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Subj: MARINE CORPS OCCUPATIONAL SAFETY AND HEALTH (OSH) PROGRAM MANUAL (SHORT TITLE: MARCOR OSH PROGRAM MANUAL)

Ref: (a) MCO 5100.8

Report Required: Inspection Results (Report Control Symbol EXEMPT), par. 7005.7

1. PURPOSE. The Marine Corps Occupational Safety and Health (OSH) Program Manual promulgates the requirements and establishes procedures to implement the reference.

2. INFORMATION. This Manual and all references provide the requirements and guidance for commanders and Marine Corps OSH Program professionals to identify and manage risk, maintain safe and healthful operational environments, and meet the Mission Essential Task List (METL) requirements.

3. SCOPE. This Manual is applicable to all Marine Corps activities, including nonappropriated fund activities and operations that are under the sponsorship of the Marine Corps Community Services (MCCS) Director or unit MCCS officers for the purposes of morale, welfare and recreation. This Manual shall also apply to activities that are involved in the acquisition, operation, sponsorship or maintenance of all facilities, activities, and programs. CMC (SD) will provide guidance, upon request, for program responsibilities on contractors, e.g., public-private venture, etc.

4. EFFECTIVE DATE. This Manual is effective the date signed. Prior to implementation of this Manual, activities must, where applicable, discharge their labor relation's obligations. Assistance and guidance may be obtained from CMC (MPC).

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

5. The Director, Safety Division (SD) administers the requirements, accuracy, and modification of this Manual. Submit recommendations for improving this Manual to CMC (SD).

6. APPLICABILITY. This Manual is applicable to the Marine Corps Total Force.

7. CERTIFICATION. Reviewed and approved this date.

R. MAGNUS
Assistant Commandant
of the Marine Corps

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MARINE CORPS
OCCUPATIONAL SAFETY AND HEALTH (OSH)
PROGRAM MANUAL

LOCATOR SHEET

Subj: MARINE CORPS OCCUPATIONAL SAFETY AND HEALTH (OSH) PROGRAM MANUAL (SHORT TITLE: MARCOR OSH PROGRAM MANUAL)

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MARCOR OSH PROGRAM MANUAL

RECORD OF CHANGES

Log completed change action as indicated.

Change Number	Date of Change	Date Entered	Signature of person Incorporating Change

MARCOR OSH PRGOGRAM MANUAL

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CHAPTER 1

INTRODUCTION

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CHAPTER 1

INTRODUCTION

1000. DISCUSSION. This Manual addresses the role of leaders and safety professionals in the identification and management of risk. The focus is on maintaining a safe and healthful operational environment, which will meet the requirements of the Mission Essential Task List (METL). References used in this Manual are provided at appendix A.

1001. DEFINITION OF TERMS

1. The words "shall," "will," and "must" are directive and require compliance. Words like "may," "can," and "should" are advisory and do not require compliance.

2. Definitions for special terms used in this Manual are provided in the glossary at appendix B.

1002. BACKGROUND

1. The Marine Corps has conducted safety and occupational health programs for many years. Historically, occupational safety (industrial type safety) has been an element of the overall Marine Corps Safety Program managed by Marine Corps command functions. Other elements of the Marine Corps Safety Program include aviation, ground (tactical), traffic (motor vehicle), explosives, fire protection and emergency services, system safety, industrial hygiene, recreational, off-duty, and radiation safety (ionizing, laser, and radio-frequency). The Navy Bureau of Medicine and Surgery (BUMED) provides support on the occupational health program elements.

2. Federal laws and regulations addressing safety and health are included in Public Law 91-596, Occupational Safety and Health Act of 1970; 5 USC 7902, Safety Programs; E.O. 12196, Occupational Safety and Health Programs for Federal Employees;

and 29 CFR 1960, Department of Labor Regulations on Federal Employee Occupational Safety and Health Programs.

