spaces at least 10 times per year) and has performed such work satisfactorily. QPs who have not been actively engaged in confined space work will be evaluated by the CSPM and be able to demonstrate their knowledge, skills, and abilities prior to re-designation by the CSPM.

e. Tenant commands, units, and activities or shore installations participating in a command, unit, or activity safety and occupational health (SOH) program may have the command, unit, or activity CSPM manage and administer the program through a written agreement signed by both parties. In situations where a number of commands, units, or activities that are working in the same confined space and have their own program requirements, the installation that owns the confined space must take the lead to coordinate between all parties the applicable confined space requirements through a written agreement and signed by all parties.

2704. Entry Options. Three options are available with respect to entry into permit-required confined spaces:

a. Reclassify a permit-space as a non-permit space in accordance with paragraph 2707.

b. Implement alternative procedures that require continuous forced mechanical ventilation and continuous air monitoring in situations where the only hazard posed is an atmospheric hazard which can be controlled by ventilation,

c. Establish a permit-entry procedure, which includes provisions for:

(1) Designate authorized entrants, authorized attendants, and authorized entry supervisors as described in paragraph 2708.

(2) Implement a process for issuing, canceling, reviewing and archiving written entry permits as described in paragraph 2708.

(3) Provide for emergency rescue services as described in paragraph 2709.

(4) Implement, if necessary, procedures for entry into atmospheres that are immediately dangerous to life or health (IDLH), as described in paragraph 2710.

2705. Identification of Confined Spaces. The written program will describe the process the installation will use to identify on-site confined spaces. The process must ensure that both permit and non-permit spaces are identified.

2706. Reclassification Procedures. If a permit space poses no actual or potential atmospheric hazards prior to entry, and if all the other hazards within the space are eliminated without entry into the space, the permit space may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated. The command, unit, or activity written program must describe the process used for reclassification of permit-required confined spaces. At a minimum this process must include provisions for:

a. Explaining the basis for determining that the permit space poses no actual or potential atmospheric hazards and that all other hazards can be eliminated without the need to enter.

b. Issuing an "entry certificate" that contains the date, the location of the space, atmospheric test results, and the signature of the person making the determinations described within Chapter 27.

c. Making sure an "entry certificate" is made available and posting it at the site so that each employee entering the space or the employee's authorized representative can be informed of the hazards and conditions of the space.

d. The entry certificate is only valid for a period of time as determined by the CSPM.

e. Canceled entry certificates will be retained for at least 1 year to facilitate the review of the permit-required confined space program.

2707. Permit-Required Program Elements. A permit--will be entered under the auspices of a written, site-specific, entry permit procedure, which at a minimum, describes the process for: Appendix 2-L provides minimum requirements for entry permits.

a. Issuing, canceling, reviewing and archiving entry permits.

b. Designating employees authorized to participate in the entry, including entrants, attendants, and entry supervisors.

c. Rescue response planning, including the process used to identify, evaluate, and select a rescue service provider.

d. Establishing procedures for entry into atmospheres that are immediately dangerous to life or health.

2708. Permit System. The written program will include an explanation of the process used for issuing, canceling, reviewing and archiving entry permits. The process will include provisions that require that:

a. The Entry supervisor sign issued permits indicating that all specified precautions have been taken, that conditions are acceptable for entry and that authorized entrants may proceed into the space.

b. The duration of the permit does not exceed one shift or the time required to complete the assigned task or job identified on the permit, whichever is less. A system can be established to allow an original permit to be amended in order to keep the permit current with entry team members and their activities.

c. A new permit will be issued or the original permit re-issued whenever changing work conditions or work activities introduce hazards into the confined space that were not addressed by the original permit.

d. Completed permits be made available at the time of entry to all authorized entrants or their authorized representatives, by posting at the entry portal or by any other equally effective means, so that the entrants can confirm that pre-entry hazards have been controlled. Any problems encountered during an entry must be noted on the permit so that appropriate revisions to the confined space program can be made.

e. Canceled permits be retained for at least 1 year to facilitate the review of the permit-required confined space program Permits that contain atmospheric testing information that constitutes an employee exposure record will be maintained for the employee's duration of employment plus 30 years as stipulated by 29 CFR 1910.1020.

2709. Rescue Procedures. The written, site-specific plan will describe the process used to:

a. Credible scenarios that may require rescue.

b. Identify potential providers of rescue services.

c. Evaluate the capabilities of potential rescue service providers to assure that they are capable of providing timely rescue services consistent with the nature of the anticipated emergencies, and are in fact able to rescue incapacitated entrants from the space.

d. Develop procedures for summoning rescue services.

e. Provide necessary aid to rescued employees.

2710. Procedures for Entry into IDLH Atmospheres. Entry into, work in, or on a confined space that is immediately dangerous to life and health (IDLH) will not be permitted under normal operations and is only authorized in cases of rescue efforts and extreme emergencies. The written program will describe the site-specific procedures that are followed when entry must be made into spaces that are immediately dangerous to life and health (IDLH). These procedures will include provisions for ensuring that:

a. Installation commanders, commanding officers, officers in charge or their designees are notified, specifically to authorize the entry into the IDLH atmosphere and provide necessary assistance appropriate to the situation.

b. One employee or, when needed, more than one employee, is located outside the IDLH atmosphere during entry.

c. Visual, voice, or signal line communication is maintained between the employees in the IDLH atmosphere and those located outside the IDLH atmosphere.

d. The employees located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue.

e. Employees located outside the IDLH atmospheres are equipped with:

(1) Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA.

(2) Appropriate retrieval equipment for removing the employees who enter these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employees and would not increase the overall risk resulting from entry; or provide equivalent means for rescue where retrieval equipment is not feasible.

2711. Hot Work. The written program will either describe the process used to control hazards associated with hot work, or refer to the installation's hot work program. If reference is made to the installation's hot work program, the CSPM will evaluate that program to determine if it meets the requirements necessary to allow it to be used for confined space entry. Minimum work practices that the hot work program will address are described in Chapter 5 of reference (gi).

2712. Employee Training. Employees who enter confined spaces will possess the understanding, knowledge, and skill necessary for the performance of their duties as described in appendix 3-L. The written program will explain the process the installation uses to ensure that

employees are trained and have demonstrated proficiency in confined space entry. Training will be documented and records kept in accordance with Chapter 6 of this Manual.

2713. Contractor Management Provisions

a. Whenever contractors perform work in an installation's confined spaces, the job will be coordinated so that neither the contractor nor the installation's employees jeopardize each other's safety. The written installation's program will describe the process for managing work contractors perform in the installation's confined spaces. At no time will contractor personnel enter a confined space under the installation's permit or certification. If contractor personnel and Navy personnel occupy the same space certification will be for Navy personnel only and stated so on the permit or certificate.

b. Construction Operations. Construction contractors who enter confined spaces at naval facilities must have a written confined space program that meets the minimum requirements prescribed by reference (au). See online Web site for reference (au). https://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1926

c. Trenches and Excavations**.** Although trenches and excavation appear to meet the definition of a permit-space, specific trenching and excavation regulations more appropriately address the hazards they pose. However, since hazards posed are similar to those associated with confined space entry, procedures must exist that address such things as atmospheric testing, ventilation, and emergency response planning. A separate site-specific trenching and excavation policy rather than the installation's confined space program should address entry into trenches and excavations.

d. Telecommunication, and Electrical generation, distribution and transmission
This section applies to operation conducted in manholes, un-vented vaults or any other confined space covered under reference (au).

e. Confined space operations conducted on a Naval Maritime Facility or ship repair operations at any location must comply with paragraphs 2702.b, except;

(1) If a space contains or has contained liquids, gases, or solids that are toxic, corrosive, or irritant and cannot be ventilated to within the PELs or is IDLH, a certified NFPA Marine Chemist, a Board-Certified Navy GFE, or Certified Industrial Hygienist must re-test the space until the space can be certified SAFE FOR ENTRY or SAFE FOR ENTRY WITH PPE.

(2) In situations that apply to paragraph 2702.b, the CSPM or appointed representative will be trained and knowledgeable of reference (gj) procedures that are applicable to the operations being performed.

2714. Program Evaluation. The CSPM or other appointed qualified person will evaluate the effectiveness of the installation's confined space program at least annually and whenever there is reason to believe that the program may not providing adequate protection to employees. The purpose of this evaluation is to identify program deficiencies and correct them before authorizing subsequent entries. The site-specific written program will describe the process used for conducting and reviewing the installation's confined space program.

2715. Responsibilities

a. CSPM's must:

(1) Ensure a survey to identify existing and potential confined spaces on a base can be conducted.

(2) CSPM must appoint the QP in writing.

(3) Reclassify spaces as "non-permit required" in accordance with the Command, units, or activities written program.

(4) Review and approve the purchase of equipment required for confined space entry.

(5) Ensure, to the extent feasible, that entry permits/entry certificates are reviewed on a periodic basis sufficient to allow identification of problems that could compromise the confined space entry program, and to assure that identified deficiencies are investigated and corrected prior to subsequent entry into the installation. This includes work performed by independent contractors.

b. Assistant Confined Space Program Manager (ACSPM). The ACSPM may be authorized to perform duties equivalent to those of the CSPM. The CSPM must delineate in writing the specific duties and responsibilities of the ACSPM.

c. Qualified Person (QP) must:

(1) Perform atmospheric testing and inspecting for physical hazards in confined spaces.

(2) Determine whether acceptable entry conditions exist, authorizing the entry, overseeing entry operations, terminating the entry, and canceling the entry permit.

(3) The QP must be re-appointed annually by the CSPM through demonstration that the individual has been actively engaged in confined space work (i.e. performed atmospheric testing in confined spaces at least 10 times per year) and has performed such work satisfactorily.

(4) QPs who have not been actively engaged in confined space work will be evaluated by the CSPM and be able to demonstrates their knowledge, skills, and abilities prior to re-designation by the CSPM.

d. Attendants, Authorized Entrants, and Entry Supervisor duties and responsibilities are specified in Appendix 3-L.

CHAPTER 30
INDOOR ENVIRONMENTAL QUALITY

3001. Discussion

a. This Chapter includes all specialties, hazards and risks in the work environment that are typically associated with Indoor Environmental Quality (IEQ) which encompasses thermal comfort, indoor air quality (IAQ), noise, and lighting in accordance with the Environmental Protection Agency (EPA), American Society of Heating, Refrigerating, and Air Conditioning Engineering (ASHRAE), and Navy Industrial Hygiene Field Operations Manual (IHFOM). Poor IEQ detracts from the quality of the work environment. Problems such as uncomfortable air temperature and humidity can decrease productivity. To increase the level of comfort and productivity in the work environment, an effort should be made to evaluate, maintain, and improve IEQ.

b. IEQ includes such parameters as chemical and biological contaminants, physical hazards, and individual perceptions or reactions to these parameters. Multiple causes of poor IEQ exist with any condition and could decrease the quality of the work environment. Some examples are:

(1) Unacceptable Humidity Ranges (generally recognized to be below 30 percent and above 60 percent. Low humidity may lead to dryness and irritation of the nose, throat, skin, and eyes. High humidity aids in the growth of certain molds. Susceptible individuals may experience allergic reactions to mold spores and particulate matter from the breakdown of mold protein.

(2) Insufficient Ventilation. Inadequate fresh air can cause fatigue, drowsiness, poor concentration, and the sensation of temperature extremes without actual temperature changes. An increase of carbon dioxide (CO2) levels is an indicator of poor ventilation. CO2 levels only correlate with the ability of the ventilation system to provide and circulate fresh air, and dilute, remove, and recirculate "stale" air. As detailed in appendix of reference (gw), maintaining CO_2 levels below 700 parts per million (ppm) over outdoor air levels should satisfy a large majority (about 80%) of people with respect to human bio effluents. Acceptable levels of CO_2 in outdoor air typically range from 300 to 500 ppm, and so indoor levels should generally be below 1000 to 1200 ppm. Such acceptable indoor levels of CO_2 generally indicate that the ventilation is adequate to manage the occupant density. See online Web site for reference (gw).
http://www.ashrae.org/ or https://ibr.ansi.org/Standards/iso.aspx

(3) Chemicals. Many modern office furnishings and equipment may emit chemicals (i.e., off-gas) used in their manufacture. Some examples include adhesives, carpeting, upholstery, manufactured wood products, copy machines, pesticides, and cleaning agents.

(4) Biological Contamination. Biological contaminants such as bacteria, molds, pollen, and viruses may be present in stagnant water, air ducts, humidifiers, drain pans, and water-damaged materials. Bird droppings and body parts from insects, rodents, and other pests also contribute to biological contamination. Biological contaminants can trigger allergic reactions and some types of

asthma and can cause some common infectious diseases.

(5) Combustion Products. Combustion products, such as Carbon Monoxide (CO) and nitrogen oxides, can be released by vehicle exhaust, improperly burning furnaces, appliances, and Environmental Tobacco Smoke (ETS).

(6) Building Modifications. Physical modifications within buildings can generate dust. Improper isolation techniques during renovations can release asbestos, lead, mold, and other contaminants into the building and ventilation systems.

(7) Poor Air Distribution. Poorly distributed air in a building can lead to temperature fluctuations, dead air zones and improper air mixing. t.

c. Design Considerations. Proper design for new and renovated buildings precludes many IEQ problems. However, modified structures may experience heating, ventilation, and air conditioning (HVAC) problems such as the system not providing adequate outside air for new uses or increased population density of the space.

3002. IEQ Investigations. Individuals working in buildings with indications of poor IEQ will report the problem(s) to their immediate supervisors.

a. If the Navy maintains the building, the supervisor will coordinate with the designated local facilities maintenance command, unit or activity safety manager. If local and regional assets are unable to determine the cause of the problem, the safety manager must request assistance from the Naval Facilities Engineering Command (NAVFACENGCOM) for building related issues. If there are documented medical issues, the safety manager must also request investigation assistance from the local Chief, Bureau of Medicine and Surgery (BUMED) occupational health service. Chapter 13 of reference (aw) provides guidance on IEQ and performing IEQ investigations. See online Web site for reference (aw).
http://www.med.navy.mil/sites/nmcphc/industrial-hygiene/industrial-hygiene-field-operations-manual/Pages/default.aspx

b. If the building contains Navy personnel, but is maintained by a private enterprise, report the problem(s) to the appropriate facility maintenance organization. If they are unable to resolve the problem(s), contact the command, unit, or activity safety manager to resolve or elevate to higher authority, if needed, and continue the same sequence, described within Chapter 30, as for buildings maintained by the Navy.

c. If the IEQ investigation reveals visible mold contamination, the command, unit, or activity should follow the procedures in references (aw), (gx) and (gy) for assessment and remediation. Facilities must provide a building evaluation to determine the area(s) of water intrusion and make appropriate repairs. After the water source is secured, abate the mold. Mold sampling and analysis are not part of the initial mold evaluation process and is generally not required when mold is present. Routine sampling for mold will not be conducted as part of an IEQ investigation. There are no

health standards for what are "unacceptable" levels of mold in the indoor environment and, therefore, there are no health standards to which to compare mold sampling results. The sampling results do not change the requirement to stop the water intrusion and clean up the contamination, and may further confuse the issue simply because there are no mold exposure standards. Reference (gz) and (ha) provides additional information. See online Web sites for reference (gx), (gv), (gz) and (ha).
https://www.wbdg.org/FFC/DOD/UFGS/UFGS%2002%2085%2000.00%2020.pdf
https://www.wbdg.org/FFC/NAVFAC/INTCRIT/ARCHIVES/fy03_04.pdf
https://www.astm.org/Standards/D7338.htm
https://www.cdc.gov/niosh/topics/indoorenv/moldtesting.html

d. If unable to resolve the IEQ issues using the process in paragraph 3002, the safety manager will request further assistance through the cognizant regional NAVFACENGCOM or BUMED offices.

3003. Environmental Tobacco Smoke

a. A prime source of poor IEQ is environmental tobacco smoke (ETS) which includes electronic smoking devices. As well as being a documented health hazard, many nonsmokers find ETS offensive and irritating in accordance with reference (gw). The National Institute for Occupational Safety and Health (NIOSH), in reference (hb), states the preferable method to protect non-smokers is elimination of smoking indoors. See online Web site for reference (hb).
https://www.cdc.gov/niosh/docs/91-108/default.html

b. In accordance with reference (hc), Department of the Navy (DON) policy on ETS is to protect all personnel in working and public living environments from involuntary exposure to ETS. Navy commands, units and activities must:

(1) Prohibit smoking in all DON vehicles, aircraft, and work buildings. This applies to all Navy active duty, civilian personnel, their dependents, and visitors in DON-controlled locations.

(2) Permit smoking only in facilities/locations designated for smoking. Do not re-circulate air from smoking quarters with air entering non-smoking quarters.

(3) Prohibit smoking in common spaces of multiple housing units (e.g., family housing apartment complexes, bachelor quarters, Navy Lodges, etc.). Any space within a building common to all occupants and visitors, such as corridors, elevators, lobbies, lounges, stairways, rest rooms, cafeterias, snack bars, barber shops, laundry rooms, etc. is defined as common space.

(4) Not locate outdoor areas designated for smoking in areas commonly used or transited by non-smokers. Locate the smoking area away from supply air intakes and building entryways and egresses to prevent ETS entering the building. See online Web site for reference (hc).
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.13E.pdf

3004. Building Design and Maintenance

a. Leadership in Energy and Environmental Design (LEED) is the leading green building certification program in the United States and a criterion, among other parameters, is indoor environmental quality. DoD has demonstrated a commitment to leadership in the design, construction, and operation of high-performance and sustainable buildings.

b. In compliance with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in reference (hd), U.S. Navy installations will strive to incorporate and adopt, as appropriate and practical, the "green building" principles into new and renovated buildings to meet existing safety and occupational health standards for indoor environmental quality areas:

(1) Ventilation and thermal comfort conditions will meet the most recent requirements as stated in references (gw) and (he).

(2) Moisture control strategy must be developed and implemented for controlling moisture flows and condensation to prevent building damage and potential mold contamination.

(3) New construction and renovation will specify materials and products with low airborne emissions including adhesives, sealants, paints, carpet systems and furnishings. For further information, refer to reference (hf). IEQ problems can be precluded through proper planning in the design of new and renovated buildings. Reference (hg), (hh), and (hi) provides guidance. In addition, the EPA has established an IEQ Information Hotline (1-800-438-4318) and Web site: https://www.epa.gov/indoor-air-quality-iaq. See online Web sites for reference (hd), (he), (hf), (hg), (hh) and (hi).
https://www.wbdg.org/FFC/FED/HPSB-MOU.pdf
https://www.ashrae.org/resources--publications/bookstore/standard-55-and-user-s-manual
https://energy.gov/eere/femp/guiding-principles-sustainable-federal-buildings
https://www.cdc.gov/niosh/docs/91-114/
https://www.wbdg.org/FFC/DOD/UFGS/UFGS%2001%2091%2000.15.pdf
http://www.wbdg.org/FFC/DOD/UFGS/UFGS%2001%2078%2024.00%2020.pdf

c. Design and renovation parameters that should be considered include: ventilation design, air flow and mixing and thermal comfort conditions; accessibility for routine inspection and preventative maintenance and for plan review by HVAC engineers; moisture control strategies; using materials and products with low airborne emissions (e.g., adhesives, sealants, paints, carpet and furnishings); and intended uses of the space. See references (gw), (he), (hh), (hi), and (hj). See online Web site for reference (hj).
https://www.ashrae.org/resources--publications/bookstore/commissioning-essentials

d. Building designers frequently use modular office systems to conserve space. These systems often block airflow to parts of the office. During the design and purchasing process, confirm the

modular office systems are compatible with the airflow patterns proposed by the HVAC engineers. Ensure the thermal and ventilation requirements in references (gw) and (he) are still met.

e. Personnel are not authorized to make modifications to the HVAC systems (e.g., by blocking off vents, cutting into duct work to create new vents, removing inspection panels and ceiling tiles, etc.). Personnel will report ventilation problems according to the guidance given in paragraph 3002.

f. Ensure employee concerns or complaints of IEQ problems are investigated and resolved in a timely manner using procedures in paragraph 3002.

g. Commanders, commanding officers, and officers in charge will ensure effective programs of routine inspection and preventive maintenance of all HVAC systems and spaces.

3005. Responsibilities

a. Echelon 2 and headquarters commanders, commanding officers, and officers in charge.

(1) Provide guidance and assistance to subordinate commands, units, and activities to ensure effectiveness of this program.

b. Chief, Bureau of Medicine and Surgery (BUMED)

(1) Budget adequate resources for Navy Medicine to support this policy.

(2) When requested, provide support for health related IEQ investigations as requested in accordance with paragraph 3002 of this Manual.

c. Commander, Naval Facilities Engineering Command (COMNAVFACENGCOM)

(1) Ensure employee concerns or complaints of IEQ problems are investigated and resolved in a timely manner using the process in paragraph 3002 of this Manual.

(2) Ensure building construction and modification plans reflect consideration of IEQ issues and comply with requirements described in paragraph 3004 of this Manual.

(3) Ensure HVAC systems in new buildings and renovation or replacement of HVAC systems in existing buildings meet the specification in the AHSRAE standards in references (gw) and (he).

(4) When appropriate and requested in accordance with paragraph 3002 of this Manual, provide engineering support for building and engineering related IEQ investigations.

(5) Ensure mold is properly abated by trained Navy personnel or through contracts using reference (gy).

(6) Inspect HVAC systems (at least semiannually or annually is recommended) to prevent the buildup of dust, mold, or parasites. Change filters as needed.

d. Commanders, commanding officers, and officers in charge

(1) Establish smoke-free buildings and zones complying with requirements described in paragraph 3003 of this Manual and reference (hc).

(2) Ensure IEQ issues are considered in the design of new buildings and during modification of existing buildings complying with requirements described in paragraph 3004 of this Manual.

(3) Coordinate with COMNAVFACENGCOM to ensure that HVAC systems in new buildings meet the specifications in ASHRAE standards contained in references (gw) and (he).

(4) Ensure HVAC systems in new or existing buildings meet specifications in ASHRAE standards contained in references (gw) and (he) and paragraph 3004 requirements of this Manual.

(5) Ensure effective programs for routine inspections and preventative maintenance are implemented for all HVAC system and spaces, including HVAC accessibility, in accordance with paragraph 3004 of this Manual.

(6) Ensure employee do not interfere with the air movement or thermostats by covering air vents or obstructing air flow from registers with furniture equipment or materials.