3. DoD issued directives and instructions to implement the Federal laws and regulations. DoD Directive 4715.1, Environmental Security, provides general DoD policy and procedures relative to implementation of Public Law 91-596, 5 USC 7902, E.O. 12196, and 29 CFR 1960. DoD Instruction 6055.1, Department of Defense Safety and Occupational Health (SOH) Program, implements the provisions of the Federal laws, regulations, and related matters on Safety and Occupational Health.

4. Under DoD Directive 4715.1, the Assistant Secretary of the Navy (Installations and Environment) (ASN (I&E)) has been appointed as "Designated Safety and Occupational Health Official" for the Department of the Navy (DON) with responsibilities contained in SECNAV Instruction 5100.10J, Department of Navy Policy for Safety, Mishap Prevention, Occupational Health and Fire Prevention Programs.

1003. MARINE CORPS OCCUPATIONAL SAFETY AND HEALTH (OSH) PROGRAM. All Marine Corps commands are required to provide a safe and healthful operational, training, and working environment for all Marine Corps personnel. These conditions shall be ensured through a comprehensive OSH Program that includes the following features.

1. Compliance with applicable standards. Per MCO 5100.29A, standards published by the Occupational Safety and Health Administration (OSHA) under Public Law 91-596 apply to non-military-unique operations and work places, for work by Marine Corps military or civilian personnel. The Marine Corps will apply OSHA and other non-DoD regulatory safety and health standards to military-unique equipment, systems, operations, or work places in whole or in part, as they apply to force preservation and mission accomplishment. When application of OSHA standards is not possible or when no regulatory standard exists for such military application, the Marine Corps shall develop and publish special military standards, rules, or regulations, e.g., standing operating procedures, prescribing OSH measures.

2. Qualified OSH inspectors will inspect all facilities, training areas, recreational areas, and work centers at least annually. Inspections for units in the operating forces may require higher headquarters or installation safety office assistance in scheduling and obtaining qualified inspectors.

3. Prompt abatement of identified hazards. To the maximum extent practicable, all hazards shall be eliminated or minimized through engineering or administrative controls. Where engineering or administrative controls are not feasible, appropriate personal protective equipment shall be provided at government expense. Where hazard abatement resources are limited, priorities shall be assigned to take care of the most serious problems first. Appropriate notices shall be posted to warn Marine Corps personnel of unabated serious hazards and to provide interim protective measures.

4. Procedures established for all military and civilian personnel to report suspected hazards to supervisors or safety and health officials without fear of reprisal. Allegations of reprisal to civilian personnel for such participation shall be filed in accordance with existing grievance procedures. Military personnel shall use the request mast process.

5. Appropriate OSH training provided for safety and health officials, all supervisory personnel, and all other Marine Corps personnel. Applicable OSH requirements shall be integrated into training programs and technical and tactical publications.

6. Procedures established to review the design of facilities and construction projects to ensure safety and health hazards are eliminated or controlled from start to finish.

7. Thorough mishap investigations completed and a comprehensive OSH information management system maintained that provides all OSH data required by higher authority.

8. Comprehensive occupational health surveillance programs, both medical and industrial hygiene, implemented by qualified personnel (Navy medical personnel or personnel with equivalent qualifications), including:

a. Industrial hygiene surveillance programs to identify and monitor potential health hazards in the work centers.

b. Medical surveillance programs to monitor personnel who are exposed to potential health hazards.

c. Periodic review of personnel placement in medical surveillance programs to ensure necessary evaluations are given and unnecessary evaluations are eliminated.

d. Trend analysis to identify excessive exposures to harmful health hazards in a work center or groups of personnel exhibiting the same medical symptoms.

e. Occupational medicine investigations of selected patient signs and symptoms to identify previously unrecognized sources of exposure in the work centers.

f. Integration of various medical and industrial hygiene specialties into a team approach to promote a progressive occupational health care system.

g. Diagnosis, treatment, and care of acute and chronic occupational illnesses and injuries.

9. Procedures established to recognize superior or deficient OSH performance, consistent with MCO 12430.2.

10. Procedures established to provide patrons of hobby shops the same level of safety and health protection as expected in other work centers. Requirements for patrons shall be as follows:

a. Advised in writing of hazards they may be exposed to.

b. Required to wear appropriate personal protective equipment (PPE).

c. Trained in proper use and care of PPE provided to them.

d. Monitored closely to ensure their familiarity with safety requirements and PPE.

1004. APPLICABILITY

1. This Manual applies to all worldwide afloat and ashore Marine Corps work centers, facilities, equipment, and material except in those areas where the Chief of Naval Operations (CNO) has program responsibilities. Exceptions or specific limitations are made, as required, for conditions governed by other statutory authorities or international agreements overseas.

2. Provisions of this Manual apply to the prevention of ground, occupational, and training mishaps. Provisions further include prevention of all other mishaps caused by equipment or personnel failures resulting in any of the following:

a. Injury or occupational illness to military personnel, while on or off duty, including Reserves on active duty, except when in actual contact with an enemy or as a result of direct enemy fire.

b. Injury or occupational illness to civilian personnel employed by the Marine Corps (including civilians paid from appropriated and non-appropriated funds) when arising out of or in the course of employment. Application of this Manual shall be consistent with the provisions of Public Law 95-454, Civil Service Reform Act of 1978, other provisions of law providing for collective bargaining agreements and procedures, and any agreements entered into pursuant to such provisions. Matters of official leave for employee representatives involved in activities under this Manual shall be determined per Public Law 95-454, or applicable collective bargaining agreements.

c. Damage to Marine Corps property or equipment and non-Marine Corps property as a result of Marine Corps operations.

d. As guidance to prevent injuries to patrons of Marine Corps owned or supervised recreational and entertainment facilities per MCO 5100.30A (e.g., hobby shops, marinas, bowling centers, firing ranges).

3. These provisions apply to Marine Corps Government-owned, contractor-operated facilities only if they involve:

a. Safety and health of Marine Corps personnel.

b. Specific OSH matters over which DoD exercises statutory authority under DoD Instruction 6055.1 with respect to contractor's employees. In all other matters affecting safety and health of contractor's employees, contractor is responsible directly to Federal OSHA or appropriate state OSHA office.

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CHAPTER 2

RESPONSIBILITIES

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CHAPTER 2

RESPONSIBILITIES

2000. HEADQUARTERS MARINE CORPS

1. In accordance with (IAW) SECNAV Instruction 5100.10H, Department of Navy Policy for Safety, Mishap Prevention, Occupational Health and Fire Prevention Programs, the Commandant of the Marine Corps (CMC) shall ensure:

a. Issuance of appropriate OSH directives and ensure implementation by all commands, activities and personnel.

b. Establishment of appropriate planning, programming, qualified staff and budgeting requirements for OSH programs.

c. Issuance of criteria for records maintenance and provide to ASN (I&E) all reports required by DoD and SECNAV directives and instructions regarding safety, occupational health, and Freedom of Information Act (FOIA). These criteria shall ensure:

(1) Reporting and recording procedures are developed to provide meaningful statistics concerning accidents, injuries and occupational illnesses in order to evaluate effectiveness of the programs. Close coordination among safety offices, personnel departments, and medical personnel handling workers compensation cases is essential. Medical information for nonappropriated fund (NAF) employees will be obtained by coordination with the NAF personnel office through the third party administrator that is adjudicating the claim.

(2) A register is maintained of personnel occupationally exposed to chemical substances and other hazardous physical or biological stresses, as deemed appropriate by BUMED.

(3) Personnel, or their designated representatives, have access to work center records regarding individual exposures.

(4) Medical records are maintained upon termination of employment.