(7) Ensure employee concerns or complaints regarding IEQ problems are investigated properly and resolved in a timely manner using the procedures in paragraph 3002 of this Manual.

e. Safety Manager, Collateral Duty Safety Officer, or Base Operating Support safety liaison. If personnel in the building are having medical issues, the safety manager will request assistance from the cognizant BUMED occupational health service. Guidance and information resources are in reference (aw) and on the NMCPHC Indoor Environmental Quality and Mold Resources webpage, http://www.med.navy.mil/sites/nmcphc/industrial-hygiene/Pages/Industrial-Hygiene-Topics.aspx.

(1) Refer personnel with medical complaints to the supporting occupational health department for evaluation.

(2) Industrial hygiene will provide assistance as needed to help facilities resolve IEQ issues. Note that investigation assistance from BUMED IH does not typically include sampling and analysis for mold, especially when visible mold is present.

f. Employees.

(1) Report IEQ problems to immediate supervisor.

(2) Do not interfere with the air movement or thermostats by covering air vents or obstructing air flow from registers with furniture equipment or materials (e.g., blocking off vents, cutting into duct work to create new vents, removing inspection panels and ceiling tiles, etc.).

CHAPTER 35
ELECTRICAL SAFETY

3501. Discussion.

a. This chapter provides requirements to establish electrical safety programs to protect Navy civilian and military personnel from electrical hazards, and to prevent mishaps that could cause injuries and extensive damage to equipment. Navy military and civilian personnel include both those whose jobs involve electrical work (i.e., qualified electrical workers) and those who do not work with electrical energy but who may inadvertently come in contact with electrical energy (i.e., unqualified workers).

b. While this chapter does not repeat the OSHA standards, references (ae), (ik) through (im), it pulls some key requirements from them, as well as the National Fire Protection Association (NFPA) Standard for Electrical Safety in the Workplace, reference (do), and Unified Facility Criteria Electrical Safety Operations and Maintenance Standard, reference (in), to assist all Navy personnel ashore to navigate through the standards and to work safely. Electrical lock out tagout and lock out tags plus policy continues to be included in the chapter on energy control, Chapter 24. See online Web sites for references (ea), (do), (ik), (il), (im), and (in).
http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=9912&p_table=STANDARDS
https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=70
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9868
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10915
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9787
https://www.wbdg.org/FFC/DOD/UFC/ufc_3_560_01_c1_2018.pdf

3502. Program Definitions and Hazards. The OSHA standards and those incorporated by reference provide general requirements for working safely with electrical and electronic equipment ashore. Electrical hazards are particularly dangerous because the human body usually does not sense electrical energy until contact is made and significant injury has already occurred. Workers must always be aware of the location of energized equipment and its voltage level at each job site. Additionally, workers must be aware of the possible sources of electrical feedback from other energized power sources into the work site. These hazards must be determined prior to starting work. Examples of the hazards present during electrical and electronic work include:

a. Electric Shock. Voltages as low as 30 volts may be fatal, depending upon the path of the current, whether it passes through the heart, the amount of current, and the length of time the current is flowing.

b. Fire. Electronic equipment fires generally occur from electrical short circuits, overloaded circuits, improper use of electrical equipment, overheated motors, and use of flammable liquids in the presence of an electric spark or hot surface as well as paper in contact with an overheated surface.

c. Arc Flash. An arc flash is the sudden release of electrical energy through the air when a high-voltage gap exists and there is a breakdown between conductors. An arc flash gives off thermal radiation (heat) and bright, intense light that can cause burns. Temperatures have been recorded as high as 35,000 ˚F. High–voltage arcs can also produce considerable pressure waves by rapidly heating the air and creating a blast. This pressure burst can hit a worker with great force and send molten metal droplets from melted copper and aluminum electrical components great distances at extremely high velocities. These and other hazards can be eliminated or reduced by pre-job planning (e.g., job hazard analysis) which must include engineering guidance in understanding the system's operation and review of up-to-date single line and schematic as-built drawings. All apparel, tools, and other equipment required for worker safety must be identified and available before beginning the job.

3503. Electrical Safety Program General Requirements.

a. The electrical safety program must be an integral part of the command, unit, or activity safety program.

b. The electrical safety program must be designed to provide an awareness of potential electrical hazards for persons who might occasionally work in an environment influenced by the presence of electrical energy as well those who use electrical tools and equipment.

c. An electrical safety program must include all the elements needed to provide guidance to employees in addition to:

(1) Ensuring that electrical safety is included in design, contracts and procurement of electrically powered equipment.

(2) Updating training as necessary.

(3) Providing current procedures for working within the Limited Approach Boundary of energized electrical conductors or parts operating at 50 volts or more that guide worker actions.

(4) Reviewing work processes to ensure that procedures are changed when necessary.

(5) Requiring personal protective equipment (PPE) for different work tasks.

(6) Auditing processes that identify and monitor developing knowledge or changes about equipment and maintenance requirements.

(7) Ensuring that electrical safety requirements are included in acquisition of new facilities, ships, tools, etc.

(8) Providing electrical safety expertise to the investigation of electrical mishaps or near miss events. The optional Electrical Mishap Investigation form OPNAV 5100/39T may be used to assist in this effort. Chapter 14 and OPNAVINST 5102.1 provide additional information on mishap investigation and reporting.

d. The electrical safety program must identify the hazard and risk evaluation procedure to be used before work is started within the Limited Approach Boundary for energized circuits operating at 50 volts or more or where an electrical hazard exists.

3504. General Electrical Safety

a. All electrical equipment must be installed in accordance with reference (io). See online Web site for reference (io).
http://www.nfpa.org/catalog/product.asp?link_type=buy_box&pid=7014SB&icid=A647

b. All equipment will be used following the underwriters laboratory listing guidance and will be used following the manufacturer's instructions or technical manuals.

c. Maintenance will be performed on electrical equipment following manufacturer's instructions and technical manual instructions.

d. Precautions for equipment commonly found in workplaces. The equipment in paragraphs f through k is found in many environments. Specific precautions and instructions for these will be applied.

e. Adapters. Adapters to plug 3-prong electrical plugs into 2-prong receptacles are prohibited. These defeat the electrical grounding circuit and can create a hazard.

f. Extension cords. Use extension cords only when necessary and only on a temporary basis, not to exceed 90 days.

(1) When disconnecting cords, pull the plug body, rather than the cord itself. Pulling on the cord damages the conductors and the terminations in the plug.

(2) Use only 3-wire extension cords for appliances and power tools with 3-prong plugs. Never remove the third (round or U-shaped) grounding prong, which is a safety feature designed to reduce the risk of shock and electrocution. Appliances, refrigerators, microwave ovens, and space heaters must be plugged directly into wall outlets never into an extension cord.

(3) Stringing of extension cords, surge protectors, or uninterruptible power supplies (i.e., daisy chain or splitting), or going from one cord to several (i.e., tree branching), is prohibited unless approved by local safety authority.

(4) Do not use extension cords to raise and lower equipment.

(5) Do not plug extension cords into plug strips or surge protectors.

(6) Do not run extension cords through walls, ceilings, floors, doors, or windows. Do not conceal behind walls, dropped ceilings, or floors.

(7) Do not place extension cords where they will be walked on, nor ran over by equipment. If extension cords must be placed in travel lanes, they must be protected by housings, bridges, or covers approved for such use.

g. Portable cord- and plug-connected equipment and flexible cord sets (e.g., extension cords) will be visually inspected for external defects (e.g., loose parts, deformed and missing pins, or damage to outer jacket or insulation) before use on any shift, and for evidence of possible internal damage (e.g., pinched or crushed outer jacket). Cord-and plug connected equipment and flexible cord sets (e.g., extension cords) which remain connected once they are put in place and are not exposed to damage need not be visually inspected until they are relocated. If there is a defect or evidence of damage that might expose an employee to injury, the defective or damaged item will be removed from service, and no employee may use it until repairs and tests necessary to render the equipment safe have been made by a qualified electrician.

h. Multi-receptacle surge protectors are typically rated for a total of 15 amperes. The total ampere load to be plugged into a 15-ampere rated surge protector must not exceed 12 amperes.

i. Ground fault circuit interrupters (GFCI)

(1) All GFCI protected outlets must be installed as required by reference (io).

(2) Periodic testing with a GFCI tester is recommended to ensure the GFCI is functioning at the correct current levels. Replace defective GFCI receptacles.

(3) A GFCI is required for receptacles, tools, and equipment in wet or damp locations, including outdoors. A portable GFCI must be used when a permanently installed GFCI receptacle is not available.

j. Portable electric heaters. The local command, unit, or activity will establish a policy on portable electric heaters. Portable electric heaters are high-wattage appliances that have the potential to overload circuits and/or cords.

(1) Do not operate a heater suspected of being damaged. Before use, inspect the heater, cord, and plug for damage. Follow all operation and maintenance instructions or visit http://www.recalls.gov to see if that model of electric heater has been recalled. Also, visit the Consumer Safety Product Services Web site at http://www.cpsc.gov for additional information.

(2) Do not leave the heater operating while unattended or while sleeping.

(3) Keep combustible material such as beds, sofas, curtains, papers, and clothes at least 3 ft (0.9 m) from the front, sides, and rear of the heater.

(4) Be sure the heater plug fits tightly into the wall outlet. If not, do not use the outlet to power the heater.

(5) During use, check frequently to determine if the heater plug or cord, wall outlet, or faceplate is hot. If so, discontinue use of the heater and have a qualified electrician check and, if necessary, replace the plug or faulty wall outlet(s). If the cord is hot, disconnect the heater, and have it inspected and, if necessary, repaired by an authorized repair person.

(6) Do not power the heater with an extension cord or power strip.

(7) Ensure that the heater is placed on a stable, level surface, and located where it will not be knocked over.

(8) Always keep electric heaters away from water, and do not touch an electric heater if skin or clothing is wet.

(9) In older buildings, consult with supporting facility electricians to determine if the building wiring can support the additional load of portable electric heaters.

k. Requirements for Temporary Wiring. Temporary electrical power and lighting installations 600 volts or less, including flexible cords, cables and extension cords, may only be used during and for renovation, maintenance, repair, or experimental work. The duration for temporary wiring used for decorative lighting for special events and similar purposes may not exceed 90 days.

l. Shore-to-Ship Power. A malfunction or misapplication of shore-to-ship power equipment could cause at least an inconvenient interruption of electrical service to a ship. At worst, it could threaten the lives of personnel, damage critical shipboard, and shore power equipment, or completely disable a ship. When connecting and disconnecting, all steps in procedures must be followed and total compliance is critical to mitigating the hazards of shore power connections and disconnections. Refer to reference (ip). See online Web site for reference (ip):
https://www.secnav.navy.mil/doni/Directives/11000%20Facilities%20and%20Land%20Management%20Ashore/11-300%20Utilities%20Services/11310.3C.pdf

m. Unplug all electrical decorations when work area is unoccupied.

3505. General Electrical Work Principles

a. General work principles.

(1) Assume all conductors are live until tested.

(2) Safety related work practices must be used while persons are exposed to electrical hazards from electrical conductors or circuit parts that are or can become energized. Specific safety-related work practices must be consistent with the nature and extent of the associated electrical hazards.

b. Wet or Damp Locations. Work in wet or damp work locations (i.e., areas surrounded or near water or other liquids) should not be performed unless it is absolutely critical. Electrical work should be postponed until the liquid can be cleaned up. These special precautions must be incorporated while performing work in damp locations:

(1) Only use electrical cords that have (GFCIs).

(2) Place a dry barrier over any wet or damp work surface.

(3) Remove standing water before beginning work.

c. All electrical wiring and equipment must be a type listed by a nationally recognized testing laboratory for the specific application for which it is to be used.

3506. Electrically Safe Work Condition

a. The normal condition required for performance of electrical work is an electrically safe working condition. Energized electrical conductors and circuit parts to which personnel might be exposed must be put into an electrically safe work condition before work is performed, if personnel are within the limited approach boundary, or there is an interaction with the equipment where conductors are not exposed, but an increased risk of injury from an exposure to arc flash hazard exists.

b. Before work is begun, the qualified person must ascertain whether any part of an electric power circuit (exposed or concealed) is located such that the performance of work could bring any person, tool, or machine into physical or electrical contact with it. Some equipment has more than one source of power that requires opening multiple breakers or switches and/or removing multiple fuses.

c. Steps to establish an Electrically Safe Work Condition

(1) De-energize the circuit and equipment. The circuit and equipment to be worked on must be disconnected from all electric energy sources. Control circuit devices, such as pushbuttons, selector switches, and interlocks, may not be used as the sole means for de-energizing circuits or equipment. Stored electric energy which might endanger personnel must be released.

(2) Apply lock or tag to the disconnecting means using the control of hazardous energy, in accordance with Chapter 24.

(3) Verify the de-energized condition. Use appropriate test equipment to test the circuit elements and electrical parts of equipment to which personnel will be exposed and verify that the circuit elements and equipment parts are de-energized.

3507. Energized Work. Energized work is where work is being performed inside the Limited Approach Boundary or where exposed, energized electrical conductors or circuit parts are readily accessible by inadvertent contact with tools or personnel when the electrical conductor or circuit parts have not been placed in an Electrically Safe Work Condition.

a. A qualified worker can perform work on or near exposed energized conductors or circuit parts under these conditions:

(1) De-energizing the conductors or equipment could result in an increased hazard.

(2) De-energizing the conductors or equipment could require a complete shut-down of an essential process.

(3) The work to be done is infeasible in a de-energized state due to equipment design or operational limitations.

b. Work on energized electrical equipment when not placed into an electrically safe work condition requires an energized electrical work permit approval by the commander, commanding officer, officer in charge or in his or her absence, the command duty officer (CDO). The commander, commanding officer, or officer in charge may designate a senior manager to approve energized work permits. Permits that cover routine work tasks to be performed by trained and qualified persons can be written to cover a long period of time, for example if the worker is trained and wearing the necessary PPE, a permit might be issued for three months to replace a fuse that involves an exposed energized electrical conductor.

c. Work permits must include but are not limited to:

(1) A description of the circuit and equipment to be worked on and its location.

(2) Justification why the work must be performed in an energized state.

(3) A description of safe work practices to be employed.

(4) Results of the shock analysis.

(5) Determination of shock protection boundaries.

(6) Results of the arc flash hazard analysis.

(7) The necessary personal protective equipment.

(8) Means employed to restrict the access of unqualified persons from the work area.

(9) Evidence of completion of a job briefing including a discussion of job specific hazards.

d. An energized electrical work permit is not required for the instances listed. However, all of the appropriate electrical safety practices do apply.

(1) Performing a voltage verification to establish an electrically safe working condition.

(2) Testing, troubleshooting, and voltage measuring where

(a) There are no exposed energized electrical circuits or parts, and

(b) There is no interaction with the equipment that would increase the likelihood of an arc flash.

3508. Training

a. Training requirements must apply to all persons who face an electrical hazard. The training must include: what electrical hazards are present in the workplace; understand how each electrical hazard affects the human body; how to determine the degree of each hazard; understand how exposure to each electrical hazard might exist in each step in the work task; safety related work practices; how to minimize risk by body position; understand the characteristics of what PPE is needed; how to select and inspect PPE; what electrical safety program SOPs must be implemented; how to determine limited, restricted and prohibited approach boundaries; recognizing symptoms of electrical shock, electrical shock trauma; and how to request emergency assistance and emergency first aid responder techniques if their duties warrant such training.

b. Training should include classroom or on-the-job and actual performance of the work under the supervision of knowledgeable persons. The degree of training needed must be determined by the employee's associated work tasks.

c. A qualified person (QP), i.e., those permitted to work on or near exposed energized parts, will, at a minimum, be trained in and familiar with:

(1) The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment.

(2) The skills and techniques necessary to determine the nominal voltage of exposed live parts, and

(3) The clearance distances specified in 1910.333(c) and the corresponding voltages to which the qualified person will be exposed.

d. For a person to be considered qualified, they must have the craft training necessary to be knowledgeable in the operation of the equipment associated with the work task or the specific work method.

3509. Personal Protective Equipment

a. When a worker is working within the Arc Flash Protection Boundary he or she must wear arc-rated clothing and other PPE as required by the job task.

(1) Arc-rated clothing must be worn wherever there is possible exposure to an electric arc flash above the threshold incident energy level for a second degree burn.

(2) PPE used for protection from the thermal hazards associated with an arcing fault must be arc-rated.

(3) The garment manufacturer's instructions for arc-rated clothing washing, laundering and maintenance must be followed.

b. Workers must wear nonconductive head protection wherever there is a danger of head injury from electric shock or burns due to contact with energized electrical conductors or circuit parts or from flying objects resulting from an electrical explosion.

c. Workers must wear protective eyewear, footwear, hand and arm protection which conform to applicable ASTM and ANSI standards. Properly tested rubber insulating gloves must be rated for the voltage for which the gloves will be exposed.

d. Workers must use insulated tools and/or handling equipment when working inside the Limited Approach Boundary of exposed energized electrical conductors or circuit parts where tools or handling equipment might make accidental contact. References (ea) and (io) provide further information for tasks that require insulated tools.

e. Personnel must be adequately trained to administer first aid and cardiopulmonary resuscitation, refer to chapter 6 for additional guidance.

3510. Responsibilities.

a. Commanders, Commanding Officers, and Officers in Charge must develop and implement an electrical safety program.

(1) The electrical safety program will directly address all electrical hazards that exist at the installation.

(2) The electrical safety program will provide the appropriate guidance for determining and mitigating the electrical hazards associated with the voltage, arc flash energy level, and circuit conditions of the work being performed. The electrical safety program must be written and available to all affected persons.

(3) Supervisors and managers at the command, unit, or activity level must enforce the applicable principles as they pertain to the systems under their cognizance.

(4) Supervisors and managers will ensure mishap, near miss, and hazard reports are made to Naval Safety Center in accordance with Navy and Marine Corps Hazard and Mishap Notification and Record Keeping Manual, reference (m). See online Web site for reference (m). https://www.secnav.navy.mil/doni/allinstructions.aspx#InplviewHashcd83a2ac-33e0-4ef2-b888-8820a1d38ac8=Paged%3DTRUE-p_FileLeafRef%3D3900%252e25D%252epdf-p_ID%3D3288-PageFirstRow%3D501

b. The Naval Education and Training Command must perform those duties identified in paragraph 0206e as well as:

(1) Develop electrical safety training and establish training guidelines for electrical safety.

(2) Evaluate training to ensure courses meet the training guidelines.

c. NAVFAC and their field activities must:

(1) Ensure electrical safety is integral to construction and repair work, including contracts.

(2) Provide assistance to activities for arc flash hazard analysis.

(3) Participate in update of the unified facilities requirements for electrical safety, reference (in).

d. All echelon 2 commands (except CNIC) must ensure their field activities establish electrical safety programs for mission safety and echelon 2 commands must audit these programs as outlined in Chapter 3.

e. Naval Supply Systems Command and their field activities must provide electrical safety support to ensure that equipment available for purchase throughout the Navy supply system meets electrical safety requirement.

f. Naval Air Systems Command and their field activities must provide electrical safety support to ensure that naval aircraft are maintained to meet electrical safety requirements.

g. Chief, Bureau of Medicine and Surgery and their field activities must provide occupational medicine support as outlined in Chapter 8.

h. Naval Sea Systems Command and their field activities must ensure that electrical safety is integral to their ship-related mission via this chapter and their Naval Ships Technical Manual 300, reference (iq).

i. Commander, Navy Installations Command is responsible for electrical safety in administrative buildings on installations (i.e., base operating support (BOS)), excluding the construction and repair work conducted by Naval Facilities Engineering Command.

j. Commands, units, and activities that design and build electrical equipment must have a program in place to ensure that the equipment is built to the applicable standards so that personnel using the equipment are not exposed to electrical hazards.

CHAPTER 36
TRAFFIC SAFETY PROGRAM

3601. Discussion. This chapter assigns responsibilities and establishes policy for the Navy Traffic Safety Program at commands, units and activities.

3602. Background

a. The primary goal of the Navy Traffic Safety Program is to reduce, and ultimately eliminate, motor vehicle mishaps and the deaths, injuries, and property damage associated with them. Motor vehicle mishaps remain an ever present threat that causes significant harm to our sailors, civilian employees, communities, and the ability to successfully complete our mission. Commanders, Commanding Officers, and Officers-In-Charge at all levels must fully incorporate the requirements of this chapter into all operations. Deliberate and seamless integration from the command level on down is vital to ensure an effective traffic safety program is implemented across the Navy Enterprise.

b. The Navy Traffic Safety Program will be managed in concert with all applicable federal, state, local, and host-nation laws or regulations. No listed requirement should be assumed to allow or direct circumvention of any legal requirement.

3603. Scope

a. This chapter applies to:

(1) All Navy military members at all times, on or off duty.

(2) All Navy civilian employees operating a vehicle in the performance of their assigned duties.

(3) All individuals on a Navy installation.

(4) All operators or passengers in a vehicle owned, rented, or leased for Navy use.

b. Violation of provisions of this chapter by military members may be punishable under the Uniform Code of Military Justice (UCMJ).

c. Violations of the provisions of this chapter by civilian employees may subject them to adverse personnel action, per applicable civilian personnel instructions.

3604. General Traffic Safety Requirements

a. Government Motor Vehicle (GMV) Requirements.

(1) All motor vehicles owned, rented, or leased for Navy use must meet the requirements of references (ir) and (is). Tactical and combat vehicles must only comply with reference (ir). See online Web site for references (ir) and (is):
https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605504p.pdf?ver=2018-11-19-123028-643
https://www.govinfo.gov/content/pkg/CFR-2017-title49-vol6/xml/CFR-2017-title49-vol6-part571.xml

(2) All Government-maintained vehicles (including non-appropriated fund vehicles, Government-owned, and contractor-operated vehicles) must pass a safety inspection at least annually. This safety inspection will include technical requirements of local, state, or host-nation vehicle inspection standards. These systems and components will be evaluated, at a minimum: safety belts, air bags, lighting, glazing (windshields and side glass), exhaust system, wipers, horns, brake systems, steering systems, suspension, tires, and wheel assemblies.

b. General Operator Licensing.

(1) All operators of government and privately-owned motor vehicles must be properly licensed or permitted when operating these vehicles on public and Navy owned or controlled roadways. Vehicle operators will follow and stay aware of applicable host-nation, federal, or state licensing procedures including Status of Forces Agreements.

(2) Licensing guidance, policy, and procedures for driver testing and issuance of Optional Form (OF) 346 U.S. Government Motor Vehicle Operator's Identification Card is contained in reference (hz). See online Web site for reference (hz):
http://www.public.navy.mil/NAVSAFECEN/Documents/shore/motor_vehicle/2003_NAVFAC_P-300.pdf

(3) Motorcycle Operator Licensing.