(5) Industrial hygiene work center monitoring and survey records are kept at least 40 years.

(6) Cross-reference linkages among employment records, medical records and industrial hygiene surveillance data are developed and implemented.

d. Appropriate research and development are conducted to preclude occupational exposures from degrading a person's health or work performance.

e. A program is developed to provide formal inspections at least annually of all work centers, including notification provisions to workers of inspection results. More frequent inspections will be conducted, at least semi-annually, in all areas with a high risk of accident, injury, or illness. This program will provide for at least annual occupational health surveillance of both personnel and their working environments. Conduct oversight inspections at least triennially to ensure implementation of the program.

f. Personnel are aware of formal procedures to process written OSH deficiency reports.

g. Procedures are developed to provide for prompt investigation of reports by military and civilian personnel and others of unsafe or unhealthful working conditions, and to ensure corrective action is taken where appropriate.

h. All military and civilian personnel receive thorough and continuing OSH orientation and training consistent with their work center environments. Particular emphasis shall be directed to the improvement of hazard awareness and reduction of accidental injury and property damage. Up-to-date audiovisual aids should be maintained in film libraries. Records shall be maintained of all OSH training conducted. OSH training programs (chapter 5) shall be developed for the following groups:

(1) Non-supervisory personnel.

(2) First line supervisors.

(3) Commanders and other senior managers.

(4) Unit safety officers.

(5) Full-time OSH professionals (including industrial hygienists).

i. Establishment of OSH councils.

j. Cooperation of all commands in support of Field Federal Safety and Health Councils and in coordinating mutually beneficial accident prevention and safety programs with local communities to the maximum extent feasible.

k. Designation of appropriate officials to consult with representatives of labor organizations that hold a bargaining agreement with Marine Corps.

l. Civilian personnel are aware they may file, through their appropriate grievance processes, allegations of reprisals for having filed a complaint of unsafe or unhealthful working conditions. Ensure prompt, impartial investigations of reprisal allegations and appropriate administrative or disciplinary action when reprisal allegations are substantiated.

m. A comprehensive Marine Corps Weapons and Explosives Safety Program is developed and maintained per DoD Directive 6055.9, Department of Defense Explosives Safety Board (DDESB) and Department of Defense Component Explosives Safety Responsibilities, and MCO P8020.10A. The program will include combat system safety, mandatory use of SOPs for explosives operations, qualification and certification of explosives workers, and certification of equipment used in explosives operations.

n. Contingency plans and organizations are developed for the expeditious evaluation of requests from defense contractors for variations, tolerances, and exemptions to any applicable provision of Public Law 91-596, Occupational Safety and Health Act of 1970.

2. The Director, Safety Division (SD) provides direct support to the ACMC in determining safety policies and objectives; developing procedural guidelines; preparing and implementing

directives; and administering, coordinating, and managing the Marine Corps OSH Program. Specifically, the Director SD shall:

a. Coordinate and provide requirements, direction and guidance for the Marine Corps OSH Program in concert with the Marine Corps Executive Safety Board (ESB), deputy commandants, commanding generals, and other DoD, Government, and non-Government agencies.

b. Serve as the single point of contact with external agencies for the Marine Corps OSH Program. Ensure the Marine Corps is represented on all DoD and DON OSH policy formulation groups.

c. Maintain close liaison and coordination with the Commander, Naval Safety Center (COMNAVSAFECEN) for support of the Marine Corps OSH Program.

d. Provide guidance to commands for developing local safety policy upon request.

3. MCO 5100.29A establishes safety responsibilities for Headquarters Marine Corps, installations, and specified commands.

2001. MARINE CORPS SYSTEMS COMMAND (MARCORSYSCOM)

1. MARCORSYSCOM shall ensure that Environment, Safety, and Occupational Health (ESOH) considerations are incorporated in the acquisition of Marine Corps ground military–unique equipment, to include OSHA standards where possible. MIL-STD 882D, Department of Defense Standard Practice for System Safety, shall be used to manage and accent ESOH risks in all acquisition programs. Prior to fielding military equipment to the operating forces, all residual hazards shall be accepted and any safety restrictions communicated to the operating forces.

2. MARCORSYSCOM shall execute the Marine Corps Explosive Safety Program.

2002. COMMANDERS

1. Conduct an OSH program that implements the requirements and procedures of this Manual.

2. Ensure their deputy commander or executive officer is responsible for execution of OSH policy. Deputy commanders or executive officers shall emphasize the incorporation of the OSH policy through all levels of command to ensure appropriate assignment and training of safety personnel. Deputy commanders or executive officers shall ensure a safety budget is developed, programmed, and executed by the installation safety manager or unit safety officer. Fitness reports for deputy commanders or executive officers shall include mandatory comments on fulfillment of safety responsibilities.

3. Ensure installation safety manager or unit safety officer is organizationally placed at command level (i.e., special staff) per MCO 5100.29A and is a trained, qualified safety and health specialist. The installation safety manager or unit safety officer will report directly to the commander as the command safety advisor and operate under the administrative cognizance of the deputy commander or executive officer.

4. Ensure a safety office is organized, staffed, funded and maintained as required by chapter 3.

5. Ensure all personnel are aware of their obligations and personal responsibilities to the Marine Corps OSH Program. Establish clear lines of accountability.

6. Establish OSH councils at appropriate command levels per chapter 4.

7. Ensure compliance with the mishap investigation and reporting procedures of OPNAVINST 5102.1D/MCO P5102.1B. Ensure all serious mishaps (Class A and B) are briefed to the first general officer in the chain of command within 7 days and provide the circumstances surrounding the mishap and the steps taken to prevent recurrence. The first general officer will brief his chain of command and the ACMC on or before the 8th day following a serious mishap on issues stated above.

8. Ensure that all work centers and training areas are inspected at least annually and the necessary deficiency reports are completed per chapter 7.

9. Establish procedures to protect all Marine Corps personnel from coercion, discrimination, or reprisals for participation in the Marine Corps OSH Program.

10. Provide Marine Corps personnel and their employee representatives access to exposure and medical records IAW BUMED Instructions.

11. Establish Marine Corps OSH education and training programs per chapter 5 to include MCO 5100.30A.

12. Coordinate occupational health and industrial hygiene support with the responsible medical command per chapter 11.

13. Ensure senior management, middle management, and first line supervision support the Marine Corps OSH Program to the extent of their authority and responsibility by:

a. Setting the example for subordinates.

b. Promptly reporting and correcting recognized hazards.

c. Clearly defining and assigning individual OSH responsibilities to subordinates.

d. Conducting or participating in work center and training area inspections, including those made by the activity OSH personnel.

e. Receiving training appropriate to their level of responsibility and authority. Marine Corps OSH orientation training does not need to be repeated with subsequent assignments to other levels of management unless significant OSH related changes have occurred.

f. Acquiring, maintaining, and requiring the use of approved personal protective equipment (PPE), approved safety equipment, and other devices necessary to protect personnel.

g. Encouraging a free flow of information and ideas from personnel on methods of improving the safety of their work center, practices, and processes.

h. Ensuring the performance evaluation of managers and supervisors, consistent with their assigned responsibilities and authority, reflects how well they meet requirements of this Manual.

i. Ensure the ANYMOUSE and Unsafe and Unhealthful Conditions forms are readily available (see chapter 9).

14. Ensure the implementation of a comprehensive motor vehicle safety program for both U.S. Government and private motor vehicle operations per MCO 5100.19E.

15. Review all OSH citations and findings from external authorities and internal sources (e.g., OSHA, Marine Corps Inspector General), as warranted. Ensure the causes of the problems are identified and the corrective actions taken address causes and not merely symptoms.