(a) CONUS. All operators of government and privately-owned motorcycles must be properly licensed or permitted when operating these vehicles on public and Navy owned or controlled roadways. For tactical motorcycle operators, a valid OF-346 with a motorcycle endorsement accompanied with a valid state driver's license fulfills this requirement.

(b) OCONUS. Operators of government-owned and privately-owned motorcycles in countries that do not accept U.S. motorcycle safety training courses for licensing purposes may be issued certificates or endorsements to ride provided they complete a COMNAVSAFECEN approved motorcycle safety course. These certificates or endorsements are issued by the commander, commanding officer, or designated representative. Certificates must not violate any host-nation or other command agreements, regulations, or orders and will not be valid in the United States.

c. Maximum Driving Time.

(1) Official Duty

(a) The operational risk management (ORM) process required under reference (it) will be applied when planning trips and all risk factors that could lead to a motor vehicle mishap will be considered. It is strongly encouraged for supervisors to review all travel plans, including mode of transportation, driving distance and time, rest periods, and accommodations prior to approval of official travel. See online Web site for reference (it): https://www.secnav.navy.mil/doni/Directives/03000%20Naval%20Operations%20and%20Readiness/03-500%20Training%20and%20Readiness%20Services/3500.39D.pdf

(b) No one may drive or require another person to drive more than a total of 11 hours in a 24-hour period. A 14-hour duty day, including driving and all other duties, will be the maximum allowed unless required under exceptional conditions. Exceptions to these limits may only be approved at the Commanding Officer, Officer-In-Charge, or Executive Officer level upon completion of a formal risk assessment meeting the requirements of reference (it). Emergency vehicle operators assigned to rotating shifts with sleeping accommodations are exempt.

(c) Operators will follow any host-nation, federal, or state guidelines that may exist regarding maximum driving time.

(d) Use of alcohol or potentially impairing drugs within the 8 hours prior to operating a GMV or PMV for official duty is prohibited.

(e) Drivers carrying explosives or other hazardous cargo will comply with 49 CFR 395, NAVSEA SW020-AG-SAF-010 and NAVSEA SW020-AF-HBK-010.

(2) Off-Duty

(a) Military members will apply the ORM process required under reference (it) when planning trips and will consider all risk factors that could lead to a motor vehicle mishap. It is strongly encouraged for supervisors to review all travel plans, including mode of transportation, driving distance and time, rest periods, and accommodations prior to leave approval. The use of TRiPS is highly recommended to meet this requirement.

(b) Military members, while in a leave or liberty status, will be aware of defined liberty limits and regulations constantly taking into consideration the local situation, including the surrounding facilities, availability of transportation, commuting distances, and other factors.

(c) All personnel will follow any host-nation, federal, or state guidelines that may exist regarding maximum driving time.

d. Occupant Protection. All operators and occupants will follow host-nation, federal, or state laws regarding occupant protection.

(1) Safety Belts – GMV.

(a) GMVs will be equipped with safety belts meeting the requirements of reference (is). Safety belts will be maintained in a serviceable condition.

(b) Vehicle occupants will properly wear safety belts. Occupants will not ride in seating positions where safety belts have not been installed, have been removed, or rendered inoperative.

(c) Passengers will not ride in the cargo areas of motor vehicles when prohibited by host-nation, federal, state, or local laws. When not prohibited by law, passengers in cargo area must use safety belts that meet the requirements of reference (is). Occupants in tactical vehicles without seat belts will remain wholly seated inside the body of the vehicle.

(d) The use of child safety seats in vehicles will be consistent with host-nation, state, or local laws. The safest location for an installed child safety seat is in the center of the rear seat. Do not install child safety seats in the front seat of a vehicle equipped with a passenger side air bag.

(e) Vehicle drivers always hold responsibility for ensuring all occupants comply with safety belt and child safety seat requirements. For military member occupants, the senior ranking person is also responsible.

(f) If any part of the safety belt assembly or air bag system malfunctions, is recalled, or otherwise deemed inoperable the driver will ensure it is reported immediately and the vehicle will be placed out of service until repaired or replaced.

(2) Safety Belts – PMV.

(a) All military members and civilian employees on a Navy installation will properly wear safety belts when occupying a motor vehicle in operation. Individuals will not ride in seating positions where safety belts have not been installed, have been removed, or rendered inoperative.

(b) Passengers will not ride in the cargo areas of motor vehicles when prohibited by host-nation, federal, state, or local laws. When not prohibited by law, passengers in cargo area must use safety belts that meet the requirements of reference (is).

(c) The use of child safety seats in vehicles will be consistent with host-nation, state, or local laws. The safest location for an installed child safety seat is in the center of the rear seat. Do not install child safety seats in the front seat of a vehicle equipped with a passenger side air bag.

(d) Vehicle drivers always hold responsibility for ensuring all occupants comply with safety belt and child safety seat requirements.

e. Motorcycles. Motorcycles are motor vehicles with a seat or saddle for the rider(s) and designed to travel on not more than three wheels. They are normally steered with a handlebar and may or may not have a sidecar. They include mopeds, motor scooters, and pocket bikes.

(1) Only motorcycles that meet the requirements of reference (is) will be operated on DON owned and controlled roadways.

(2) Motorcycle use will comply with local installation, host-nation, federal, state, and local laws and regulations.

(3) Motorcycles designed for off-road use only, gas-powered or electric mini-bikes, pocket bikes, Segways, and similar type vehicles that do not meet reference (is) will not be operated on DON owned and controlled roadways.

f. Autocycles. Autocycles are broadly defined as three-wheeled motor vehicles designed for on-highway use with a steering wheel, foot pedals for acceleration and braking, occupant seating, and seat belts. They are driven similar to a standard passenger vehicle and may or may not have enclosed cabins, airbags, or rollover protection. They are required to meet the motorcycle requirements in reference (is), as they are not currently recognized at the federal level. However, many states have established their own definitions, laws, and limitations for their use. Autocycles that do not meet federal safety standards for passenger vehicles will not be owned, rented, or leased for Navy use. Operators of autocycles that fully comply with all current federal, state, local, and host-nation laws and regulations will be allowed on Navy owned and controlled roadways. Operators of autocycles will not be required to meet the motorcycle operator training requirements of this chapter.

g. All-Terrain Vehicles (ATV). ATVs are four-wheeled vehicles that generally do not provide occupant protection features and are not designed for on-highway use. They are normally steered with a handlebar, have throttle controls, hand levers for breaking, and require riders to straddle a seat and shift their body weight to steer the vehicle.

(1) ATVs that do not meet the requirement of reference (is) will not be operated on Navy owned or controlled roadways. Where allowed, their use will be restricted to off-road areas. Installation commanders will designate areas approved for use.

(2) Commands using these vehicles will establish standard operating procedures, authorized areas of usage, perform annual vehicle inspections, and ensure the vehicles are operated and maintained in accordance with the manufacturer's guidance. Vehicles utilized off the installation will comply with host-nation, federal, state, local laws and regulations.

h. ROV and Similar Off-Road Vehicles. Recreational off-highway vehicles (ROV), utility terrain vehicles (UTV), and other types of off-road vehicles (ORV) generally provide some level of occupant protection features and are not designed for on-highway use. These vehicles generally have a steering wheel, foot pedals for acceleration & braking, seats, side retention features, and rollover protection. They may or may not have doors, windshields or windows.

(1) ROVs, UTVs, and similar types of ORVs that do not meet the requirement of reference (is) will not be operated on Navy owned or controlled roadways. Where allowed, their use will be restricted to off-road areas. Installation commanders will designate areas approved for use.

(2) Commands using these vehicles will establish standard operating procedures, authorized areas of usage, perform annual vehicle inspections, and ensure the vehicles are operated and maintained in accordance with the manufacturer's guidance. Vehicles utilized outside Navy installations will comply with host-nation, federal, state, local laws and regulations.

i. Emergency Vehicles (EV). Vehicles used to transport people and equipment for emergency response. They may include vehicles used for fires, medical emergencies, law enforcement, crash and rescue, explosive ordnance disposal, hazardous material responses, and other types of emergencies. Commands utilizing EVs will establish standard operating procedures, authorized areas of usage, perform annual vehicle inspections, and ensure the vehicles are operated and maintained in accordance with the manufacturer's guidance, where applicable.

j. Government Vehicle Other (GVO). Government owned vehicles primarily for off-highway operation that may be used to provide transport for one or more individuals. They include, but are not limited to, multi-tracked or multi-wheel vehicles, forklifts, aircraft tugs, motorized scooters, golf carts, agricultural vehicles, amphibious vehicles, ground effect air cushion vehicles, wind powered vehicles, or other means of transportation deriving motive power from a source other than muscle (hand or foot) power.

(1) Commands utilizing GVOs will establish standard operating procedures, authorized areas of usage, perform annual vehicle inspections, and ensure the vehicles are operated and maintained in accordance with the manufacturer's guidance, where applicable.

(2) GVOs will meet host-nation, federal, state, local laws and regulations, where applicable.

(3) GVOs not designed for on-highway use will not be operated on Navy owned or controlled roadways.

k. Low Speed Vehicles (LSVs). LSVs are motor vehicles designed to operate at least 20 miles per hour, but no greater than 25 miles per hour. LSVs operated on roadways will be marked with the slow moving vehicle emblem in accordance with reference (hz). All LSVs will meet the safety requirements of reference (is) such as windshields, exterior mirrors mounted on driver and passenger sides of the vehicle, head lamps, tail lamps, brake lamps, emergency flashers and turn signals, reflectors, parking brake, safety belts, and vehicle identification number. They also will meet host-nation, federal, state, and local safety requirements. Non-standard vehicles modified to match the speed of a LSV for operation on Navy owned or controlled roadways will comply with this paragraph.

l. Cell Phones, Texting, and Driver Distractions. All motor vehicle operators on Navy installations, operators of government owned, rented, and leased vehicles, and operators performing official assigned duties, on and off Navy installations, will not use cell phones or other hand-held electronic devices unless the vehicle is safely parked. Additionally, the wearing of any portable headsets, earbuds, or other similar listening devices while operating a motor vehicle is prohibited. Military members and civilian personnel who operate PMVs off base will comply with host-nation, state, and local laws. All personnel are encouraged to refrain from any activity that may be a distraction while driving and lead to traffic mishaps (e.g., eating; text messaging; adjusting the radio; shaving; applying make-up; reading maps, newspapers, magazines, or books, etc.). Exceptions are allowed for operators of emergency or tactical vehicles during performance of official duties.

m. Activity Vehicle Transportation. Provisions will be made to reduce the danger of death or injury to occupants while they are being transported to and from school or related activities, in Navy or contractor-owned multi-passenger vehicles. Navy school buses will be marked, equipped, operated, and maintained consistent with reference (hz). Private contractors will comply with host-nation, federal, state, or local requirements in addition to any contractual requirements imposed by the applicable Navy component.

n. Headlights and Daytime Running Lights (DRLs). Vehicles will be operated with headlights turned on during periods of precipitation or reduced visibility on all Navy owned or controlled roadways. Examples are, but not limited to, periods of light or heavy rain, snow, fog, smoke, or darkness.

o. Open Alcohol Containers. While driving on any Navy installation, the operators and passengers of motor vehicles are prohibited from having open containers of alcoholic beverages in their ready possession.

p. Traffic Infractions. All traffic infractions, other than impaired driving (e.g., driving under the influence), occurring on Navy installations (in the United States or U.S. territories) will be referred to the appropriate U.S. magistrate, state, or local judicial authorities; as determined by base or regional agreement regarding jurisdiction on board the installation [see reference (iu)]. Any vehicle operator convicted of a moving traffic infraction will comply with the penalty imposed by the court. Any associated cost or use of leave is the responsibility of the individual. See online Web site for reference (iu):
https://www.secnav.navy.mil/doni/Directives/11000%20Facilities%20and%20Land%20Management%20Ashore/11-200%20Transportation%20Facilities,%20Heavy%20Equipment/11200.5D.pdf

q. Pedestrians and Bicycles.

(1) Pedestrians.

(a) Pedestrians will be separated from motor vehicle traffic. This may be accomplished through the use of crosswalks, sidewalks, paths, trails, ramps, dedicated travel lanes, vehicle traffic restrictions, or other suitable protection measures. All applicable accessibility standards will be met.

(b) Individuals running/jogging on Navy owned or controlled roadways will face oncoming traffic, in single file, and obey traffic rules. General pedestrians will not be allowed to traverse roadways during high traffic periods. Installation commanders will designate roadways and times where pedestrian traffic restrictions apply (includes marching formations).

(c) Strong emphasis will be placed on the protection of children walking to and from school, entering and leaving school buses, and playing in Navy housing areas.

(d) Personnel exposed to traffic hazards as a part of their assigned duties will wear applicable high-visibility or reflective clothing or PPE (e.g., gate sentries, troops in marching formations, traffic control personnel, road construction crews, electricians, or telephone repair personnel working on outside overhead lines).

(e) Personnel exposed to traffic hazards for non-duty purposes should wear reflective outer garments during periods of reduced visibility or darkness.

(f) Use of motorized (electric, gas, etc.) or human powered scooters, skateboards, roller-skates, roller-blades, and other similar equipment will only be used in approved areas on Navy installations. As a minimum, users of this equipment will wear head protection on Navy installations. Motorized scooters, skateboards, and similar equipment capable of traveling 20 miles per hour or higher that do not meet the requirements of reference (is) will not be operated on Navy owned or controlled roadways. The use of these devices will always comply with the manufacture's guidance and all applicable federal, state, local, and host-nation laws or regulations.

(2) Bicycles and other Pedal-Driven Vehicles.

(a) Cyclists on Navy installations will comply with local installation, host-nation, state, or local laws and regulations. Where allowed on roadways, cyclists will ride with the flow of traffic, in single file, obeying the rules of the road.

(b) At shipyards and other high hazard areas with vehicle traffic, cyclists will be separated from motor vehicle traffic through the use of dedicated travel lanes, physical barriers, vehicle traffic restrictions, or other suitable protection measures.

(c) All military members will properly wear an approved helmet when riding a bicycle. Others will wear an approved helmet while on a Navy installation. Helmets must meet the requirement of the Consumer Product Safety Commission (16 CFR 1403). Commanders will determine helmet requirements for bicycle operators at industrial work sites.

(d) Cyclists will ensure bicycles are in proper operating condition (e.g., tire inflated properly, brakes and steering work properly, appropriate reflectors are in place, etc.).

(e) The wear of high-visibility or reflective outer garments is strongly recommended during periods of darkness or reduced visibility.

(3) Listening Devices. Pedestrians and cyclists are prohibited from using any listening device that may impair recognition of emergency signal, alarm, announcement, approaching vehicle, etc., while on Navy owned or controlled roadways. This includes the wear of portable headsets, earbuds, cellular hands-free devices, radios, recording devices or other portable listening devices while running, jogging, walking, bicycling, skating, skate boarding, etc. Listening devices may be used on paths and routes where users are protected from nearby motor vehicle traffic or motor vehicle traffic is not allowed.

r. Personal Protective Equipment (PPE) Requirements.

(1) Motorcycles and All-Terrain Vehicles. Military members will properly wear PPE at all times while riding motorcycles or ATVs. Non-military operators will wear PPE while on Navy owned or controlled installations or while conducting assigned duties.

(a) Head Protection. A helmet meeting the requirements of reference (is) will be worn and properly fastened under the chin. Helmets not intended to be used as safety equipment (i.e., novelty) are prohibited.

(b) Eye Protection. Protective eye devices designed for motorcycle operators (impact or shatter resistant safety glasses, goggles, wrap around glasses sealing the eye, or face shield properly attached to the helmet) will be properly worn. A windshield or standard sunglasses or standard eye wear alone are not proper eye protection.

(c) Foot Protection. Sturdy over the ankle footwear that affords protection for the toes, feet, and ankles will be worn.

(d) Protective Clothing. Riders and passengers will wear a long sleeved shirt or jacket, long trousers, and full-fingered gloves or mittens constructed of abrasion resistant materials such as leather, Kevlar®, or CORDURA® Nylon. In addition, the inclusion of impact-absorbing padding and outer garments constructed of brightly colored, fluorescent, or reflective materials are highly recommended. Riders on government-owned motorcycles and ATV will also wear knee and shin guards and padded full-fingered gloves, when applicable.

(e) When riding on Department of Defense (DoD) installations controlled by another service, riders must comply with that service's PPE requirements.

(2) Other Off-Road Vehicles. Military members will follow motorcycle and ATV head and eye protection requirements of this chapter when operating or occupying ROVs or similar ORVs

designed for off-highway use without fully enclosed cabins. Non-military operators will follow these requirements while on Navy owned or controlled installations or while conducting assigned duties.

(3) Autocycles.

(a) Military members will follow motorcycle and ATV head and eye protection requirements of this chapter when operating or occupying autocycles without a fully enclosed cabin. Civilian employees will follow these requirements on a Navy owned or controlled installations or while conducting assigned duties.

(b) Operator and passenger use of autocycles will comply with all applicable state, federal, local, and host-nation PPE requirements beyond the requirements of this chapter.

3605. Training Requirements. Training required in this paragraph will be provided to all military members and DoD civilians who operate a GMV as a part of their official duties. This training will be provided at no cost and no charge in leave to the attendee. This training may be provided to other DoD civilian employees, dependents, and retirees at no cost, on a space available basis.

a. Driver Education.

(1) All military members under the age of 26 must receive 4 hours of traffic safety training within 12 months of entering the Navy. This training will convey to incoming personnel the profound responsibility associated with operation of a PMV, Navy expectations for responsible vehicle operation, and the significant impact PMV fatalities have on naval operational readiness.

(2) Service schools and initial assignment commands for military members will provide the training outlined for all military members who have not previously completed the training within 90 days of arrival. This training will address general traffic safety precautions and local command traffic safety policies as well as any unique traffic safety considerations appropriate for the area. The Navy eLearning "Driving for Life Course" (DFL); any National Safety Council, American Automobile Association (AAA), Smith-System Driver Improvement Institute course; or any locally developed or commercial course of instruction approved by COMNAVSAFECEN may be used to accomplish this training. Formal courses of instruction under 20 weeks in length and Navy "A" schools are exempt from this requirement.

b. Traffic Safety Orientation. Commands will ensure that all newly assigned personnel receive a local area/host-nation traffic safety orientation within 30 days of arrival. This orientation will describe factors that commonly lead to traffic related mishaps including speeding, impaired driving (alcohol, illegal drugs, medications, sleep deprived), distracted driving, and failure to properly wear seat belts. It will also include information about local driving conditions, hazards, regulation, laws, and the legal consequences and penalties for impaired or distracted driving.

c. Traffic Safety Briefs. Commands will ensure traffic safety briefs are provided to all personnel prior to any holiday, foreign port visits, returning from deployment, seasonal change, or

when traffic related mishap warrants additional training. These briefs will reinforce and supplement information provided in the traffic safety orientation. Traffic safety briefs may be informal or formal and accomplished at various opportunities including leave approvals, plan of the day, safety stand-downs, division and department briefs, and supervisory briefs. These briefings should be at the awareness level and should not be expected to create a significant time burden to mission accomplishment. Local installation safety offices, Traffic Safety Coordinators (TSC), and Motorcycle Safety Representatives (MSR) will provide assistance with obtaining applicable traffic safety information and briefing materials.

d. Driver Improvement.

(1) All military and DoD civilian personnel who operate a GMV as their primary duty or a collateral duty for more than 8 hours a week will complete COMNAVSAFECEN approved training. Locally developed training may be authorized when approved by COMNAVSAFECEN in advance.

(2) When designating a duty driver, consider driving experience, driving history, and maturity.

(3) Commanding officers may exempt military members assigned to drive less than 8 hours in a duty week from this requirement.

(4) Duty drivers must be properly licensed and briefed on all applicable traffic safety regulations and requirements before the initial duty begins.

(5) Military or civilian personnel convicted of a moving traffic violation or determined to be at fault in a traffic mishap while operating a GMV will complete remedial driving improvement training. The Navy eLearning "Driving for Life Course" (DFL); any National Safety Council, American Automobile Association (AAA), Smith-System Driver Improvement Institute course; or any locally developed or commercial course of instruction approved by COMNAVSAFECEN may be used to accomplish this training.

e. Passenger Vans and Bus Operator Training.

(1) Operators of Navy owned, rented, or leased passenger vans with a capacity of 15 or more occupants will be provided training stressing the unique handling characteristics of these vehicles and the training will include hands on familiarization. Operators of Navy owned, rented, or leased passenger vans with a capacity of less than 15 occupants should be provided this training. Installations may use locally developed training approved by COMNAVSAFECEN to meet this requirement.

(2) Operators of Navy owned, rented, or leased buses will successfully complete a host-nation, state, or local jurisdiction approved bus operator training program or Naval Facilities Engineering Command managed bus operator training.

f. Motorcycle Operator Training. These training requirements are mandatory for all military member operators, Navy civilian employees required to operate a motorcycle in the performance of their assigned duties, and operators of any Navy owned, rented, or leased motorcycle. Individuals subject to these training requirements will:

(1) Complete Level I training and obtain a valid motorcycle operator license, endorsement, or permit prior to operating these vehicles on any public and Navy owned or controlled roadway.

(2) Complete Level I training prior to attending any Level II or Level III training course.

(3) The three levels of motorcycle training are:

(a) Level I (Beginner). All military motorcycle riders will complete Level I training. Level I courses include: Basic Rider's Course (BRC), any COMNAVSAFECEN approved entry Level I course, or any host-nation or state approved curriculum intended to provide novice riders the skills and knowledge needed to obtain a motorcycle endorsement on their driver's license. Level I motorcycle training will consist of both classroom and range time training on:

1. Motorcycle Controls and Devices

2. Basic Riding, Balance and Maneuvers

3. Street Skill Sets (e.g., intersections, cornering, positioning)

4. Handling Characteristics

5. Navy Compliance and Local Laws

6. Proper Use of Required PPE

(b) Level II (Intermediate/Sport bike). All military motorcycle riders will complete Level II training within 60 days to 1 year of Level I training completion. Riders should use their personally owned motorcycle to complete the training, whenever possible. These courses are intended to build upon the skills and knowledge that riders obtained in Level I courses. Curriculum will consist of both classroom and range time to include practice maneuvers at slower speeds before progressing to street or highways speeds, providing instruction in challenging cornering techniques, advanced braking, and other realistic scenarios. The BRC II, Military Sport bike Rider Course (MSRC), and Advanced Rider Course (ARC) are examples of level II courses approved for riders.

(c) Level III (Advanced/Track Days). These courses are intended to be taken on track days under a controlled environment or off site at professional training sites. Curriculum will improve an experienced Level II riders' skills and knowledge through a combination of drills at track speeds, challenging cornering techniques, and other realistic scenarios.