16. Apply the operational risk management (ORM) process of MCO 3500.27B, and other risk management techniques in planning, operations, and training.

17. Ensure workers' compensation claims are filed for appropriated fund (APF) and NAF employees within required guidelines.

2003. INSTALLATION SAFETY MANAGERS (ISM). Installation Safety Manager (ISM) shall be assigned the following minimum general duties that may be amplified to meet local requirements:

1. Execute administrative details of the Marine Corps Safety Program. These are applicable to:

a. All non-flight related operations and activities under cognizance of installation to include implementation of core safety services as they apply to tenant commands.

b. All personnel assigned to, stationed at, employed by, or otherwise engaged in normal activities at the installation.

c. Personnel employed by Marine Corps exchanges, clubs, etc., at an installation.

d. All residents, tenants, or visitors of installation.

2. Adapt safety directives, regulations, and suggestions from higher authority for local conditions. Prepare and keep current local safety regulations and SOPs. Implement the installation core safety services described in MCO 5100.29A.

3. Maintain complete reports of all mishap types and make comprehensive analyses, for mishap prevention purposes, of all mishaps involving Marine Corps personnel, equipment, or activities. Prepare reports of mishaps required by higher authority, investigate mishaps as directed, and recommend corrective measures to eliminate mishap causes. Provide statistical reports to department heads and work center supervisors on the analysis of their injuries by type and causal factors. Provide the installation Injury Compensation Program Administrator and the NAF personnel office a detailed report on the causes of civilian employee injuries.

4. Ensure safety inspections are conducted of the work centers, training areas, premises, equipment, and activities on a periodic basis in accordance with chapter 7. Document safety inspection programs and ensure appropriate follow-up and timely corrective action on unsafe conditions and practices noted.

5. Act in an advisory capacity on safety matters to the commander. Provide guidance to staff officers and supervisors. Maintain liaison with all staff officers to ensure maximum cooperation in connection with matters of mutual concern and work toward completeness and accuracy of reports with a minimum of duplication in the investigation of mishaps.

6. Coordinate and consult with the following installation officials at a minimum on safety matters:

a. Medical personnel for matters relating to proper selection and placement of personnel from safety and job analysis standpoints.

b. Security personnel on traffic management and other matters of mutual concern.

c. Supply officer for specifying standards for safety devices and proper storage and labeling of hazardous materials.

d. Facility maintenance or public works officer on matters pertaining to:

(1) Safety plans and specifications for alterations and new construction.

(2) Safety and health deficiencies in existing structures or facilities.

(3) Identification of safety and health deficiencies that are potential candidates for OSH Deficiency Abatement Program (HQMC funded).

e. Training officer to ensure safety standards, rules, and regulations are included in training programs.

f. Industrial hygienist to survey and appraise conditions affecting the health and efficiency of personnel, such as fumes, vapors, gases, dust, lighting, ventilation, temperature extremes, ergonomics, noise, and sanitary facilities with a view toward eliminating or minimizing unhealthful conditions.

g. Radiation safety officer, laser system safety officer, or industrial hygienist to evaluate sources of radiation and ensure personnel are protected from harmful exposure.

h. NAF personnel office for work status and restrictions for NAF employees.

7. Program and budget, in coordination with facilities maintenance or public works officer and comptroller, as

appropriate, for correction of safety and health deficiencies. All deficiencies must be documented and an audit trail established.

8. Establish and maintain liaison with local, municipal, state, and federal safety agencies.

9. Organize, provide technical assistance to, and act as recorder of command safety councils.

10. Provide safety representation on activity or unit committees and boards as assigned. Some committees and boards appropriate for safety manager membership are:

a. Beneficial suggestions.

b. Grievance hearings where safety is a factor.

c. Planning boards to advise on appropriate priority for safety.

d. Workers' compensation committees or working groups.

11. Review beneficial suggestions regarding safety devices and practices and submit recommendations to the awards committee.

12. Study safety problems and conduct job analyses to develop remedial safety measures related to mechanical processes, shop and field operations, and physical conditions. Provide safety comments on designs of equipment, processes and safeguards. Review operating and training instructions and recommend those corrective actions necessary to eliminate or control mishap-producing conditions and hazards.

13. Organize, implement, and supervise a complete motor vehicle safety program for both U.S. Government and private motor vehicle operation, including technical guidance for training operators and conducting attitude training aimed at mishap prevention.

14. Oversee explosives and range safety programs. Through the explosives safety officer and operations and training officer,

coordinate with ordnance and range officers to ensure appropriate safety standards, rules, and regulations are included in explosives, ordnance, and range operations.

15. Provide safety education to all supervisors, unit safety officers, and their assistants in subordinate units. Make sure they are aware of their duties and have the necessary references, equipment, and material to discharge those duties.

16. Initiate actions to stimulate interest in safety, such as news releases, posters, handouts, safety fairs, use of marquees, command television, etc.

17. Keep the commander informed at all times of any safety problems encountered in conducting safety and mishap prevention programs. A narrative report of safety conditions, problems, and recommended corrective action shall be submitted to the commander at least quarterly.

2004. UNIT SAFETY OFFICERS

1. Maintain a unit safety program that implements the functions described in MCO 5100.29A.

2. Ensure the unit safety program meets the requirements of the host installation safety program and this Manual.

2005. BUMED. BUMED shall provide occupational health policy and support for Marine Corps as described in chapter 11.

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CHAPTER 3

SAFETY PROGRAM

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CHAPTER 3

SAFETY PROGRAM

3000. ADMINISTRATION

1. This chapter provides insight to assist commanders in their responsibilities to oversee force preservation, selecting and training of safety professionals, and to manage a proactive safety program. Mishaps produce burdensome costs, which reduce mission readiness, and cause limited resources to be realigned in personnel, equipment, workers' compensation and civil claims that commanders must manage through a proactive safety program.

2. Commanding generals, commanders, and commanding officers shall identify and establish safety billets at all commands and fill them with appropriately trained personnel. Personnel shall complete the basic required safety training within 90 days of assignment. Personnel assigned to safety billets must remain in the billet for at least 1 year. Commands will ensure that their safety officers/managers are not only trained, but possess the necessary expertise to provide relevant, proactive mishap prevention, force preservation advice, and feedback to the command.

3. Per MCO 5100.29A, installation commanders are responsible for the overall health and safety of personnel and equipment aboard the installation. Marine Corps installations will have one safety program that shall include all on-duty and off-duty operations and activities located aboard and apply to all military and civilian personnel assigned to, stationed at, employed by, or otherwise engaged in normal activities at the installation. Due to the catastrophic potential associated with ordnance, all installations, regardless of population level, that store, use, or otherwise manage munitions, explosives, or related activities, will have an explosives safety officer in accordance with the requirements of MCO P8020.10A.

4. The safety program of Marine Corps units not located on an installation, but located within the immediate area, shall be

integrated and coordinated with that installation’s safety program.

5. Marine Corps installations shall provide safety support to tenant commands and develop memorandums of understanding or host-tenant agreements with Marine Corps and non-Marine Corps commands per MCO 5100.29A, and DOD Instruction 4000.19, Interservice and Intragovernmental Support. This safety support will not be charged to tenants unless services required by the tenant are outside the scope of the host's safety standards. Installations shall provide all the applicable installation core safety services described in MCO 5100.29A to include tactical safety support.

6. To maintain better liaison and reduce administrative requirements, tenants may integrate safety staff with the installation's safety office. However, when an operational unit departs from the installation, the unit must manage its safety program independently or integrate safety with the program of the operating force it joins.

7. The commander of each separate installation or unit is responsible for coordination with other installations, units, or services within a joint command to ensure a proactive safety program is established and supports mission requirements.