(d) Refresher Training. All military members who operate motorcycles will complete refresher training at least once every five years. The selected refresher course must meet or exceed the training curriculum of Level II or Level III training. It's strongly recommend that more experienced riders select refresher training suited to their level of skill and motorcycle type.

	LEVEL I TRAINING	**LEVEL II TRAINING**	**REFRESHER TRAINING (LEVEL II/III)**
TRAINING PERIODICITY	Before operation on public or Navy owned or controlled roadways	Within 60 days to 1 year of Level I training completion	At least once every 5 years
NOTE: Level 1 training does need to be completed for riders that already hold a valid State motorcycle license endorsement or an original or certified copy of a completion card or certificate from a MSF, State-approved, or DoD Component-approved motorcycle course.			

(4) Motorcycle Operator Training for Other than Military.

(a) Navy civilian personnel who operate motorcycles in the performance of assigned duties must meet the requirements for Level I, Level II, and refresher training.

(b) All operators of Navy owned, rented, or leased motorcycles must meet the requirement for Level I, Level II, and refresher training.

(c) Civilian operators of personally owned motorcycles, not in the performance of assigned duties, with current state motorcycle operator license, endorsement, or permit are not required to complete training requirements in paragraph (f).

(5) Training for Operators of Three Wheeled Vehicles and Scooters. Operators of motorcycles with attached sidecars; three-wheeled vehicles (e.g., autocycles), scooters, mopeds, and certain other two-wheeled vehicles that may be legally operated without a driver license motorcycle endorsement are not required to complete motorcycle training. All host-nation, state, and local training requirements will be adhered to.

g. ATVs and Similar ORVs.

(1) All military members and Navy civilian personnel who operate government-owned, leased, or rented ATVs and ORVs will successfully complete a Specialty Vehicle Institute of America (SVIA) based course or COMNAVSAFECEN approved equivalent course prior to operating these vehicles. Operators of government-owned, leased, or rented ROVs or UTVs will successfully complete a SVIA Recreational Off-Highway Vehicle Association course or COMNAVSAFECEN approved equivalent.

(2) Operators of privately owned ATVs and ORVs on any Navy installation must successfully complete a Specialty Vehicle Institute of America based course or COMNAVSAFECEN approved equivalent. Operators of privately owned ROVs or UTVs on any Navy installation must successfully complete a SVIA Recreational Off-Highway Vehicle Association course or COMNAVSAFEECN approved equivalent. Training provided under the Navy Morale, Welfare, and Recreation Program will be considered approved, where equivalent to SVIA.

(3) Operators on DoD installations controlled by another service must comply with that service's specific PPE requirements.

(4) Operators of privately owned ATVs, ORVs, ROVs, or UTVs outside a DoD installation are highly encouraged to complete a Specialty Vehicle Institute of America based rider course.

(5) Equivalent courses must meet or exceed the curriculum of the Specialty Vehicle Institute of America rider course to receive COMNAVSAFECEN approval. ROVs, UTVs, and similar vehicles meeting the definition of paragraph 3604. h. of this chapter will not be considered ATVs.

(6) All additional or specialized state, federal, local, or host-nation training requirements will be followed.

h. Emergency Vehicles Operator Course (EVOC). All military and Navy civilian personnel prior to operation of any government-owned or leased EV, equipped with either emergency lighting and or sirens, will successfully complete a 40-hour basic EVOC course. All EVOC certification courses will be conducted by a certified EVOC instructor. The three levels of emergency vehicle training are:

(1) EVOC Basic Operator Training. Training prerequisites are as listed:

(a) Have assigned duties that involve EV operation (i.e., police, fire, crash and rescue, ambulance).

(b) Possess a valid driver's license (host-nation or state).

(c) Have at least 2 years of driving experience as a licensed driver.

(2) EVOC Instructor Training. Training prerequisites are as listed:

(a) Have assigned duties that involve EV operation (i.e., police, fire, crash and rescue, ambulance).

(b) Possess both a valid driver's license (host-nation or state) and OF-346 with the proper qualifications and endorsements.

(c) Have successfully completed the Basic Operator Training and have at least 2 years of EV driving experience.

(3) EVOC Recertification Training. Training Requirements are as listed:

(a) Instructors and operators are required to maintain their skills at an acceptable level. All instructors and operators are required to attend refresher, phase, or in-service training every 3 years.

(b) Instructors will attend and successfully complete a 3-day COMNAVSAFECEN-approved instructor recertification program.

(c) Operators must complete 24 hours of EV related training over the course of 3 years (i.e., 8 hours per fiscal year). Training will consist of:

1. Applicable host, state or local laws and regulations.

2. DoD and Navy policies, guidance, or other applicable region and command instructions.

3. Safe vehicle operating practices to include selected driving range exercises.

(4) EVOC Remedial Training.

(a) Any EV operator found at-fault in a motor vehicle mishap will complete remedial training within 30 days of the mishap.

(b) Supervisors may also require remedial training for personnel who demonstrate deficiencies in their driving habits or attitudes.

(5) Additional EVOC Program Guidance. EVOC training meets the driver improvement training required in this chapter. Additional EV instructor, operator, and recertification requirements can be found on the COMNAVSAFECEN Web site.

i. Alternative Course Approval Requests. Commands desiring to use alternative, non-recognized, or previously unapproved training may submit written requests to COMNAVSAFECEN.

3606. Host Traffic Safety Services. Host traffic safety services will provide these elements, at a minimum:

a. Maintain a traffic safety program that fully complies with this chapter. Commands receiving Base Operating Support (BOS) services will follow host established traffic safety program policies.

b. Ensure installations using ORV, UTVs, and GVOs follow vehicle manufacture guidelines, host-nation or local laws, and host policy on how these vehicles will be operated on the installation, to include who, where, when, and how the vehicles may be operated.

c. Maintain oversight of installation roadways in compliance with reference (ir) and the Manual on Uniform Traffic Control Devices (MUTCD) for safe and efficient movement of both vehicle and pedestrian traffic.

d. Provide resources for all traffic safety training required under this chapter to commands under their cognizance (both CONUS and OCONUS). Publish a 90-day schedule of traffic safety course convening dates, and provide the training to Navy installations within 30 days of request.

e. Ensure adequate training ranges are available to meet the training requirements contained in this chapter.

f. Ensure adequate numbers of training motorcycles (500 cubic centimeter (cc) or less) are provided to meet the Level I motorcycle training requirements contained in this chapter.

g. Maintain an adequate number of train-the-trainer instructors that are qualified to provide recertification training for all traffic safety training programs as required.

3607. Traffic Safety Councils and Committees. Traffic safety is a mandatory Safety and Occupational Health (SOH) program and will be managed at the installation level by the BOS service provider or host command. Traffic safety may be managed as a standard agenda item in existing installation level SOH required under this manual, or its own separate council. NOTE: Traffic safety inherently encompasses motorcycle safety.

a. Traffic safety councils and committees will meet the requirements of this Manual and as a minimum:

(1) Identify, analyze, and recommend mitigation or abatement of any traffic safety issues that may lead to mishaps or increase their severity.

(2) Compile and maintain a list of traffic safety program deficiencies and associated action items. Track deficiencies and action items on the host command abatement log until abated or mitigated to an acceptable risk level.

(3) Review training needs assessments and provide a Plan of Action and Milestones to alleviate any training deficiencies.

(4) Disseminate traffic safety related guidance, lessons learned, best practices, etc., in order to reduce future traffic mishaps.

(5) Cooperate and coordinate with host-nation, federal, state, and local officials to resolve both on and off base traffic safety problems of mutual concern.

(6) As required by the installation commander, establish traffic accident review boards in accordance with reference (iu) in review of traffic related mishaps to determine key causal factors and recommend measures to reduce the risk and/or severity of similar mishaps.

b. The traffic safety council will be chaired by the commanding officer or executive officer of the host command and include representatives from BOS and tenant command safety offices; base traffic engineering; emergency services departments; TSC, and MSR.

c. Motorcycle safety may be separated from the traffic safety council and managed as its own sub-group. If separated, the minutes of motorcycle safety meetings will be formally provided to the traffic safety council for oversight.

3608. Motorcycle Mentorship Program. All commands with military motorcycle riders will maintain a mentorship program that allows experienced riders to partner with new and less experienced riders. New riders are inherently exposed to a higher risk to mishaps, so mentorship is vital to helping new and less experienced riders bridge the gap from introductory training (i.e. Level I and II courses) to becoming skilled in real world conditions. In lieu of an alternate designation, the MSR will facilitate the command program. While commands have great latitude to develop and maintain a mentorship program that meets and recognizes its needs and limitations, considerations should be reflected in all programs:

a. Programs should focus on pairing more experienced riders with less experienced riders and individual or group riders with similar type of bikes and riding goals.

b. It is strongly recommend to have an experienced and active rider coordinate the command mentorship program.

c. Whenever possible, traditional rank/rate structures should be relaxed during mentorship activities.

d. In lieu of a command program, commands may participate in an installation program or form joint mentorship programs with other commands inside the DoD.

e. Command programs may allow DoD civilian employee participation.

f. The Defense Safety Oversight Council (DSOC) Motorcycle Mentorship Modules may be used to develop or enhance the command program. DSOC mentorship guidance is available on the COMNAVSAFECEN Web site.

3609. Responsibilities

a. Office of the Chief of Naval Operations, Special Assistant for Safety Matters, (CNO N09F)/Commander, Naval Safety Center (COMNAVSAFECEN) will:

(1) Develop and issue policy and guidance for the Navy Traffic Safety Program.

(2) Conduct on-site command installation traffic safety program reviews upon request from echelon 2 or 3 commands.

(3) Include traffic safety program reviews as part of all safety assessments.

(4) Provide program guidance and actively promote traffic safety.

(5) Coordinate and evaluate traffic safety programs, policies, and equipment with the DoD, other services, and governmental and non-governmental agencies.

(6) Serve as the repository for Navy and Marine Corps reportable motor vehicle mishap reports and provide traffic safety statistics, trend analysis, and recommendations to improve the overall Navy Traffic Safety Program.

(7) Develop, produce, and distribute traffic safety awareness products.

(8) Provide traffic safety program guidance, oversight, and quality assurance services for all Navy traffic safety training.

(9) Provide official validation of courses intended to meet the traffic safety training requirements of this chapter.

(10) Maintain awareness of new and emerging programs and technologies through engagement with industry, academia, and government and non-government agencies by attending national level traffic safety meetings and conferences.

b. Naval Inspector General (NAVINSGEN) will include the Navy Traffic Safety Program in scheduled safety program oversight reviews. Findings and recommendations for improvement will be provided to COMNAVSAFECEN as part of NAVINSGEN annual reports.

c. Commander, Naval Education and Training Command (NETC) will ensure initial traffic safety training for military members under age 26 is completed at all Service and or "A" schools.

d. Budget Submitting Offices (BSOs) will ensure their commands and subordinate commands support and assist entities to ensure:

(1) CNIC funding, in part to implement the Navy Traffic Safety Program as a base operating service in order to comply with this chapter.

(2) Commanding Officers are funded to the maximum extent possible to support this program and all elements in accordance with this chapter.

e. Commander, Navy Installations Command (CNIC) will:

(1) Provide and execute traffic safety services for military members and civilian personnel as required by this chapter.

(2) Coordinate, execute, and manage the traffic safety training programs in accordance with this chapter.

(3) Establish policy for BOS traffic safety service implementation throughout the Navy with associated roles and responsibilities as required by this chapter.

(4) Implement and sustain standardized traffic safety training courses and ensure availability of adequate classes for course train-the-trainers and attendees for all Navy commands.

(5) Develop training specific to the local area with known hazards, risks, or resources that can be used by tenants during return to home port programs and safety stand-downs.

(6) Provide a training course enrollment system that allows all commands to effectively schedule individuals for traffic safety training required by this chapter.

(7) Compile an annual traffic safety training needs assessment based on input from installations and supported commanders to determine future training requirements, number, types of courses needed, and issues impeding traffic safety training support.

(8) Direct the establishment of a host provider or installation level traffic safety council to provide oversight at all locations where BOS services are provided.

(9) Ensure the appropriate BOS safety services traffic safety program managers are designated in writing.

(10) Follow all DoD traffic safety program requirements as required by reference (ir).

f. Echelon 2 Commands will:

(1) Ensure all subordinate commands fully participate with the CNIC BOS traffic safety program or establish an independent program in accordance with the requirements of this chapter.

(2) Ensure all subordinate commands designate a TSC and MSR, in writing.

(3) Ensure subordinate command compliance with investigation, reporting and recordkeeping requirements for traffic related mishaps as required in accordance with reference (m).

See online Web site for reference (m):
https://www.secnav.navy.mil/doni/allinstructions.aspx#InplviewHashcd83a2ac-33e0-4ef2-b888-8820a1d38ac8=Paged%3DTRUE-p_FileLeafRef%3D3900%252e25D%252epdf-p_ID%3D3288-PageFirstRow%3D501

(4) Participate in the CNIC established traffic safety council meetings or establish an independent traffic safety council, where a CNIC led council is not established.

(5) Follow all DoD traffic safety program requirements as required by reference (ir).

g. Commanders, Commanding Officers, and Officers-in-Charge, Ashore and Afloat will:

(1) Fully participate with the CNIC BOS traffic safety program or establish an independent program in accordance with the requirements of this chapter.

(2) Participate in the CNIC established traffic safety council meetings or establish an independent traffic safety council, where a CNIC led council is not established.

(3) Designate a TSC and MSR, in writing. The same person may serve in both positions simultaneously.

(4) Complete the annual traffic safety needs assessment when receiving traffic safety related BOS services.

(5) Utilize the current training tracking system to schedule, enroll, and track the training needs of personnel and effectively manage traffic safety training programs.

(6) Ensure traffic related mishaps are reported, investigated, and documented in accordance with reference (m) and corrective actions are implemented to mitigate risk of future mishaps.

(7) Ensure compliance with the training and PPE requirements of this chapter.

(8) Allow individuals to attend safety training required by this chapter during normal working hours and without a charge to their leave.

(9) Follow vehicle manufacture guidelines, and established host-nation, state laws, and local policy on the use of ORVs, ROVs, UTVs, GVOs, and LSVs on the installation to include who, where, when, and how the vehicles may be operated. Operator training and vehicle inspections will be completed as required by this chapter and regional, installation, activity, or local policies.

(10) Ensure TSC and MSR participate in traffic safety councils and committees.

(11) Follow all DoD traffic safety program requirements as required by reference (ir).

h. Traffic Safety Coordinators (TSC) will:

(1) As directed by the CO/OIC, establish and maintain the command traffic safety program meeting the requirements of this chapter.

(2) Represent command and communicate traffic related concerns at safety council or committee meetings.

(3) Stay current on traffic safety issues through participation in safety courses, conferences, workshops, seminars, webinars, review of periodicals, or other locally developed methods.

(4) Ensure traffic related mishaps are reported, investigated, and documented in accordance with reference (m) and corrective actions are implemented to mitigate risk of future mishaps.

(5) Ensure all personnel complete all traffic safety training required by this chapter or their command

(6) Ensure training is properly documented in the appropriate electronic training record.

(7) Compile a quarterly traffic safety training status report and provide to the commander, commanding officer. The report will include the list of individuals which have not completed required training or were scheduled but failed to attend training.

i. Motorcycle Safety Representatives (MSR) will:

(1) As directed by the CO/OIC, establish and maintain the command motorcycle safety program meeting the requirements of this chapter.

(2) Represent command and communicate motorcycle related concerns at safety council or committee meetings.

(3) Stay current on motorcycle safety issues through participation in motorcycle safety courses, conferences, workshops, seminars, webinars, review of periodicals, or other locally developed methods.

(4) Identify military members who operate or plan on operating a motorcycle and maintain a limited amount of current information for military motorcycle riders (whether riding on base or off-base) to include:

(a) Name

(b) Type of motorcycle operated

(c) License information to indicate legal authority to ride (state license or motorcycle endorsement, OF-346, host-nation)

(d) Proof of training and completion date (approved course completion card or certificate)

(5) Provide assistance for completion of safety training and wear of PPE.

(6) Ensure motorcycle related mishaps are reported, investigated, and documented in accordance with reference (m) and corrective actions are implemented to mitigate risk of future mishaps.

(7) Ensure training and motorcycle rider information are properly documented in the appropriate electronic tracking system.

(8) Compile a quarterly motorcycle safety training status report and provide to the commander, CO, or OIC. The report will include the list of individuals which have not completed required training or were scheduled and failed to attend training.

(9) Facilitate the command motorcycle mentorship program, when required.

j. Supervisors will:

(1) Incorporate the ORM process into motor vehicle operations.

(2) Ensure compliance with the training and PPE requirements of this chapter.

(3) Ensure traffic related mishaps are reported, investigated, and documented in accordance with reference (m) and corrective actions are implemented to mitigate risk of future mishaps.

(4) Follow all DoD traffic safety program requirements as required by reference (ir).

k. Individuals will:

(1) Follow and stay aware of applicable state, federal, local and host-nation traffic safety laws and regulations.

(2) Incorporate the ORM process while operating motor and manual powered vehicles, or as a pedestrian.

(3) Comply with all training and PPE requirements of this chapter.

(4) Report applicable traffic related mishaps to supervisor or chain of command as soon as reasonably possible.

11161 (5) Follow all DoD traffic safety program requirements as required by reference (ir).

CHAPTER 37
RECREATION AND OFF-DUTY SAFETY PROGRAM

3701. Discussion. This chapter assigns responsibilities and establishes basic program requirements for the Navy Recreation and Off-Duty Safety Program (RODS). This chapter significantly revises prior policy and incorporates operational risk management principles for integration into command safety management systems required under reference (b). See online Web site for reference (b): https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.10K.pdf

3702. Background

a. The Navy is committed to the safety of personnel, their families, and the public. This commitment inherently extends to recreational and off-duty activities, as the loss of personnel to mishaps impacts unit readiness and adversely affects our sailor's families and communities, no matter where or when they occur. Therefore, an effective RODS program is vital to mission accomplishment and must be maintained at all levels of command.

b. RODS has historically been managed separately from other operational safety program elements. This chapter incorporates the adoption of safety management systems (SMS) to align individual safety management functions. Integration of RODS into the SMS framework allows the Navy to systemically extend operational risk management (ORM) and other safety principles to the recreational and off-duty sphere. This will give Navy leaders the necessary management tools to help personnel at all levels assess and manage their recreational and off-duty risk decisions. Successful implementation will help eliminate preventable mishaps across the Navy Enterprise.

3703. Scope

a. This chapter applies to:

(1) All Navy active duty military members, on or off-duty.

(2) All Navy reserve personnel on or off-duty while in any type of active duty status.

(3) All Navy civilian employees while on-duty or in an official travel status.

(4) All individuals participating in recreational activities on Navy owned or controlled property.

3704. Core Program Requirements

a. Safety Policy Statement. Command intent regarding RODS will be included in the safety and occupational health (SOH) policy statement required by this manual. Commanders should foster an environment where RODS mishap prevention is instilled down through all level of command.

b. Supplemental SOH policies. SOH policies developed to supplement this chapter will include specific procedures for RODS program management in accordance with the scope of the policy.

c. Risk Management. As required in reference (it), the ORM process will be applied to manage and control risk for RODS at all levels. Potential hazards associated with RODS events and activities will be fully assessed through means of a hazard analysis, in advance. Risk assessment and implementation of controls will be made at the lowest authority level possible. The goal is to ensure all hazards are quickly eliminated or mitigated. See online Web site for reference (it): http://www.public.navy.mil/NAVSAFECEN/Documents/shore/motor_vehicle/2003_NAVFAC_P-300.pdf

(1) Continual Engagement. Participants in RODS activities will receive continual engagement from the appropriate party. Individual military members require direct communication at the one-on-one level to reinforce the need to incorporate risk management into all of their recreational and off-duty decision making. Group discussions (safety briefs) are acceptable for multiple participants of specific on-duty organizational or general off-duty RODS events and activities. Communications should reinforce risk-based decision making for both individual and group activities.

(2) High Risk Recreational Activities. Military members that participate or desire to participate in high risk recreational activities must receive an initial review of their ability to safely engage in the activity. Examples of high risk recreational activities are provided on the Naval Safety Center website, however commands may define their own list of activities deemed high risk. The review will include an assessment of the participant's knowledge and ability to perform the activity, hazard analysis of the activity, and supervisory or CO/OIC approval. Supervisors will ensure members are identified and complete the assessment in advance of high risk activity participation. The individual assessment is not a briefing, but rather a determination of the member's state of readiness, training, and physical ability to perform the activity. This assessment may be conducted by the command RODS program manager, supervisor, or another command-directed designee. Supervisors will review assessment results with the member and discuss any identified gaps. Commanding officers have the authority to restrict participation in any activity deemed to have excessive risk.

(3) Recreational Operations and Equipment. Equipment and facilities established for morale, welfare, and recreation (MWR) or off duty recreational purposes must meet rigid safety considerations. Introduction of large scale recreational operations or local purchase/installation of recreational equipment outside of the MWR or base operating support (BOS) service sphere will meet the same safety requirements. Commands desiring to establish their own recreational operation or install RODS equipment will consult with their local MWR staff, BOS service provider, or another qualified safety authority to ensure a thorough risk assessment is completed. At a minimum,

the safety considerations listed in manufacturer instructions, pertinent consensus standards, and reference (iv) will be maintained for MWR type operations and equipment. See online Web site for reference (iv):
https://www.cnic.navy.mil/content/dam/cnic/hq/pdfs/Instructions/01000%20Series/CNICINST%201710.3.pdf

d. Hazard Identification. Hazard identification of RODS related facilities and infrastructure will be accomplished during inspections required under chapter 5 and 12 of this manual. SOH inspections of these areas will focus on identification and control of hazards that may cause injury or illness to on-duty workers, off-duty Navy personnel (military and civilian), and patrons of MWR areas.

e. Documentation, Tracking, and Abatement. Inspection findings will be documented and abated as required by chapter 5 and 12 of this manual. Inspectors will document and assign a risk assessment code (RAC) for each RODS related deficiency in the same manner as other SOH hazards. Deficiencies will be documented on OPNAV 5100/12 NAVOSH Deficiency Notice, or equivalent. RODS deficiencies assigned a RAC 1, 2, or 3 not abated or mitigated within 30 days will be documented in the formal hazard abatement plan. Hazardous areas and equipment must be taken out of service or restricted from further use until full abatement is accomplished or effective interim controls are in place that adequately prevent future injury or illness.

f. Mishap Reporting and Investigation. Department of Defense (DoD) mishaps related to RODS will follow the reporting, investigation, and recordkeeping requirements detailed in reference (m). See online Web site for reference (m):
https://www.secnav.navy.mil/doni/allinstructions.aspx#InplviewHashcd83a2ac-33e0-4ef2-b888-8820a1d38ac8=Paged%3DTRUE-p_FileLeafRef%3D3900%252e25D%252epdf-p_ID%3D3288-PageFirstRow%3D501

g. Self-assessment and Management Evaluation. RODS will be included as a standard element under the command annual SOH self-assessment required under this manual. Echelon 2 commands will provide oversight of RODS program effectiveness during review of subordinate command SOH self-assessments and during management evaluations.

h. Required Training. This paragraph details the minimum requirements for all RODS programs. It is not intended to be all inclusive. Additional training requirements may be developed at all levels of command to support regional, installation, activity, or local programs.

(1) Command Indoctrination Training. Commands will ensure that all military members and civilian employees receive training on the requirements of this and other supplemental RODS policies as part of their command indoctrination. Training will include awareness of the RODS program, individual responsibilities, and local hazard awareness training (such as known local hazards, local laws, restricted areas, common geographic high risk recreational activities).

(2) RODS Safety Briefs. RODS safety briefs are required for all military members prior to any holiday, foreign port visits, returning from deployment, seasonal change, or when RODS mishap experience warrants additional training. RODS briefs may be informal or formal and encompass a variety of training methods including plan of the day, safety stand-downs, division and department briefs, supervisory briefs, mishap testimonials, videos, and guest speakers. These briefings should be at the awareness level and should not be expected to create a significant time burden to mission accomplishment. Local installation RODS program managers will provide assistance with RODS training information and briefing materials.

(3) Specific Participant Training. Individuals desiring to engage in RODS activities with mandatory training will successfully complete it before engaging in the activity. Commands may also require completion of training that would otherwise be optional before allowing participation in high risk recreational activities specific to the geographic location.

(4) MWR Patron Training. MWR authorized patrons will be provided training in safety techniques and procedures associated with the use or receipt of MWR controlled recreational areas or equipment that potentially exposes the user to safety or health hazards. Patrons will be trained by staff qualified to provide instruction on safety measures specific to the equipment or activity. Training qualifications of MWR staff providing instruction to patron will meet the requirements in reference (iv). Patrons may be allowed to show proof of safety course completion by recognized and approved organizations to meet MWR patron training requirements.

(5) Group Physical Training/Recreational Events. Participants in command directed recreational events outside of MWR controlled facilities will receive guidance on safety precautions to prevent mishaps in advance of the activity. This guidance may include techniques for pre and post activity exercise, how to properly use required personal protective equipment, etc. Commands may request this guidance from local MWR staff on recreational safety procedures for events outside MWR facilities.

	REQUIRED FOR	**PERIODICITY**	**RESPONSBILITY TO PROVIDE**
COMMAND INDOCTRINATION TRAINING	Military/Civilian	At Indoc/Check-In	Command/BOS RODS PM
SAFETY BRIEFS	Military	Prior to Holiday/Foreign Port Visits/Return from Deployment/Change of Seasons/Lessons Learned After Significant RODS Mishaps	Command RODS PM

SPECIFIC PARTICIPANT TRAINING	Military-Situational	In advance of subject activity participation	Obtained by Member
MWR PATRON TRAINING	Patrons at CNIC-Owned MWR Facilities	Situational-Based on Activity and/or Locally Established Policy	CNIC/MWR Staff
GROUP PHYSICAL TRAINING/ RECREATIONAL EVENTS	Military/Civilian in advance of command directed activities	Situational-Based on Activity and/or Locally Established Policy	Command RODS PM

i. Safety Councils and Committees. Safety councils and committees established to meet the requirements of this manual will include RODS as a standard agenda item. It is strongly recommended that RODS is integrated into appropriate existing councils and committees versus creating separate venues solely for RODS. Safety working groups, councils, or committees established for specific concerns are exempted from this requirement.

j. Communication. Supplementary RODS materials will be provided to military members and civilian employees and/or posted liberally to reinforce requirements of this policy, requirements of supplemental polices, common risk management or mishap prevention solutions, or local concerns. These materials may take the form of e-mails, social media messages, articles, pamphlets, signage, or other command approved communication measures. Safety councils and committees that review RODS related issues will ensure any official decisions or findings are communicated to the affected personnel.

3705. Responsibilities

a. Chief of Naval Operations Special Assistant for Safety Matters (CNO N09F) and Commander, Naval Safety Center (COMNAVSAFECEN) will:

(1) Develop RODS program policies, objectives, and directives and provide management of all aspects of mishap prevention specifically directed by reference (b).

(2) Ensure proper interpretation of RODS program requirements and conduct RODS assessments, staff-assist visits, and site visits for Navy commands and activities as directed or requested.

(3) Provide program guidance, actively promote, and develop RODS awareness and educational programs.

(4) Serve as the repository for all Navy and Marine Corps reportable RODS mishap reports and provide mishap data analyses to Navy and Marine Corps commands and activities in support of their RODS mishap prevention efforts.

b. Command Budget Submitting Offices will: Provide funding and support to assist subordinate commands with implementation of the installation RODS program.

c. Commander, Navy Installations Command (CNIC) will:

(1) Provide resources and guidance to CNIC installations in order to support RODS program compliance in accordance with this chapter.

(2) Ensure installations provide tenants BOS safety services meeting the RODS core program requirements in accordance with this chapter.

(3) Provide adequate RODS related resources and guidance for installation MWR activities in accordance with this chapter and reference (iv).

(4) Conduct oversight of RODS program elements.

d. CNIC BOS providers will:

(1) Ensure that a RODS program is established and in compliance with this chapter for all installations and regions.

(2) Designate a BOS RODS Program Manager at lowest applicable level, with the authority and ability to successfully manage the program and coordinate with all tenant commands.

(3) Provide oversight, assessments, and assistance to safety offices and MWR staff to ensure compliance with RODS program.

(4) Ensure RODS mishaps are reported, investigated, and documented in accordance with reference (m) and corrective actions are implemented to mitigate risk of future mishaps.

(5) Ensure installation level local area/host nation hazard briefs are provided to newly assigned and tenant military members and civilian employees within 30 days of assignment or arrival.

(6) Ensure that the RODS program manager or designee attends command safety council or committee meetings and that RODS is maintained as a standard agenda item.

(7) Ensure MWR activities manage internal safety programs in accordance with reference (iv) and this chapter.

e. Echelon 2 Commanders will:

(1) Ensure subordinate commands not supported by a BOS service provider are adequately resourced to maintain a RODS program meeting the requirements of this chapter.

(2) Ensure subordinate command compliance with investigation, reporting and recordkeeping requirements for RODS related mishaps in accordance with reference (m).

(3) Provide oversight of lower level command RODS programs through review of SOH annual self-assessments and safety management system management evaluations as required by this manual.

(4) Establish and disseminate command-specific requirements for RODS in concert with other SOH programs.

f. Commanders, Commanding Officers (COs) and Officers in Charge (OICs) (ashore and afloat) will:

(1) Establish and maintain a command RODS program compliant with this chapter for all program requirements where BOS safety services are not available or provided.

(2) Include command intent regarding RODS in the SOH policy statement. Where established, ensure SOH policies developed to supplement this chapter include local RODS requirements.

(3) Appoint a command RODS Program Manager, in writing, with the authority to successfully execute the program.

(4) Ensure annual safety inspections of command owned or controlled MWR recreational areas are conducted by qualified SOH inspectors, BOS service providers, or RODS Program Managers.

(5) Ensure RODS training is provided to command military members and civilian employees as required in this chapter.

(6) Ensure self-assessment of the command RODS program is conducted as a part of the SOH self-assessment at least once annually and complies with requirements of higher level commands and this chapter.

(7) Ensure command RODS Program Managers participate in installation or regional safety councils, safety committees, or promotions.

(8) Ensure RODS mishaps are reported, investigated, and documented in accordance with reference (m) and corrective actions are implemented to mitigate risk of future mishaps.

(9) Provide or arrange for local area/host nation hazard briefs to newly assigned and tenant military members and civilian employees within 30 days of assignment or arrival.

(10) Enforce compliance with appropriate personal protective equipment requirements for all command directed or sponsored RODS events.

(11) Ensure risk management is integrated into all off-duty or community activities.

(12) Ensure purchases or installation of command procured RODS equipment not provided through local MWR office services meets all safety requirements. Local MWR staff may be consulted for guidance.

g. BOS RODS Program Managers will:

(1) Ensure RODS mishaps are reported, investigated, and documented in accordance with reference (m) and corrective actions are implemented to mitigate risk of future mishaps.

(2) Provide continual guidance and direction to command RODS program managers in management of their program. Perform needs assessments, communicate RODS related updates, and/or hold local training/workshops as necessary to support program management.

(3) Prepare installation level local area/host nation hazard briefs for newly assigned and tenant military members and civilian employees.

(4) Consult frequently with installation safety departments and MWR staff on RODS related matters.

(5) Represent installation/command and communicate RODS related concerns at safety council or committee meetings.

h. Command RODS Program Managers will:

(1) As directed by the CO/OIC, establish and maintain the command RODS program meeting the requirements of this chapter.

(2) Obtain guidance and direction from the BOS RODS program manager and supporting safety offices, as needed.

(3) Provide (or arrange for) RODS indoctrination, safety briefs, or group event training required by this chapter to command military members and civilian employees.

(4) Conduct annual safety inspections of command owned or controlled MWR recreational areas.

(5) Maintain record of command military members participating or desiring to participate in high risk recreational activities.

(6) Conduct and/or assist supervisors with RODS high risk recreational activity assessments.

(7) Represent command and communicate RODS related concerns at safety council or committee meetings.

(8) Complete RODS section of annual command SOH program self-assessments, as required by this chapter and higher command policies.

i. Supervisors will:

(1) Require military members and civilian employees to comply with all safety and PPE requirements during all RODS activities.

(2) Ensure military members and civilian employees receive required RODS training.

(3) Incorporate and encourage the application of ORM principles into all RODS programs and activities in accordance with reference (it).

(4) Strongly discourage military members against engaging in high risk recreational activities alone.

(5) Encourage military members and civilian employees to stop and reevaluate risk when RODS activities become unsafe or more hazardous than anticipated.

(6) Review and approve ORM assessments submitted by military members preparing to engage in high risk on and off-duty recreational activities prior to the event.

(7) Ensure RODS mishaps involving subordinates are reported, investigated, and documented as required in accordance with reference (m) and corrective actions are implemented to mitigate risk of future mishaps.

(8) Ensure subordinates understand and meet their responsibilities required by this chapter.

j. Military Members will:

(1) Use ORM principals to make risk-based decisions before and during participation in recreational and off-duty activities.

(2) Hold an adequate level of knowledge and physical ability before participation in any RODS activity.

(3) Wear all required or appropriate personal protective equipment.

(4) Refrain from engaging in high risk recreational activities alone.

(5) Stay aware of the command identified lists of high risk recreational activity and inform the chain of command before activity participation.

(6) Complete a high risk recreational activity assessment with the command program manager or supervisor in advance of high risk recreational activity participation.

(7) Complete any required training, gain certifications, or meet applicable qualifications in advance of participation in any high risk recreational activities and submit documentation to their supervisor and command RODS program coordinator.

(8) Report RODS related mishaps to supervisor or chain of command as soon as reasonably possible.

(9) Report hazards or deficiencies in MWR recreational areas to MWR staff when identified.

(10) Comply with all local, state, national, or host nation laws, regulations and rules when participating in RODS activities.

k. Civilian Employees will:

(1) Use ORM principals to make risk-based decisions before and during participation in recreational activities while on-duty.

(2) Wear all required or appropriate personal protective equipment during participation in recreational activities while on-duty or at MWR controlled recreational areas.

(3) Report on-duty recreational activity related mishaps to supervisor or chain of command as soon as reasonably possible.

(4) Report hazards or deficiencies in MWR recreational areas to MWR staff when identified.

(5) Comply with all local, state, national, or host nation laws, regulations and rules when participating in recreational activities while on-duty.

l. Other individuals will:

(1) Wear all required or appropriate personal protective equipment during participation in recreational activities on Navy owned or controlled property.

(2) Comply with all applicable local, state, national, or host nation laws, regulations and rules when participating in recreational activities on Navy owned or controlled property.

CHAPTER 38
SYSTEM SAFETY

3801. Discussion and Background

a. The Navy is committed to protecting personnel from accidental death, injury, or occupational illness and safeguarding defense systems, infrastructure, and property from accidental destruction, or damage while executing its mission requirements of national defense. Integral to these efforts is the use of a system safety approach to identify hazards and manage the associated risks at the earliest feasible stage of requirements and design, and throughout the product/systems life-cycle.

b. This process has previously been referred to as acquisition safety which is a poor term as it would have system safety as only the responsibility of Secretary of the Navy (SECNAV). Furthermore, past Navy policy reiterated requirements outlined in higher level policy. The intent of this chapter is to provide highlights of Systems Safety and the specific Navy processes, roles, and responsibilities.

3802. Highlights of System Safety Program

a. DOD and Navy acquisition regulations require application of systems safety process in large-scale acquisition and risk acceptance at the appropriate management level using the process of reference (b), (h), (bd), (bm) and (iw). Reference (bm) requires that "Safety must be addressed throughout the acquisition process. Safety considerations include human (includes human/system interfaces), toxic/hazardous materials and substances, production/ manufacturing, testing, facilities, logistical support, weapons, and munitions/explosives. All systems containing energetics will comply with insensitive munitions criteria." See online Web sites for references (b), (h), (bd), (bm) and (iw).
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.10K.pdf
https://www.dau.mil/cop/armyesoh/DAU%20Sponsored%20Documents/MIL-STD-882E.pdf
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/500002_dodi_2015.pdf?ver=2017-08-11-170656-430
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodd/500001p.pdf
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-00%20General%20Admin%20and%20Management%20Support/5000.2F.pdf

b. Application of the system safety process is required not only by system safety professionals, but also by other functional areas including acquisition, systems engineering as well as environmental safety and health (ESOH) disciplines such as fire protection engineers, occupational health professionals, and environmental engineers to identify hazards and mitigate risks through the Systems Engineering process throughout systems lifecycle. This chapter

provides guidance to support reference (bd), (bm) and (iw) requirements for integration of system safety engineering processes into acquisition programs to ensure hazards are identified, mitigated and controlled early in the program. Safety through design is promoted by the system safety process, as well as safety management systems integral to reference (ix) guidance, and best practices such as ANSI Z10 and the National Institute of Occupational Safety and Health's Prevention Thru Design (PTD) initiative. See online Web site for reference (ix). https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodd/471501p.pdf?ver=2018-12-03-092122-250

(1) Use of the system safety is a required component of the systems engineering process used during (1) the planning and execution for research, development, test and evaluation, (2) acquisition of special equipment or existing equipment undergoing major design changes, (3) the planning and design of facility construction projects and/or major renovation projects, and (4) procurement of pollution prevention equipment or technology.

(2) Design safety will utilize the reference (h) System Safety five step process to ensure that all client safety and health needs are identified, and special controls are understood and designed into each project or technology.

(3) Reference (it) provides a complementary process to integrate risk into operational scenarios. In depth operational risk management (ORM), supports input into design when time permits significant advance planning. Deliberate and time-critical ORM provide a methodology for risk reduction through management processes, where initial systems and equipment design cannot be immediately influenced. See online Web site for reference (it). https://www.secnav.navy.mil/doni/Directives/03000%20Naval%20Operations%20and%20Readiness/03-500%20Training%20and%20Readiness%20Services/3500.39D.pdf

c. Requirements Generation. The evaluation of military capabilities and requirements (needs, capabilities gap and resource requirements) is managed through the Chairman, Joint Chief of Staff in accordance with Joint Capabilities Integration and Development System (JCIDS) using processes described in references (iy) and (iz). Reference (iw) describes integration of capabilities generation/validation and naval acquisition. Reference (ja) describes the roles of Chief of Naval Operation (CNO) Codes in capabilities assessment, requirements generation and resources allocation. Navy requirements and resources are managed by CNO N8/N9 with inputs from logistics (N4/N45) and manpower, personnel (N17). See online Web sites for references (iy), (iz) and (ja).
https://www.secnav.navy.mil/rda/Policy/The%20Joint%20Capability%20Integration%20and%20Development%20System%20JCIDS/cjcsi317001h201201102.pdf
https://www.jcs.mil/Portals/36/Documents/Library/Manuals/m315013.pdf?ver=2016-02-05-175659-333
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-400%20Organization%20and%20Functional%20Support%20Services/5450.352A.pdf

d. Acquisition Process. The Defense Acquisition Guidebook reference (jb) and reference (jc) provide an overview of the Defense Acquisition Process. The Naval Safety Center Web site provides an overview of safety integration into the acquisition process. See online Web sites for reference (jb), (jc) and Naval Safety Center.
https://www.dau.mil/tools/dag
https://fas.org/sgp/crs/natsec/RL34026.pdf
https://www.public.navy.mil/NAVSAFECEN/Pages/index.aspx

e. The Assistant Secretary of the Navy (Research, Development & Acquisition) (ASN (RD&A)) manages Naval Acquisition process and reports directly to the Secretary of the Navy. Program Executive Offices (PEOs), reporting to ASN RD&A, provide oversight for major classes of defense platforms and capabilities such as expeditionary warfare, tactical vehicles and aircraft carriers. Program managers (PMs) are responsible for a specific acquisition program such as a particular ship or aircraft and report to PEOs. Guidance and support for the acquisition process and specific technology areas is provided through the systems commands (MARCORSYSCOM, NAVAIR, NAVSEA, SPAWAR, NAVFAC, etc.) and their warfare centers.

f. ASN (RDA) is responsible for ensuring DON Science and Technology (S&T) projects and acquisition programs comply with Department of Navy (DON) environmental, safety and occupational health (ESOH) policy and is the focal point for all DON S&T and acquisition ESOH issues in accordance with reference (iw). ASN (RD&A) is the mishap risk acceptance authority for "high" risk in accordance with references (h), (bd), and (iw).

g. The ASN (RD&A) Chief Engineer's Office (CHENG) provides oversight for the integration of ESOH into the system engineering process in accordance with references (b), (iw), and (jd).

3803. System Safety Working Groups (SSWG)/ Facility system safety working groups (FSSWG).

a. Program managers (PMs) for acquisition of defense platforms and systems are guided by reference (jb) to establish inter-disciplinary working groups to address complex issues such as logistics, human systems integration and system safety. Reference (jd) also establishes the requirement for appointment of a life-cycle manager for both new systems and those in sustainment. See online Web site for reference (jd).
https://www.dau.mil/cop/se/DAU%20Sponsored%20Documents/Naval%20SYSCOM%20Risk%20Instr%20Signed%2021%20July%202008.pdf

b. The Government Lead System Safety Engineer, appointed by the PM, is the primary safety point of contact for all aspects of the system. This position may also be referred to as the Principal for Safety or the Principal for Environmental, Safety and Occupational Health, PESOH. He or she develops a system safety management approach for the acquisition program and documents the approach in the System Safety Management Plan (SSMP). The Lead System

Safety Engineer also ensures the contractor has a System Safety Program Plan (SSPP) for development of the system. To successfully carry out the system safety program for a given acquisition program, the Government Lead System Safety Engineer establishes a System Safety Working Group (SSWG) made up of Government and contractor representatives.

c. Safe facilities and systems must be designed to minimize personnel injuries and illnesses and equipment breakdown. System safety engineering will be used during (1) the planning and execution for research, development, test and evaluation, (2) acquisition of special equipment or existing equipment undergoing major design changes, (3) the planning and design of facility construction projects and/or major renovation projects, and (4) procurement of pollution prevention equipment or technology.

3804. System Safety Advisory Board (SSAB)

The SSAB will be chartered under auspices of the Safety Quality Council and leverage existing groups under the System Engineering Stakeholder group to develop, champion and promote use of common system safety policies, procedures, tools, and matrices. Concurrent benefits include reduced lifecycle cost and reduced Safety and Occupational Health (SOH) risk over the system's lifecycle.

3805. Responsibilities

a. In accordance with references (h), (iw), and (ja), the CNO:

(1) Plans and programs support for the POM/PR including supervision and control of requirements/capabilities allocation and integration of navy resources (CNO N8/N9).

(2) Develops and maintains system safety policy to fulfill Secretary of the Navy (SECNAV) policy and requirements.

(3) Recommends system safety policy to the SECNAV.

(4) Establishes a System Safety Advisory Board (SSAB).

(5) Establishes and supports a process for operational commands to identify safety deficiencies to the program executive offices for action.

b. CNO (N8) and related program sponsors, consistent with reference (iw), (iy), (iz) and (ja) will ensure SOH considerations are addressed as part of the JCIDS and consult with appropriate experts to support this objective.

c. The Special Assistant for Safety Matters (CNO N09F), in accordance with references (k) and (ja) will:

(1) Advise and assist the CNO in reviewing Navy system safety program policies, objectives, requirements and effectiveness consistent with references (b), (iw), and (ja).

(2) Ensure acquisition managers comply with the requirements of reference (b), (h), (bm), (iw), (ix), and other applicable Federal agency safety and health standards or criteria in the procurement of military systems, subsystems, equipment, and related facilities.

(3) Establish and maintain a data repository and center of expertise for mishap and hazard information, capable of communicating safety hazards to relevant Navy System Commands (SYSCOM), Program Executive Offices (PEOs), Program Managers, acquisition activities commands, or other appropriate technical authority, and provide identification of safety issues and hazards consistent with references (a), (e), (k), (m) and (ag). See online Web sites for references (a), (e), (k), (m) and (ag).
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605501p.pdf
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605507p.pdf
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-400%20Organization%20and%20Functional%20Support%20Services/5450.180E.pdf
https://www.secnav.navy.mil/doni/allinstructions.aspx#InplviewHashcd83a2ac-33e0-4ef2-b888-8820a1d38ac8=Paged%3DTRUE-p_FileLeafRef%3D3900%252e25D%252epdf-p_ID%3D3288-PageFirstRow%3D501
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.19E%20-%20Volume%20I%20Part%20I.pdf

(4) Provide system leads to participate in System Safety Working Groups (SSWGs).

d. CNO N1 provides guidance for development of requirements for human systems integration within the JCIDS system, in accordance with references (iw), (ja) and (je). See online Web site for reference (je).
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-300%20Manpower%20Personnel%20Support/5310.23A.pdf

e. Commander, Operational Test and Evaluation Force (COMOPTEVFOR), consistent with references (iw) and (jf), will provide an independent evaluation that the material solution provides an acceptable level of safety for the user in the operational environment. See online Web sites for reference (jf).
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-400%20Organization%20and%20Functional%20Support%20Services/5450.332A.pdf

(1) Provide an evaluation of safety and health for those involved in testing, as well as, the user community.

(2) Issue a Safety Release with SOH risk to personnel, equipment and the environment for the test event accepted at the proper authority level.

f. The President, Board of Inspection and Survey (PRESINSURV) consistent with references (j), (iw), (jg), (jh) and (ji) inspects newly constructed naval vessels and provides evaluation of contract compliance and performance oversight for the ships prior to government acceptance. See online Web sites for references (jg), (jh) and (ji).
https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-400%20Organization%20and%20Functional%20Support%20Services/5420.70G.pdf
https://www.secnav.navy.mil/doni/Directives/09000%20General%20Ship%20Design%20and%20Support/09-00%20General%20Ship%20Design%20Support/9080.4C.pdf
https://www.secnav.navy.mil/doni/Directives/04000%20Logistical%20Support%20and%20Services/04-700%20General%20Maintenance%20and%20Construction%20Support/4730.5R.pdf

g. Chief, Bureau of Medicine and Surgery (BUMED):

(1) Support the ASN (RD&A), CNO N09F, SYSCOMs and PEOs/PMs in integrating occupational health considerations into science and technology (S&T) projects and the systems engineering process for acquisition programs in accordance with references (iw) and (ac). See online Web site for reference (ac).
http://www.med.navy.mil/directives/ExternalDirectives/6270.8C.pdf

(2) Provide health hazard assessments and programmatic environmental safety and health evaluations (PESHE) reviews when requested by PEOs, PMs or Program offices in accordance with references (iw) and (ac).

h. SYSCOMs will:

(1) Be responsible for the technical aspects of system safety, consistent with references (iw) and (jd). Ensure adequate consideration of safety features in the design, purchase, or procurement of items over which the command exercises acquisition authority in accordance with Chapter 2 of this Manual and reference (jd).

(2) Support and participate on Mishap Investigation Boards with trained personnel in accordance with reference (m).

(3) Establish and maintain the capability to conduct system safety assessments in accordance with references (b), (h), (m), (bd), (bm), (iw), and (ix).

(4) Support, monitor and conduct safety evaluations/approvals for high risk/regulated systems to include, but not limited to:

(a) Lasers (references (ek) and(es)). See online Web sites for reference (ek) and (es). https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.27B.pdf https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.14E.pdf

(b) Weapons (ordnance/explosives) (reference (jj))

(c) Lithium batteries (reference (jk)). See online Web site for reference (jk). https://www.public.navy.mil/navsafecen/Documents/afloat/Surface/CS/Lithium_Batteries_Info/LithBattSafe.pdf

(d) Ship systems and interfaces (reference (jl) and (jm)). See online Web site for reference (jm). https://www.secnav.navy.mil/doni/Directives/03000%20Naval%20Operations%20and%20Readiness/03-100%20Naval%20Operations%20Support/3120.28D.pdf

(e) Airworthiness for aircraft systems (reference (jm) and (jn))

(f) Radiofrequency radiation (reference (jo)). See online Web site for reference (jo). https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/322203p.pdf?ver=2019-02-26-101527-160

(g) Safety of facilities supporting acquisition systems and equipment (references (iw), (jp) and Chapter 2 of this Manual).

(h) Ensure environmental compliance and use of least hazardous products and process consistent with operational requirements and economy (including life-cycle cost management) consistent with references (b), (h), (bd), (bm), (iw), (ix), (al) and (jq). This include Environmental Planning Under the National Environmental Policy Act (NEPA) and Executive Order 12114 (reference (al), chapter 10) and Environmental Readiness in the Acquisition Process (reference (al), Chapter 11). See online Web site for reference (jq). https://www.secnav.navy.mil/rda/Policy/2008%20Policy%20Memoranda/dcnon4memo29jul08environmentalreadinessinsysacqn.pdf

(i) Control of noise hazards to personnel consistent with DOD policy reference (cr), Military Standard 1474 design criteria, and reference (jr) with risk acceptance at the appropriate management level, in accordance with references (b), (h), (bd), (bm), (iw), (ix), and VCNO Policy Memorandum, reference (js). See online Web site for reference (cr), (jr) and (js). http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/605512p.pdf https://www.denix.osd.mil/shf/references/military-standards/mil-std-1474d-noise-limits/ https://www.secnav.navy.mil/rda/Policy/2011%20Policy%20Memoranda/PMDASNmemoofDec

222011ImplementationofNASHazardousNoiseRecommendations.pdf

(5) Ensure the requirements in the Safety Release (SR) are followed and system safety requirements are addressed when performing testing.

(6) Evaluate the impact on safety when reviewing engineering changes, alterations, deviations, waivers, and modification proposals.

(7) Apply system safety process and evaluation to support facility safety in design in accordance with references (b), (al) and (ix).

(8) Develop, maintain and implement policy for system safety, SOH risk management, safety releases and SOH integration into Systems Engineering (SE).

(9) Designate in writing a system safety lead for each program and/or fielded system, including minimum qualifications for personnel to be designated as a system safety lead and communicate this POC to the operational forces. This lead is called the Principal for Safety (PFS) in NAVFAC and NAVSEA and the Safety Class Desk in NAVAIR.

(10) Ensure all identified ESOH risk is mitigated or accepted prior to exposing personnel, equipment or the environment in accordance with reference (jd).

(11) Establish a means to identify and manage hazards that are discovered post-fielding, including application of references (jt), (ju), (jv) and (jw) processes. See online Web sites for references (jt), (ju) and (jv).
https://www.secnav.navy.mil/doni/Directives/04000%20Logistical%20Support%20and%20Services/04-800%20Production%20and%20Industrial%20Preparedness%20Planning/4855.3D.pdf
https://www.secnav.navy.mil/doni/Directives/04000%20Logistical%20Support%20and%20Services/04-100%20Material%20Resources%20Storage%20and%20Management/4140.2.pdf
https://www.secnav.navy.mil/doni/Directives/04000%20Logistical%20Support%20and%20Services/04-700%20General%20Maintenance%20and%20Construction%20Support/4790.2J.pdf

(12) Provide Safety Releases for all developmental and operational test events involving civilian, government or military personnel.

(13) Establish a means to review engineering changes, alterations, deviations, waivers, and modification proposals for their impact on safety.

(14) Establish a means to maintain a permanent record of identified risk acceptance.

(15) Promote and monitor system safety assessments related to the acquisition of systems, sub-systems, materials, equipment, and software under their purview during R&D, new construction, modernization, repair, and overhaul.

(16) Ensure all technical authorities include system safety methodology and SOH risk management consistent with references (h), (bm) and (jd).

(17) Provide trained personnel to Mishap Investigation Boards of Class A and B mishaps involving systems over which SYSCOMS has cognizance.

(18) Issue Safety of Use Messages (SOUM) to operations commands concerning systems and provide SOUM to NAVSAFECEN.

(19) Establish Facility System Safety Working Groups (FSSWG) (or similar group) to review facility designs for new military construction projects to ensure hazards are identified and controlled. Acquisition activities must ensure end user safety and health controls are identified, evaluated and communicated to the users.

i. Operational Commands/Type Commands, will:

(1) Consider issues that may affect safety when identifying capabilities gaps to Requirements Officers.

(2) Support the system safety process by participating in SSWGs, as appropriate.

(3) Include operational expert representation from areas of safety concern on all Operational Advisory Groups (OAGs).

(4) Report hazards identified during operation and maintenance of ships, aircraft or systems to technical authorities, SYSCOM, PEO, PM or the appropriate acquisition activity for hazard analyses and mitigation.

(5) Establish a process to involve the user in SOH risk identification and a means for formal user concurrence of identified serious and high risks consistent with references (h) and (bd) and provide the process to the program offices for SOH risk management.

(6) Identify and report material deficiencies and hazards with ships, aircraft and systems to the appropriate Program Executive Offices and Program Management Offices via Hazardous Material Reports.

(7) Identify to appropriate engineering authorities and Technical Warrant Holders (TWH) via engineering investigations, technical publication deficiency report (TPDR) and Technical Manual Deficiency report (TMDR).

(8) Share hazardous material reports (HMRs), TPDRs, Engineering Investigation (EI's), and non-official concerns with the NAVSAFECEN Lessons Learned office and SYSCOM Safety Offices consistent with reference (e) and (jt).

(9) Request information from PESHE and Hazard Tracking System as well as various Hazard Analysis as required by reference (h) from Program Management Offices and provide feedback and process improvement mandated by the Fleet/Naval Safety Center Safety Campaign and implementation of a safety management system, reference (jw).

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(iv) CNICINST 1710.3, Operation of Morale, Welfare and Recreation Programs, of 14 Jun 2013

(iw) SECNAVINST 5000.2F, Department of the Navy Implementation and Operation of the Defense Acquisition System and the Joint Capabilities Integration and Development System, of 1 Sep 11

(ix) DOD Directive 4715.1E, Environmental, Safety and Occupational Health, of 19 Mar 05

(iy) Chairman, Joint Chiefs of Staff Instruction (CJCSI) 3170.01H, Joint Capabilities Integration and Development System, of 10 January 2012

(iz) Chairman, Joint Chiefs of Staff Manual (CJCSM) 3150.13C, Joint Capabilities Integration and Development System, of 19 Jan 2012

(ja) OPNAVINST 5450.352A; Subj: Missions Functions and Tasks of The Chief of Naval Operations, of 23 Apr 2019

(jb) The Defense Acquisition Guidebook

(jc) Defense Acquisitions: How DOD Acquires Weapon Systems and Recent Efforts to Reform the Process; Moshe Schwartz, Specialist in Defense Acquisition, May 23, 2014

(jd) NAVSEAINST 5000.8/ NAVAIRINST 5000.21B MARCORSYSCOM Order/ SPAWARINST 3058.1 NAVFACINST 5000.15/ 5000.3 Subj: NAVAL SYSCOM RISK MANAGEMENT POLICY, of July 2008

(je) OPNAVINST 5310.23, Navy Personnel, Human Systems Integration (NAVPRINT), of 10 Nov 09

(jf) OPNAVINST 5450.332A Mission, Functions and Tasks of Commander, Operational Test and Evaluation Force of 21 March 2012

(jg) OPNAVINST 5420.70G, Mission, Organization, and Functions of the Board of Inspection and Survey, of 17 Jul 2014

(jh) OPNAVINST 9080.4C, Relationship between the Naval Inspector General and the President, Board of Inspection and Survey, of 20 March 2012

(ji) OPNAVINST 4730.5R, Trials and Material Inspections (MI) of Ships Conducted by the Board of Inspection and Survey, of 27 May 2014

(jj) NAVSEAINST 8020.6E, Navy Weapon System Safety Program, of 11 Mar 08 (Contact NAVSEA for instruction)

(jk) NAVSEAINST TM-S9310-AQ-SAF-010 Technical Manual for Batteries, Navy Lithium Safety Programs Responsibilities and Procedures, 19 Aug 04

(jl) NAVSEAINST 5100.12B System Safety Engineering Policy, 3 Aug 2011(Contact NAVSEA for instruction)

(jm) OPNAVINST 3120.28D; 04 Jan 2011 Subj: Certification of The Aviation Capability of Ships Operating Aircraft

(jn) NAVAIRINST13034.10 MAR 16 2010 Subj: Flight Clearance Policy for Air Vehicles and Aircraft Systems

(jo) DoDI 3222.03; August 25, 2014 SUBJECT: DoD Electromagnetic Environmental Effects (E3) Program

(jp) NAVFACINST 5100.10J NAVFACENGCOM Safety and Health Program, 18 June 2000 (Contact NAVFAC for instruction)

(jq) CNO memorandum 5090 Ser N4/8U156042, Environmental Readiness in Systems Acquisition, of 29 Jul 2008

(jr) Military Standard 1474 Noise Limits

(js) ASN (RDA) (VCNO Skinner) Memo of 22 Dec 2011 Subj: Implementation of The Naval Audit Service Hazardous Noise Recommendations

(jt) SECNAVINST 4855.5A, Product Quality Deficiency Report Program, of 20 Jul 93 Cancelled. Refer to SECNAVINST 4855.3D Product Data Reporting and Evaluation Program 6/27/2014

(ju) SECNAV 4140.2 Management of Aviation Critical Safety Items (Joint) 1/25/2006

(jv) OPNAV 4790.2J The Naval Aviation Maintenance Program (NAMP) 2/1/2005

(jw) CNO Msg R 251720Z AUG 14 ZYB /N09F/ OPER/U.S. NAVY FLEET SAFETY CAMPAIGN/SGID/ORDER/COMUSFLTFORCOM-COMPACFLT// AMPN/OPORD/IMPLEMENTATION OF A U.S. NAVY FLEET SAFETY MANAGEMENT SYSTEM (SMS)//

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CHAPTER A1
INTRODUCTION

A0101. Purpose. This instruction establishes the Navy Safety Management System (SMS), a comprehensive framework that will ensure operational readiness through continuous improvement and risk-based decision making processes and procedures. Key to this framework is the use of predictive, standardized, system-oriented, and process-driven approaches.

a. The goal of the Navy SMS is to align and enable naval operational forces and shore establishments to identify and implement elements from the Navy SMS that will facilitate a transition from *reactively managing safety* to *proactively managing safety and risk,* and ultimately, *to become predictive.* The Navy expects commands, units, and activities to develop comprehensive and systematic means to manage both safety and risk in order to prevent losses due to mishaps while preserving required operational capabilities (i.e., operational readiness) in all projected operational environments. This will enable a Navy that is fully prepared and lethal, today and at all times, with optimal readiness and predictable availability. Rather than an end itself, operational safety contributes directly to readiness. It requires approaches that complement and go beyond traditional compliance-based rules and inspections. To move beyond legacy data categories and stove-piped data systems, it also requires using relevant operational, training, and human performance data in new ways that indicate commands, units, and activities at risk of having operational mishaps, before those mishaps occur. The Navy SMS is not prescriptive about the design of a particular command, unit, or activity's SMS, nor does it provide specific performance objectives. The design of a particular command, unit, or activity's SMS, and specific performance objectives for their SMS, will be stated by headquarters commands and that individual command, unit, or activity.

b. The primary administrative goal of the Navy SMS is to be a scalable, transparent high-level framework for all Navy safety and risk-related policies, programs, and functions that includes, but is not limited to the following: risk management, acquisition safety, environmental health, emergency response, explosives safety, fire and emergency services, industrial hygiene, occupational health, occupational safety, radiation safety, operational safety, human systems integration, system safety, recreational and off-duty safety, and public safety. A secondary administrative goal is to avoid creating unnecessary or redundant administrative burdens.

A0102. Scope and Applicability

a. Navy Civilian and Military Personnel and Operations Worldwide

(1) The provisions of this instruction apply to all Navy civilian and military personnel and operations worldwide except where responsibility rests with the Commandant of the Marine Corps and for those afloat personnel falling under the requirements of reference (d).

(2) The provisions of this instruction apply to all Navy civilian and military personnel

onboard United States Naval Ships (USNS) of the Military Sealift Command (MSC) manned by Federal civil service mariners and military personnel. Due to the manning complexities for MSC ships, there may be some administrative procedures that will need to be tailored in the MSC Safety Management System (SMS) for MSC ship applications. MSC SMS complies with International Maritime Organization (IMO) International Safety Management (ISM) code requirements.

b. Military-Unique Equipment, Systems, Operations, or Workplaces. Per reference (a), the Navy must apply U.S. Department of Labor (DOL) Occupational Safety and Health Administration (OSHA) and other non-Department of Defense regulatory safety and health standards to military-unique equipment, systems, operations, or workplaces, in whole or in part, as practicable. When military design, specifications, or deployment requirements render compliance with existing occupational safety and health standards infeasible or inappropriate, or when no standard exists for such military application, Navy commands, units, and activities must publish and apply risk management procedures. The results of the risk management decision must be communicated to all affected personnel. The Navy must develop, publish, and follow special military occupational safety and health standards, rules, or regulations which protect personnel from hazardous exposures due to military-unique equipment, systems, operations, or workplaces.

c. Navy Contractors

(1) The provisions of this instruction do not apply to Navy contractors, except for the following:

(a) Situations in which the United States, by admiralty law or other law, is responsible for contractor employee injury compensation; and

(b) Situations where the Navy exercises statutory authority for occupational safety and health and, as a result, the Occupational Safety and Health Act does not directly apply.

(2) Where the occupational safety and health of the contractor's employees are affected, the contractor is responsible directly to the DOL's OSHA or appropriate state office where OSHA has approved a state plan.

d. Collective Bargaining Agreements. Regional commanders and commanding officers must apply this instruction consistently with the provisions of reference (e), other provisions of law providing for collective bargaining agreements and procedures, and any agreements entered into under such provisions. They must determine matters of official leave for employee representatives involved in activities under this instruction by the procedures of reference (e) or applicable collective bargaining agreements.

e. Naval Nuclear Propulsion Plant Activities. These activities are part of the overall Navy

SMS. Under the statutory authority of the Atomic Energy Act of 1954, section 309(a) of the Department of Energy Organization Act, and E.O. 12344 of 1 February 1982, (statutorily prescribed by Public Laws 98-525 and 106-65), the Office of the Chief of Naval Operations Director of Naval Nuclear Propulsion Program (CNO (N00N)) is responsible for the safety of reactors and associated naval nuclear propulsion plants, and the control of radiation and radioactivity associated with naval nuclear propulsion plant activities, including prescribing and enforcing standards and regulations for these areas as they affect the environment and the safety and health of workers, operations, and the general public.

f. Explosives Safety. This is part of the overall Navy SMS. By the authority of section 172 of title 10, United States Code (U.S.C.), explosives safety is exempt from the occupational safety and health requirements of this instruction. However, this instruction does apply to occupational safety and health and risk management issues in explosives and ordnance areas (e.g., the evaluation of exposure to hazardous materials, noise, machine guarding, etc.).

A0103. Definition of Terms

a. See the Glossary at the end of the instruction for the definition of special terms used throughout the instruction.

b. This instruction uses the words "will," "must," "should," "may," and "can" throughout. "Will" and "must" are directive in nature and require mandatory compliance. "Should" is a strong recommendation, but compliance is not required. "May" or "can," when used, are optional in nature, and compliance is not required.

A0104. Background. An SMS is a system of processes that proactively manages day-to-day safety and risk management in an organization across all operations and business lines. It is not a single written policy or database.

a. The Navy has had an eclectic collection of safety and risk-related systems and processes for many decades that have various semblances of an SMS; however, these eclectic systems and processes were not integrated into an overall *management system,* such as an SMS. References (a) through (z) [references (d) through (x) are listed in Appendix A] are a partial list of select policy, guidance, and technical documents that are relevant to the Navy SMS. The references listed were selected to provide a glimpse into how the Navy SMS includes many other safety and risk-related policies, programs, and functions besides just occupational safety, occupational health, and industrial hygiene. What has been missing from the Navy in the past are an enterprise-level policy and lower echelon policies that integrate these eclectic safety and risk-related systems and processes into a single, effective management system. Reference (b) discusses the construct of a Navy SMS and specifies the minimum fundamental elements of a Navy SMS.

(1) One of the best Navy community-level examples of an SMS that already incorporates

a majority of the Navy SMS framework is the Bureau of Medicine and Surgery's (BUMED) use of The Joint Commission standards and survey process for the accreditation and certification of a military treatment facility (MTF). These standards include the elements of a health care-centric SMS and also incorporate the Plan-Do-Check-Act iterative continuous improvement cycle. What has resulted, is a proven, flexible approach to proactively and continually address MTF workplace safety and health issues. These standards also minimize risk and foster a "culture of safety" in the MTF health care setting, with potential benefits for both worker and patient safety. Use of this process by BUMED has been around for decades. The Medical Inspector General (MEDIG) for the BUMED conducts command inspections of MTFs at the same time that The Joint Commission conducts its accreditation and certification surveys. The MEDIG inspects MTFs for the SMS requirement gaps not covered in The Joint Commission survey process (e.g., worksite hazard analyses, recreational and off-duty safety, traffic safety, employee involvement, and contractor employee involvement) along with other non-SMS requirements.

(2) More recently, in early 2018, the commanders of both U.S. Fleet Forces Command and U.S. Pacific Fleet published a first-ever Fleet SMS Program. The Fleet SMS had a major influence in the construct of the Navy SMS framework.

(3) Finally, a Navy community-level example of a policy for safety and risk-based systems or processes that support predominantly the operational safety functional area of an SMS is the Submarine Safety (SUBSAFE) Program (reference (u)).

b. The Navy has different and distinct operational and business cultures, each shaped by unique organizational structures, needs, and priorities. Over time, these individual communities tailored safety policies, manning, and procedures to meet their individual needs. This approach led to wide disparities and stove pipes in the means and methods used to gauge and manage safety and risk. Additionally, the lack of common methodology between the various communities invariably becomes a barrier to sharing information, best practices, and successful initiatives.

A0105. Discussion

a. World class organizations like the U.S. Navy effectively manage safety and risk while ensuring program compliance across all lines of operation and business in order to accomplish the mission while preserving operational capabilities in all projected operational environments for the future. The Navy SMS provides the framework to manage safety and risk at all levels through operations and business lines alike. The Navy SMS also reinforces the Navy's commitment to the health and welfare of its people and to the principle of continuous improvement.

b. Full implementation of the Navy SMS will ensure a comprehensive and robust program that continuously improves, fosters a strong risk management culture, moves beyond simple procedural compliance, and accomplishes the mission efficiently and effectively. While other

recognized SMSs closely align with the Navy SMS for occupational safety and health programs, these other SMSs do not include other safety and risk management functional areas required by the Navy such as risk management in military operations, acquisition safety, environmental health, emergency response, explosives safety, fire and emergency services, radiation safety, operational safety, human factors engineering, human systems integration, system safety, recreational and off-duty safety, and public safety. Examples of other recognized SMSs that are solely *occupational safety and health-focused* include the following: International Organization for Standardization (ISO) standard ISO 45001: 2018, "Occupational Health and Safety Management Systems;" and American National Standards Institute (ANSI) and American Society of Safety Professionals (ASSP) standard ANSI/ASSP Z10-2012 (R2017), "Occupational Health and Safety Management Systems."

c. Commands, units, and activities may customize their own SMS, but these SMSs must adhere to the minimum framework requirements of this instruction. The Navy SMS framework outlined in this instruction strikes a balance between flexibility of implementation and the standardization of essential safety management system processes. This instruction was written so that the Navy SMS is applicable to Navy commands, units, and activities no matter what their size or mission. *This Navy SMS instruction is written as a requirements document. Therefore, it is only prescriptive as to what the organization must do, not how it will be accomplished.* The Navy SMS is scalable and allows organizations to integrate safety and risk management practices into their unique operations and business lines. Smaller organizations may adopt much of the policy from higher echelons, have other base operating support organizations cover some requirements, or conduct assurance in conjunction with other existing inspections or assessments, provided that the support is documented. Regardless of how the minimum Navy SMS framework requirements are met, evidence of the existence of an SMS must be evident within commands, units, and activities at every echelon.

d. Voluntary Protection Program (VPP). The VPP is not an SMS, but a U.S. Department of Labor (DOL) Occupational Safety and Health Administration (OSHA) program that gives official third-party recognition of the outstanding efforts of employers and employees who have achieved an exemplary occupational safety and health SMS. The VPP sets performance-based criteria for a managed safety and health system, invites sites to apply, and then assesses applicants against these criteria.

e. Department of Defense Safety Management Center of Excellence (DoD SMCX). The DoD SMCX is a central resource for commanders, safety professionals, and employees to obtain proven risk management solutions and technologies in support of a DoD activity's pursuit of VPP recognition and an SMS.

A0106. Introduction to the Navy SMS Framework. The Navy SMS framework consists of an iterative continuous improvement cycle, four pillars, and one or more minimum fundamental elements that underpin those pillars. A particular iterative continuous improvement cycle is not specified; therefore, commands, units, and activities may use whichever cycle meets their needs.

Acceptable examples of iterative continuous improvement cycles in use by varying organizations in the Navy are Plan-Do-Check-Act (PDCA) and Plan-Brief-Execute-Debrief (PBED). The four Navy SMS pillars (table A1) are as follows: Policy and organizational commitment, risk management, assurance, and promotion. The Navy SMS uses the four pillars to categorize the many fundamental elements for several reasons: simplicity, brevity, and to facilitate better understanding of the overall SMS concept throughout the Navy enterprise. The Navy SMS framework and the minimum fundamental elements will be further discussed in chapter A2.

Pillar	Description
Policy and Organizational Commitment	Policy provides the requirements for a fully-functional SMS and establishes, through documentation, the organization's expectations, objectives, employee participation, risk tolerance, and SMS business rules for its personnel. It will also define, document, and communicate the safety and risk-related roles, responsibilities, and authorities throughout the organization.
Risk Management	A formal system of hazard identification, risk assessment, risk acceptance, control implementation, and risk monitoring to control risk to acceptable levels. Risk management applies to all missions and environments across the Navy Enterprise, both on- and off-duty.
Assurance	Safety assurance ensures proactive compliance with standards, policies, directives, and procedures through audits, assist visits, human factors surveys and workshops, command and employee reporting, data analysis, and guides continuous improvement efforts and positive safety cultures. It also includes periodic evaluation to measure whether organizations conform to standards and are making progress toward established goals. Safety assurance evaluates the continued effectiveness of implemented risk controls and reporting strategies, and supports the identification of new hazards.
Promotion	Actions by organizations to promote safety as a core value with practices that support a sound safety culture. This includes training, awards, employee recognition, sharing best practices and lessons learned, clear communications, and other actions to create a proactive safety climate and informed safety culture within all levels of the chain of command.

Table A1. The Four Pillar Framework of a Navy SMS

A0107. Responsibilities

a. Office of the Chief of Naval Operations, Special Assistant for Safety Matters (CNO N09F)

(1) Serves as the principal advisor to the Chief of Naval Operations and Deputy Assistant Secretary of the Navy for Safety on policy and administration of the Navy SMS Program, including policy guidance and accountability.

(2) Develop and publish SMS directives and guidelines for implementation throughout the Navy using feedback on best practices and echelon 2 and other headquarter command needs.

(3) Advocate for the inclusion of Navy SMS requirements in all training courses, personnel qualification standards, job qualification requirements, events, and evolutions across the Navy.

b. Commander, Naval Safety Center

(1) Oversee implementation of this instruction.

(2) Serve as the point of contact for echelon 2 commands and other headquarter commands to interpret policy, address needs and concerns, and provide subject matter expertise for technical SMS-related matters.

(3) Identify and address potential risks to readiness by collecting and analyzing Navy-wide mishap; near miss; hazard, exercise; operational; and inspection, certification, and assist visit related data.

(4) Ensure that non-aviation Navy SMS training courses are developed and hosted by the Naval Safety and Environmental Training Center.

(5) Ensure that aviation safety training courses which are relevant to the Navy SMS are developed and hosted by the Naval School of Aviation Safety.

c. Commanders of echelon 2 and other headquarter commands

(1) Oversee implementation of this instruction within their respective command, unit, and activity structures.

(2) Designate an SMS lead and assign, as needed, other personnel to execute and fully implement SMS throughout the headquarters and subordinate commands, units, and activities. The minimum duties and responsibilities include:

(a) Serve as the point of contact for subordinate commands, units, and activities to interpret policy, address needs and concerns, and provide subject matter expertise for technical SMS-related matters.

(b) Attend applicable training sufficient enough to understand and implement their SMS.

(3) Develop and publish SMS directives and guidelines for implementation throughout their command, unit, or activity and lower echelons using their feedback on best practices and organizational needs.

(4) Identify and address potential risks to readiness and operations by collecting and analyzing organizational-wide mishap, near miss, hazard, exercise, operational, and related data.

(5) Direct subordinate training agencies and training executors to include Navy SMS requirements in their training courses, personnel qualification standards, job qualification requirements, events, and evolutions.

(6) Incorporate SMS requirements into all oversight inspections, certifications, and assist visits (e.g., inspector general inspections, Board of Inspection and Survey inspections, command

inspections, and safety and occupational health management evaluations, etc.) of headquarters and their respective subordinate commands, units, and activities.

(7) Ensure that at least one union and one management representative, if applicable, is provided an opportunity to participate in all oversight inspections, certifications, and assist visits.

(8) Develop and implement an oversight process to evaluate safety management system program effectiveness at subordinate commands, units, and activities. Evaluations should be included as part of a command inspection or readiness assessment, whenever possible, and leverage existing events. The evaluations must be conducted at a minimum of every three years and include reviews of operational safety, occupational safety and health, recreational and off-duty safety programs, and how well risk management principles are applied within a continuous improvement cycle (e.g., PDCA, PBED, etc.).

Note:

It is not the intent of this instruction to direct Navy commands, units, and activities to assign SMS responsibilities to only safety and occupational health professionals (e.g., GS-0018 or GS-0690 Classification Series, Navy Industrial Hygiene Officers, etc.). An SMS includes many safety and risk management-related processes and systems outside of the scope of the typical position description for safety and occupational health professionals. Commands, units, and activities may find it necessary to assign responsibility for different functional areas of their SMS (e.g., operational safety) to one or more different advisors with subject matter expertise in those respective SMS functional areas.

d. Commanders, commanding officers, masters (i.e., Military Sealift Command vessels), and officers in charge

(1) Oversee implementation of this instruction within their respective command, unit, and activity structures.

(2) Designate an SMS lead and assign, as needed, other personnel to execute and fully implement SMS throughout command, unit, or activity. The minimum duties and responsibilities include:

(a) Serve as the point of contact for your command to interpret policy, address needs and concerns, and provide subject matter expertise for technical SMS-related matters.

(b) Attend training as directed by the echelon 2 SMS lead.

(3) Develop and publish SMS directives and guidelines for implementation throughout their command, as needed, using their feedback on best practices and organizational needs.

(4) Identify and address potential risks to readiness by collecting and analyzing organizational-wide mishap, near miss, hazard, exercise, operational, and related data.

(5) Direct training officers to include Navy SMS requirements in their training courses, job qualification requirements, plans, briefs, events, evolutions, and debriefs.

Note:

It is not the intent of this instruction to direct Navy commands, units, and activities to assign SMS responsibilities to only safety and occupational health professionals (e.g., GS-0018 or GS-0690 Classification Series, Navy Industrial Hygiene Officers, etc.). An SMS includes many safety and risk management-related processes and systems outside of the scope of the typical position description for safety and occupational health professionals. Commands, units, and activities may find it necessary to assign responsibility for different functional areas of their SMS (e.g., operational safety) to one or more different advisors with subject matter expertise in those respective SMS functional areas.

e. Navy Civilian and Military Personnel

(1) Comply with all of the SMS requirements published by their chain of command.

(2) Monitor and report to their supervisor (or designee) any unsafe conditions for prompt correction.

(3) Correct any hazard that they have the ability to correct and report that event to the applicable supervisor (or designee).

(4) Provide feedback to their applicable supervisor (or designee) regarding the need for additional controls or mitigations to ensure safety, health, and risk standards are met.

(5) Set the example as a leader in safety and risk management to others in the course of their professional duties.

(6) Avoid exposure to any recognized uncontrolled hazard, and actively look for hazards and near misses.

(7) Participate meaningfully in SMS activities (e.g., preparing Job Hazard Analyses, conducting accident or near miss investigations, and serving on safety and health committees).

(8) Attend training as required by the SMS lead at the echelon 2, command, unit, or activity.

CHAPTER A2
POLICY AND ORGANIZATIONAL COMMITMENT

A0201. Introduction. Policy provides the requirements for a fully-functional SMS and establishes, through documentation, the organization's expectations, objectives, employee participation, risk tolerance, and SMS business rules for its personnel. Policy will also define, document, and communicate the safety and risk-related roles, responsibilities, and authorities throughout the organization. Each successive lower echelon of command then aligns its SMS policies with applicable instructions and guidance from higher headquarters and then conveys its respective leadership's expectations, objectives, employee participation, risk tolerance, and SMS business rules to their personnel.

A0202. Methodology. All management systems developed and implemented for an SMS must include an iterative continuous improvement cycle and the minimum Navy SMS fundamental elements. Use of the four pillars framework (table A1) for a headquarters command or unit-level SMS is optional. Table A2 is a matrix that portrays the relationship of the minimum required fundamental elements of a Navy SMS to the Navy SMS Pillars.

a. Reference (b) lists 15 fundamental elements, and their respective expectations, that were specified by the Secretary of the Navy (SECNAV) as being required for a Navy SMS. However, these 15 SECNAV-specified fundamental elements alone do not fully support the four-pillar framework of a Navy SMS (table A1) as envisioned by the Chief of Naval Operation (CNO). This instruction consolidates the SECNAV fundamental elements and a few more additional CNO fundamental elements into a master list (table A2) that will fully support the four pillars of a Navy SMS.

b. Each of the additional CNO fundamental elements, with corresponding expectations, are annotated by an asterisk in table A2 to differentiate them from the SECNAV ones. Because table A2 summarizes all of the minimum required fundamental elements and expectations for a Navy SMS, it can be used as a tool for conducting gap analyses and assessments.

Pillar(s)	Fundamental Element	Expectation
Policy and Organizational Commitment	Leadership	Leadership demonstrates its commitment to continuous safety improvement through clear policy, measureable and attainable objectives, ensuring adherence to policies and procedures, and providing the resources that enable successful mission execution.
	Policy, Procedures, and Documentation	Hazard controls are embedded in standard operating procedures. Adherence to safety is documented to validate conformance and facilitate review.
	Personnel Awareness, Education, and Training	Personnel are trained to recognize and report hazards and the dangers of such hazards to themselves, their colleagues, and operations. The organization ensures all personnel have the necessary level of education and training.
	Personnel	Commanders ensure personnel are encouraged to participate in hazard

Pillar(s)	Fundamental Element	Expectation
	Participation	identification, reporting, and control.
	Planning	Adaptive planning ensures that threats or risks are swiftly identified and mitigation strategies and techniques integrated into execution. Training and drilling are essential to validation and adaptation of plans.
Policy and Organizational Commitment	Personnel Awareness, Education, and Training	Personnel are trained to recognize hazards and the dangers of such hazards to themselves, their colleagues, and operations. The organization ensures all personnel have the necessary level of education and training.
Promotion		
Risk Management	Risk Management	Risk management integrates an iterative continuous improvement cycle, and is supported by safety policy and objectives and safety assurance. By focusing on identification, analysis, and control, risk management proactively reduces risk to mission execution. Any iterative continuous improvement cycle parallels the risk management cycle.
	Hazard Identification	Risks are prioritized per their potential impact on mission success, personnel safety, and health.
	Risk Assessment	Navy commands, units, and activities will apply systems thinking to risk assessment. It is essential that, as system components are analyzed, the connection among components is understood and retained throughout the analysis. Gaps identified through the risk analysis process yield insight into alternative COAs to control risks. Through the application of an iterative continuous improvement cycle, the alternative COAs will be integrated into plans of action and milestones (POAMs) and include specifics on the resources required.
	Risk Acceptance	The impact of each COA supported by POAMs and resource requirements is presented for risk decision making at the appropriate level. Where a higher level of risk acceptance is required, the process is repeated at a higher organizational level.
	Control Implementation	Once a COA is decided upon, requirements are established to enable the necessary resourcing and implementation.
Risk Management	Risk Monitoring	An iterative continuous improvement cycle will be used to monitor risk control. This cycle ensures adjustments to implementation as new information becomes available. Changes in operational system components or the organization at large, the appearance of new risks, or other indicators of low- or non-performance may warrant a change in direction. As adjustments to the COA are made, POAMs are adapted, resource requirements adjusted, and an iterative continuous improvement process is in constant play to ensure remediation.
Assurance		
Risk Management	Change Management	Changes to policies, procedures, mission objectives, hardware, software, budget, politics, etc., can create hazards with potential risk. Assessment of the impacts of change on the organization is especially critical in the initial phases of change management.
Assurance	Safety Performance Monitoring	Performance indicators will be derived from a broad range of sources including self-assessments, internal inspections, external inspections, internal audits, external audits such as those of the Auditor General of the Navy, safety and industrial hygiene surveys, medical surveillance data, mishap investigations, Navy Inspector General investigations, safety studies, safety research, external management reviews and evaluations, past performance indicators, regulatory compliance indicators, Occupational Safety and Health Administration citations, injury and illness data, and other non-safety reporting channels. Corrective actions will be focused and

Pillar(s)	Fundamental Element	Expectation
		prioritized using a risk-based approach. As information technology solutions become more readily available, data-driven analysis will result in corrective actions that are more accurately targeted, refined, and effective. The ultimate goal is to manage risk proactively to prevent safety lapses.
	Management System Monitoring	Monitoring of management systems begins at the strategic level and cascades through the organization. To verify that management systems are operating effectively, Navy commands, units, and activities will be assessed according to their alignment with the fundamental elements described in this table.
Promotion	Risk Communication	Clear lines of horizontal and vertical communication ensure that personnel understand the potential impacts of hazards to themselves, their peers, and the operation; that hazards are expeditiously and effectively mitigated; and that clearly articulated lines of responsibility enable informed risk decision making at the appropriate level of authority. Feedback channels ensure personnel most directly affected by hazards can voice their opinion on the efficacy of hazard controls.
	Employee Recognition*	Timely recognition of employees for their contribution to an effective SMS as a motivational tool that will drive continuous improvement. Performance plans, performance appraisals, compensation, and reward and recognition systems include performance objectives related to fundamental elements of a unit's SMS.
	Sharing Best Practices and Lessons Learned*	Critical results of the SMS are communicated to its personnel (e.g., best practices, lessons learned, audit and evaluation results, mishap and near miss data, rationale behind the selection of controls, and preventative or corrective actions).
	Informed safety culture*	The foundation of an informed safety culture is comprised of four culture types that continuously promote and reinforce through leadership actions throughout organizations: just culture, reporting culture, learning culture, and flexible culture.

*Not specified in reference (b), enclosure (3).

Table A2. Relationship of Minimum Fundamental Elements of a Navy SMS to Navy SMS Pillars

A0203. Organizational Commitment and Accountability. All echelons of command must establish or follow the higher headquarters safety management plan and policy with necessary resources to fully execute all of the required SMS framework. The plan must:

a. Specify how the organization will set, review, and achieve its actionable and measurable SMS objectives.

b. Specify how all levels of leadership, as well as all military and civilian personnel throughout the organization, will remain engaged and participate in the SMS.

c. Specify the actions to promote and maintain a positive safety and risk management culture.

d. Identify reporting requirements and structure up and down the chain of command (i.e., subordinate units) on performance of the SMS and the need for improvement.

e. Ensure SMS and overall safety performance is included in military and civilian performance plans, performance appraisals, compensation, reward, and recognition per reference (f).

f. Document, in either paper or electronic form, the safety and risk management policies, objectives, and procedures, through a records management process that meets legal requirements, and organizational expectations and objectives (e.g., Naval Air Training and Operating Procedures Standardization (NATOPS), Combat System Operating Sequencing System (CSOSS), commanding officer's standing orders, Navy Planned Maintenance System (PMS), technical manuals, etc.).

g. Ensure that policies, objectives, and procedures are available to all members of the command, unit, or activity, within legal requirements for privacy, privilege, proprietary information, and national security.

A0204. Appointment of SMS Personnel. Safety management system staff at all levels must assist top management with the implementation and integration of safety and risk management elements into all activities. SMS-related responsibilities and authorities must be defined, documented, and communicated throughout the organization. Safety management system personnel must be appointed with the authority to execute SMS processes and programs. The lead safety management system person must have a direct reporting line to the unit commander, commanding officer, master (i.e., Military Sealift Command vessels), or officer in charge, as applicable. Additional manning, resourcing, and training requirements are provided in reference (c), reference (d), and applicable policy guide(s).

CHAPTER A3
RISK MANAGEMENT

A0301. Introduction. Risk Management is used throughout the Navy enabling conscious and well-informed decisions on how to manage risk. Effective risk management requires early and ongoing involvement by stakeholders and subject matter experts. Risk decisions must be based upon full situational awareness, rather than conditioned responses alone. Leaders must act with a keen appreciation for the essential factors that make each situation unique. Risk management applies to all aspects of capability definition, requirements establishment, acquisition, manpower development and training, operations and sustainment, demilitarization and/or demobilization, and materiel disposal. Risk management does not alleviate the inherent responsibility to comply with local, state, national, or host nation laws, regulations, and rules. Lastly, risk management applies to all missions and environments across the Navy enterprise, both on- and off-duty.

A0302. Methodology. Navy personnel are already familiar with the standardized risk management processes for hazard identification; risk assessment; development/implementation of risk controls; making risk decisions; and supervision of risk controls. They are often less familiar with the risk management principles that actually determine the effectiveness of that approach. There are many other risk assessment tools and techniques used in industry and other governmental organizations that are available for Navy employee use. The drawback to using these other tools and techniques, however, is that they may not be included in the Navy's training continuum. They may also use different terms. An advantage is that some of these tools and techniques are more advanced than those used in the Navy's standardized operational risk management process and may be more appropriate for complex systems, processes, or analyses. A non-exhaustive list of examples of risk assessment tools and techniques is as follows: Operational Risk Management (ORM) Evolution and Program Assessments; Checklist Review; Job Hazard Analysis (JHA); Root Cause Analysis; Human Factors Analysis and Classification System (HFACS); What-If Hazard Analysis; Preliminary Hazard Analysis (PHA); Functional Hazard Assessments (FHAs); System Hazard Analyses (SHAs); Safety Compliance Assessments (SCAs); Human Systems Integration (HSI) plans; Failure Modes and Effects Analysis (FMEA); Fault Tree and Event Tree Analysis; Programmatic Environment, Safety, and Occupational Health Evaluations (PESHEs); Health Hazard Assessments (HHAs), and Bayesian statistics. Board of Inspection and Survey material inspections (MIs) and surveys, command inspections, culture workshops, industrial hygiene surveys, and safety audits serve both the risk management and assurance pillars.

A0303. Error Tolerance. Just as risk is an inherent part of everyday life, to err is an inherent aspect of humanity. A valid risk management program acknowledges the probability of error when humans are involved. Human error can be driven by stressors that affect human performance and decision making (e.g., fatigue, illness, weather, noise, chemicals, and task interruption), and must be accounted for to make informed risk decisions. Attributes of an error-tolerant system that support effective risk management are:

a. Potential errors are identified early and abated or mitigated to prevent them from driving the system to failure.

b. Errors are detected and communicated, and

c. Systems are able to recover from errors without appreciable damage or delays.

A0304. Principles

a. Accept No Unnecessary Risk. If all detectable hazards have not been identified, then unnecessary risks are likely being accepted. Risk is characterized by the probability and severity of a potential loss resulting from hazards. Risk management principles and methods are generally applicable to both on- and off-duty environments. An *unnecessary risk* is any risk that, if taken, will either not contribute meaningfully to mission success, will not contribute meaningfully to task accomplishment, will needlessly jeopardize personnel, will needlessly jeopardize materiel, or any combination of the four. The risk management process identifies hazards that might otherwise go unidentified and provides tools to reduce or offset risk. The acceptance of risk does not equate to the imprudent willingness to gamble. Take only risks that are necessary to accomplish the mission or task.

b. Anticipate and Manage Risk by Planning. Integrating risk management into planning at all levels and as early as possible provides the greatest opportunity to make well-informed risk decisions and implement effective risk controls tailored to the intended operation. This enhances the overall effectiveness of risk management and often reduces costs. Thorough planning identifies hazards and the steps necessary to complete the task or mission. During hazard analysis, the understanding of conditions that could cause or contribute to mission or task failure (i.e., causal factors) must be identified, documented, and communicated; thereby, enhancing the overall effectiveness of risk management.

c. Accept Risk when Benefits Outweigh the Cost. The process of weighing risks against the benefits and value of the mission or task helps to maximize success, reveals assumptions, and uncovers alternatives. Balancing costs and benefits is a subjective process. Therefore, personnel with knowledge and experience of the mission or task must be engaged when making risk decisions. Controls should include a methodology for monitoring and tracking their effectiveness while weighing risks against the benefits and value of the mission or task. This methodology creates the opportunity for maximum success.

d. Make Risk Decisions at the Right Level. Everyone makes risk decisions. However, the appropriate level for risk decisions is the person who can, with full knowledge of the potential impact, make decisions to eliminate or minimize the hazard, implement controls to reduce the risk, or accept the risk. Leaders at all levels must ensure that personnel know how much risk they can accept and when (and how) to elevate the decision to a higher level. Ensuring that risk decisions are made at the appropriate level will ensure success, establish clear accountability, and avoid unnecessary or unrecognized transfer of unmitigated accumulated risk to lower levels.

Therefore, those accountable for the mission must be included in the risk management process. If the commander, leader, or individual responsible for executing the mission or task determines that the controls available to them will not reduce risk to an acceptable level, they must elevate the risk decisions to the next level in the chain of command.

A0305. Requirements. All levels of Navy leadership must establish risk management procedures and tools, supported by appropriate training and resources, in order to manage risk. Requirements include:

a. Prioritize the identification and communication of hazards, along with their causal factors, throughout the command, unit, or activity and to communities of interest.

b. Establish a risk management evaluation policy for subordinate commands, units, or activities, where applicable, using existing evaluation or inspection processes and periodicities.

Note:
In this context, establishing a risk management evaluation policy for subordinate commands, units, or activities refers to specifying how subordinate commands, units, or activities will evaluate risk. It is not the same as the policy requiring an annual SMS management review (i.e., evaluation) of a subordinate command, unit, or activity, by a more senior command, unit, or activity, as specified under paragraph A0405a.

c. Prioritize hazards based on probability and severity, to include most likely and most dangerous.

d. Complete a risk assessment as part of the decision-making process.

e. Ensure risk management training is tailored to unit-level and group training, operations, and exercises.

f. Review evaluations and evolutions for gaps and best practices, and share results with higher headquarters so that this information can be disseminated to communities of interest. Higher headquarters must communicate with stakeholders when unmitigated residual risk is transferred to them; or, when action is required by commands or activities above the unit level to mitigate risks.

g. Develop and implement a change management strategy to minimize the introduction of new hazards and risks into the environment. Identify and manage risk caused by changes that may affect established processes.

CHAPTER A4
ASSURANCE

A0401. Introduction. Assurance is the collection of processes that monitor, measure, and evaluate the performance of programs, goals, processes, systems, and cultures. To break it down even further, assurance processes identify system deficiencies and opportunities for improvement, identify new hazards, measure the effectiveness of and the conformity with risk controls, and ensure compliance with regulatory requirements.

A0402. Methodology. Evaluate SMS conformance and performance through monitoring, measurements, mishap or near miss investigations, inspections, assessments, and evaluations. All feedback and participation associated with assurance must be without reprisal. Reference (c), chapter 9, "Safety Assurance" contains amplifying guidance on assurance requirements specified in this chapter.

A0403. Requirements

a. Systematically monitor internal and external data to identify hazards, determine conformity with risk controls, measure effectiveness of risk controls, and assess SMS performance. Echelons with subordinate commands, units, or activities must also monitor their internal and external data for trending purposes, to identify hazards, measure effectiveness of risk controls, assess their mission performance, and communicate and control hazards beyond the ability of unit commanders to mitigate to an acceptable level. Commands, units, and activities should reduce monitoring burdens whenever possible by using existing data streams, reports, and assessment methods.

b. Develop an inspection and self-assessment program to ensure compliance and conformance with SMS and performance results achieved.

c. Develop and implement a strategy to minimize the introduction of new hazards and risks into the work environment.

d. Identify and manage risk caused by changes that may affect established processes and services.

e. Ensure corrective actions are taken when non-conformance with SMS processes or execution of the SMS is identified.

f. Establish, maintain, and monitor an anonymous reporting and feedback system to identify hazards, including those that emerge over time, and to assess performance of risk controls in the operational systems.

g. Ensure recommendations developed from acquired data are actionable and adequately

measure SMS performance.

h. Monitor the status of corrective and preventive actions, injury and illness metrics, findings of incident investigations (i.e., including near misses and close calls), inspections, assessments, audit activities, performance measures, trend analyses, and causal analyses to determine whether the SMS is functioning properly.

i. Ensure sustained and continuous improvement by monitoring metrics and making necessary information available for leadership to evaluate the continuing suitability, adequacy, and effectiveness of the SMS.

j. Investigate mishaps, near mishaps, hazards, and instances of potential regulatory noncompliance and then share results with pertinent stakeholders.

A0404. Continuous Improvement. Continuous improvement requires that deficiencies are identified, fixes are defined and implemented, and results are documented to ensure the deficiency has been corrected. The SMS implements and supports an iterative continuous improvement cycle by creating the framework to continuously review safety conformance and performance. It creates deliberate opportunities to refine and refocus suboptimal elements as trends develop, interventions are deemed either a success or failure, or when new technology is introduced. Leadership at all levels will use an iterative continuous improvement cycle to control and continuously improve processes and products.

A0405. Management Review

a. An SMS management review must be conducted by each command, unit, or activity annually of the minimum Navy SMS fundamental elements as described in section A0202. This review allows leadership and applicable process owners to conduct a strategic and critical evaluation of the conformance and performance of the SMS and to recommend improvements.

b. Results and action items from this review must be documented, prioritized, and communicated to affected organizations and tracked to completion. More important than fixing individual discrepancies is addressing any underlying causes so that the discrepancy will not occur again in time.

CHAPTER A5
PROMOTION

A0501. Introduction. Promotion consists of a wide range of activities that shape organizational safety culture through multi-faceted communications and training. It is an essential piece to the overall function of the SMS, which cannot succeed by mandate alone or by strict implementation of policy.

A0502. Leadership Commitment. Promoting the growth of a positive and proactive safety culture by:

a. Publishing top management's stated commitment to safety to all personnel and subordinate commands, units, and activities.

b. Visibly demonstrating their commitment to the SMS by sharing lessons learned and recognizing employees for their contributions.

c. Clearly and regularly communicating SMS policy, goals, objectives, standards, responsibilities, and performance objectives to all organizational personnel.

d. Ensuring essential resources (i.e., staffing and funding) are available to implement and maintain the SMS.

A0503. Training. Training is a key element of promotion. Both formal and informal training on safety-specific and operational topics are necessary to ensure a fully-functional SMS. Curriculum managers develop, document, deliver, and regularly evaluate formal training necessary to meet key operations, safety, and risk management competency requirements. Personnel must receive regular training that is commensurate with their position or duty assignment in the organization and their influence on the safety of the organization's operations and services. This training must meet the scope, content, and frequency required to meet objectives identified in the safety policy, and rapidly incorporate lessons learned.

A0504. Communication and Awareness. Each command, unit, and activity must communicate critical results of the SMS such as lessons learned, audit and evaluation results, mishap and near miss data, rationale behind the selection of controls, preventative or corrective actions, and ensure awareness of SMS objectives to its personnel. This ensures transparency and a shared understanding of leadership's priorities and goals. In order to ensure safety awareness, each command, unit, or activity's SMS must contain a safety marketing, education and awareness element that provides timely and accurate safety information and teaches personnel how to identify, report, and correct hazards. This element must also include processes for two-way communication of information both up and down the chain of command.

A0505. Organizational Safety Culture. The foundation of an *informed safety culture* is

comprised of four culture types (table A3) that should be continuously promoted and reinforced through leadership actions throughout organizations: just culture, reporting culture, learning culture, and flexible culture.

Culture Type	Description
Just	A just culture encourages personnel to report unsafe or unhealthful working conditions without fear of reprisal or adverse action. Commanders, commanding officers, masters (i.e., Military Sealift Command vessels), and officers in charge must encourage reporting for safety analysis and mishap prevention purposes, while establishing clear guidelines on acceptable and unacceptable behavior. In a just culture, the immediate response by personnel who become aware of a hazard should be to find "what happened and why" versus "who to blame and punish." A just culture fosters partnerships for identifying hazards and the root causes of events where safety was diminished.
Reporting	A reporting culture promotes the importance of, and rewards, voluntary reporting of hazards and errors.
Learning	A learning culture demonstrates a willingness to communicate lessons learned as well as to change procedures and practices based on discovered hazards and errors before a mishap results.
Flexible	A flexible culture empowers personnel to recommend procedural and behavioral changes within the organization to meet changing conditions.

Table A3. Foundations of an Informed Organizational Safety Culture

A0506. Personnel Participation. Proper use of the SMS elements ensures personnel engagement enhances the effectiveness of the system and drives continuous improvement. The organization must establish and implement processes to ensure personnel at all levels are encouraged to participate effectively in the SMS. Examples of personnel participation include, but are not limited to:

a. Providing input to and actively participate in safety councils and committees

b. Conducting, or providing input for, safety briefings

c. Participating in safety-related inspections and assessments

d. Participating in hazard identification and risk assessments

e. Completing required safety, health, and operations related training

f. Using risk assessment tools, techniques, and principles

g. Using safety feedback mechanisms to communicate safety concerns to leadership

h. Collection and dissemination of lessons learned and/or best practices

A0507. Employee Recognition. Timely recognition of employees for their contribution to an effective SMS is a motivational tool that will drive continuous improvement. Performance plans, performance appraisals, compensation, and reward and recognition systems include performance objectives related to fundamental elements of a unit's SMS. Examples of measures

of effectiveness to be considered for any employee recognition may include, but are not limited to:

a. Operational excellence

b. Extent of an informed safety culture

c. Extent and duration of exposure to hazards

d. Exemplary safety and risk management contributions

e. Furtherance of Navy safety and risk management or analysis programs

f. Economy of operations through safety and risk management

g. Outstanding safety records or risk reporting

h. Outstanding preventive maintenance records

i. Outstanding training programs that include lessons learned

j. Aggressive safety management systems that contribute new ideas for mishap prevention to the general benefit of the Navy

k. Comprehensive, timely, and quality mishap, near miss, and hazard reporting

APPENDIX A
LIST OF REFERENCES

(a) through (c) are listed in the cover letter to this instruction.

(d) OPNAVINST 5100.19E, Navy Safety and Occupational Health Program Manual for Forces Afloat

(e) Public Law 95-454, Title VII, Civil Service Reform Act, 5 U.S.C., Sections 7101-7135 (1978 Supp.), 13 Oct 78

(f) DoDI 1400.25, Volume 430, DoD Civilian Personnel Management System: Performance Management, 5 August 2014

(g) OPNAVINST 3500.39D, Operational Risk Management

(h) OPNAVINST 5102.1D, Navy and Marine Corps Mishap and Safety Investigation, Reporting, and Record Keeping

(i) OPNAVINST 3750.6S, Naval Aviation Safety Management System

(j) OPNAVINST 3500.44, Navy Culture Workshops

(k) OPNAVINST 1500.75D, Policy and Governance for Conducting High-Risk Training

(l) OPNAVINST 3500.37C, Navy Lessons Learned System (NLLS)

(m) OPNAVINST 1650.28B, CNO Aviation, Afloat, Shore, Expeditionary-Related Safety Leadership Awards Program

(n) SECNAVINST 5100.16C, Department of the Navy Gas Free Engineer Certification and Recertification

(o) N09F-NTSP-S-40-8603E/A, Navy Safety and Occupational Health Navy Training System Plan (SOH NTSP) (March 2011)

(p) Navy and Marine Corps Public Health Center, Industrial Hygiene Field Operations Manual (31 August 2018)

(q) Navy and Marine Corps Public Health Center Technical Manual NMCPHC-TM 6220.12, Medical Surveillance and Reporting

(r) International Maritime Organization, International Safety Management (ISM) Code, 1993

(s) Naval Sea Systems Command Technical Manual 0924-062-0010, Submarine Safety (SUBSAFE) Program, Submarine Safety (SUBSAFE) Certification Manual (NOTAL)

(t) COMUSFLTFORCOMINST 4790.3, Joint Fleet Maintenance Manual (NOTAL)

(u) Naval Sea Systems Command Technical Publication S0400-AD-URM-010/TUM, Tag-out User's Manual (NOTAL)

(v) COMUSFLTFORCOM/COMPACFLTINST 3000.15A, Optimized Fleet Response Plan (NOTAL)

(w) COMUSFLTFORCOM/COMPACFLTINST 3000.16, Fleet Inspections, Certifications, Assessments and Visits Program and Processes (NOTAL)

(x) NAVAIR Instruction 5100.11A, Research and Engineering Technical Review of Risk Process and Procedures for Processing Grounding Bulletins (NOTAL)

APPENDIX B
GLOSSARY

1. Acquisition Program. A directed, funded effort that provides a new, improved, or continuing materiel, weapon, or information system or service capability in response to an approved need. Acquisition programs are divided into categories that are established to facilitate decentralized decision-making, execution, and compliance with statutory requirements.

2. ANSI. American National Standards Institute, a private, non-profit organization that administers and coordinates the U.S. voluntary consensus standards and conformity assessment system.

3. ASSP. American Society of Safety Professionals, a national consensus standard-developing organization.

4. Collateral Duty. A task or tasks carried out by an employee that lie outside of that employee's main role.

5. Command. The headquarters and all subordinate commands, activities/installations, units, forces, and employees.

6. Consensus Standard. A standard developed through the cooperation of all parties who have an interest in participating in the development and/or use of the standard. Consensus requires that all views and objections be considered, and that an effort be made toward their resolution. Consensus implies more than the concept of a simple majority but not necessarily unanimity.

7. Controls. Actions taken or measures put in place to eliminate a hazard or reduce the associated identified risk. Some types of controls include engineering controls, administrative controls, and physical controls. Also called mitigations.

8. Course of Action (COA). A possible plan that is open to a person that would accomplish, or is related to the accomplishment of the mission.

9. Culture Workshop. An open-forum discussion process, facilitated by experienced senior command-level officers who focus on operational excellence by gauging trust, integrity, and effective communication, both up and down the chain of command within the unit. Facilitators lead and focus the discussion on these three key areas, but may discuss any issue unit members feel is an impediment to operational excellence within their command. The culture workshop process is specifically designed to help the commander, commanding officer, master, or officer in charge to look introspectively at the organization and determine whether their perception of the command, unit, or activity's culture and climate is accurate. More importantly, the culture workshop allows the command, unit, or activity to identify issues that presently cause concern or generate hazards, as well as those that pose a risk to future sustained operational excellence or

may cause a mishap or other hazard to a command, unit, or activity.

10. Echelon. A subdivision of a military or naval force numbered from highest to lowest in ascending numerical order (e.g., echelon 1 is higher than echelon 2).

11. Enterprise. As used in this instruction, represents all Navy operating forces and shore activities under the supervision of the Chief of Naval Operations.

12. Hazard. Any real or potential condition that can cause injury, illness, or death to personnel; damage to or loss of equipment or property; degradation of mission capability or impact to mission accomplishment; or damage to the environment (synonymous with the term threat).

13. Headquarters Command. An organization assigned primary support responsibility for subordinate commands, units, or activities. Primary support responsibility is the provision of resources (i.e., funds, manpower, facilities, and material) for shore activities to enable them to carry out their mission. Primary support includes administrative, personnel, and material support and guidance in such matters as internal organization, process, procedures, budgeting, staffing, and facilities. Support includes the responsibility to assist in evaluating the operational effectiveness of shore activities and responding to other requests for technical assistance. Examples of headquarters commands are the systems commands headquarters, Fleet Commanders, Numbered Fleet Commanders, Type Commanders, and the Field Support Activity for CNO-assigned activities.

14. Human Systems Integration. Includes the integrated and comprehensive analysis, design, assessment of requirements, concepts and resources for system manpower, personnel, training, safety and occupational health, habitability, personnel survivability, and human factors engineering.

15. Human Factors Engineering. Includes applying fundamental principles and theoretical concepts from psychology disciplines to human and organizational performance, decision making, training, engineering, and human/system integration. It develops processes to provide predictive standards of performance, collect objective measures of human and unit performance, conduct assessments, and monitor predictive and leading trends.

16. Industrial Hygiene. The science that deals with the recognition, evaluation, and control of potential health hazards in the work environment.

17. Mishap. Any unplanned or unexpected event, or series of events, causing death, injury, occupational illness; damage, including days away from work, job transfer or restriction; or unexpected event, or series of events, causing materiel or assets to be lost or damaged, where if some or all causal factors that might have been corrected were corrected, the event or series of events would have been unlikely to occur.

18. Navy Civilian Personnel. Defined as:

a. Navy Federal Civilian Personnel. All career, career-conditional, and temporary (i.e., whether full-time or part-time or intermittent) Department of the Navy (DON) civilian employees who are subject to Federal Civil Service regulations who are paid from appropriated Federal funds and are covered by the Federal Employees' Compensation Act. The Navy excludes civilians paid by appropriated funds on a contract or fee basis.

b. Navy Non-Appropriated Fund (NAF) Civilian Personnel. All civilian personnel the Navy employs to serve Navy activities that are paid from non-appropriated funds and are covered by the Longshoreman and Harbor Workers' Compensation Act. These employees typically work in special services, recreation and athletic programs, hobby shops, open messes, and Navy Exchanges. The Navy excludes civilians paid by non-appropriated funds on a contract or fee basis.

c. Navy Foreign National Civilian Personnel. Foreign nationals the Navy employs in direct (i.e., appropriated or non-appropriated funds) or indirect-hire (i.e., contract or fee basis) status when the Navy has supervisory control. The Navy excludes those paid on a contract or fee basis when the host government has supervisory control. Activities will review and determine if the host nation injury and illness reporting and compensation systems supersede DoD requirements per the status of forces agreements.

19. Navy Contractor**.** A non-Federal employer engaged in performance of a Navy contract, whether as prime contractor or subcontractor.

20. Navy Employee. For purpose of this instruction, Navy employees include all military and civilian personnel (i.e., except contractors) paid from Navy appropriated and non-appropriated funds.

21. Navy Military Personnel. For purposes of this instruction includes all U.S. Navy personnel on active duty; U.S. military reserve or National Guard personnel on active duty or in drill status; service academy midshipmen/cadets; Reserve Officer Training Corps cadets when engaged in directed training activities; foreign national military personnel assigned to Navy commands, units, or activities; and personnel of other branches of the Military Services (including the U.S. Coast Guard) serving with the Navy.

22. Near Miss. An act or event that may have resulted in a mishap where the death, injury, illness, or loss of asset was avoided merely by chance, the actions of a single person, a small measure of distance, or a few moments in time.

23. Occupational Safety and Health. A multidisciplinary field that maintains the highest degree of military and civilian personnel readiness and physical well-being by preventing illness or injury induced by hazards and exposures in the workplace. Activities include

facility and equipment design, training, personnel competence, procedural compliance, hazard analysis, exposure prevention, leadership, enforcement, and oversight of comprehensive health and safety programs that promote health and safety of personnel while performing official duties in an on-duty status. Generally, risk decisions are made at higher level than the unit level, and the unit role is to ensure compliance with established standards and controls.

24. Off-Duty. Applicable to DoD personnel. Such personnel are off-duty when they are not on-duty as defined below.

25. On-Duty. DoD personnel are on-duty when:

a. Physically present at any location (area under the control of a DoD component) where they are to perform their officially assigned work. (This includes those activities incident to normal work activities that occur on DoD installations, such as lunch, coffee, or rest breaks, and all activities aboard vessels.)

b. Being transported by DoD or commercial conveyance for the purpose of performing officially assigned work. (This includes travel in private motor vehicles for performing official duty, but not routine travel to and from work).

c. Participating in compulsory physical training activities (including compulsory sports and command-sponsored activities during work hours).

d. Ready Reservists performing inactive duty training (drill) and are between departure and return home without diversion.

e. On temporary duty or temporary additional duty (TDY/TAD). Personnel on assignment away from the regular place of employment are covered 24 hours a day with respect to any injury that results from activities essential or incidental to the temporary assignment. However, when personnel deviate from the normal incidents of the trip and engage in activities, personal or otherwise, which are not reasonably incidental to the duties of the temporary assignment contemplated by the employer, the person ceases to be considered on-duty for reporting purposes of occupational injuries or illnesses.

26. Operational Safety. *Formerly* "mission safety." A multidisciplinary field that promotes and strives to maintain the highest degree of aircraft, surface vessel, subsurface vessel, expeditionary, and shore establishment business operations readiness by preventing property damage or personnel injury during peacetime and wartime activity. Activities include efforts to continually improve equipment design, training, procedural compliance, individual and team competence, leadership, oversight, effective communication, and the timely application of operational risk management principles at all levels. Risk decisions are constantly made that weigh mission requirements, and controls are designed and

implemented at many levels.

27. Operational Risk Management (ORM). The Navy's primary process to assess the potential for mission failure, inadequate force protection, and practices of personal risk. The process is principles-based vice compliance-based. It is designed to enable good risk decision making even when the rules may be unclear or risk tolerance is very high. It may be applied across the spectrum of operations and tasks, both on- and off-duty. ORM is a decision-making tool used by all personnel to increase effectiveness by identifying hazards and reducing the risk associated with each hazard, which in turn greatly increases the probability of mission success. ORM is exceptionally suitable for reducing the inherent risk in high-risk training. There are three ORM levels used throughout training development to mission execution: in-depth, deliberate, and time-critical.

28. Plan of Action and Milestones (POAM). Document that identifies tasks needing to be accomplished. It details resources required to accomplish the elements of the plan, any milestones in meeting the tasks, and scheduled completion dates for the milestones.

29. Primary Duty. Principal, main, major, or most important duty that the employee performs.

30. Proactively. By taking action to control a situation rather than just responding to it after it has happened.

31. Probability. A measure of the likelihood that given exposure to a hazard, a potential consequence mishap will occur.

32. Recreational and Off-Duty Safety. A multidisciplinary field that maintains the highest degree of personnel readiness and physical well-being of military personnel, civilian employees, and their families, as described in reference (d), while engaged in non-command directed motor vehicle operations, individual and team sports, and leisure activities. Activities include facility and equipment design, training, performance, compliance and oversight of comprehensive recreational and off-duty safety programs that promote health and safety of personnel when in an off-duty status, whether on or off Department of Defense installations.

33. Requirement. A condition or capability that must be met or possessed by a solution or solution component to satisfy a contract, standard, specification, or other formally imposed documents.

34. Risk. Chance of adverse outcome or bad consequence, such as failed or degraded mission, injury, illness, or loss. Risk level is expressed in terms of hazard probability and severity.

35. Risk Management. A formal system of hazard identification, risk assessment, risk acceptance, control implementation, and risk monitoring to control risk to acceptable levels.

36. Root Cause. Any basic underlying cause that was not in turn a result of more important underlying causes. Describes the depth in the causal chain where an intervention could reasonably be implemented to change performance and prevent an undesirable outcome.

37. Safety. Protection in depth from those conditions that can cause death, injury, occupational illness, or damage to or loss of equipment or property.

38. Scalable. Able to be changed in size or scale.

39. Severity. This is an assessment of the potential consequence that can or could occur as a result of a hazard and is defined by the degree of injury, illness, property or environmental damage, loss of asset (e.g., time, money, personnel), or effect on the mission or task. When analyzing risk, it is based on the worst credible outcome.

40. System Safety. The application of engineering and management principles, criteria, and techniques to achieve acceptable mishap risk within the constraints of operational effectiveness, time, human capabilities, and cost throughout all phases of the system life cycle.

41. The Joint Commission. An independent, not-for-profit organization, The Joint Commission accredits and certifies nearly 21,000 health care organizations and programs in the United States. Joint Commission accreditation and certification is recognized nationwide as a symbol of quality that reflects an organization's commitment to meeting certain performance standards.

42. Top Management. Person or group of people who direct and control the operation of a command, unit, or activity. In Navy commands, units, and activities, this will typically be either a commander, commanding officer, master (i.e., Military Sealift Command vessels), or officer in charge; either a deputy commander, executive officer, or executive director; a board of directors; and the senior-most enlisted member.