8. Headquarters commanders are required to conduct safety program management assessments of their installations and subordinate commands at a minimum of every 2 years.

3001. SAFETY ORGANIZATION AND STAFFING. The commander at each installation or unit shall designate a safety manager or officer to carry out the responsibilities in chapter 2. The safety office shall be established at the command level to provide safety personnel direct access to the commander for safety matters. The safety program shall not be subordinated to other programs and/or functions. A qualified “safety specialist” includes persons meeting the definition for a qualified safety and health specialist, contained in MCO 5100.29A and OPM General Schedule Position Classification Standards. Military personnel assigned to a unit safety officer billet must have completed, at a minimum, the Aviation Safety Officer’s Course (MOS 7596), or

the Marine Corps Ground Safety for Marines Course (MOS 9956), or other qualified training approved by the MARFOR. The following staffing requirements designate the numbers and types of personnel considered adequate to conduct minimally successful safety programs:

1. Installations having a total population of 10,000 or more military and civilian personnel, to include tenant commands and resident dependents, shall identify and staff:

a. One full-time safety manager or officer, either a civilian qualified for civil service employment as a safety and occupational health manager (GS-0018 series), or field grade officer qualified in mishap prevention program administration. Per MCO 5100.29A, the safety manager must be a qualified safety and health specialist and should have a minimum of 4 years experience in management of a safety function. Installations under this category require the safety and occupational health manager to have managerial and technical experience at the GS-13 grade or higher.

b. One full-time technical assistant, either a civilian qualified for civil service employment as a safety and occupational health specialist (GS-0018 series), or a trained safety officer.

c. Additional trained technical assistants as required. A minimum of one safety specialist shall be assigned for each 1,500 "occupationally employed personnel," military and civilian combined.

(1) Where a motor vehicle safety program is required, one of the technical assistants assigned shall be qualified in motor vehicle mishap prevention.

(2) Additional technical assistants may be required if other functions are added which have a major impact such as tactical safety, explosives safety, radiation safety, industrial hygiene, environmental safety, or asbestos program manager.

d. Clerical support as justified by work requirements.

e. One qualified unit safety officer (civilian safety specialist, officer or SNCO/NCO) in each separately administered unit, and in other activities as deemed necessary by the commander.

2. Installations having a total population of over 2,000 but less than 10,000 military and civilian personnel to include tenant commands and resident dependents:

a. One full-time safety manager or officer, either a civilian qualified for civil service employment as a safety and occupational health manager (GS-0018 series), or a field/company grade safety officer. Installations under this category require the safety and occupational health manager to have managerial and technical experience at the GS-12 grade or higher.

b. Technical assistants as required, see paragraph 3001.1c, above.

c. Clerical support as required.

d. One qualified unit safety officer (civilian safety specialist, officer or SNCO/NCO) in each separately administered unit, and in other activities as deemed necessary by commander.

3. Installations having a total population of 2,000 or less military and civilian personnel to include tenant commands and resident dependents:

a. One qualified full-time safety specialist (civilian safety specialist, officer or SNCO/NCO) as a minimum.

b. One qualified unit safety officer (civilian safety specialist, officer or SNCO/NCO) in each separately administered unit, and in other activities as deemed necessary by the commander.

4. Commander, Marine Corps Forces Command (COMMARFORCOM); Commander, Marine Corps Forces Pacific (COMMARFORPAC); Commander, Marine Corps Forces Reserve (COMMARFORRES); Commanding General, Marine Corps Combat Development Center (MCCDC); Commanding General, Marine Corps System Command (MARCORSYSCOM); Commanding General, Marine Corps Recruiting

Command (MCRC); and Commanding General, Marine Corps Logistics Command (MARCORLOGCOM) shall establish a safety office staffed to coordinate the safety and mishap prevention programs. Operational units, such as the force, division, logistics group, wing, brigade, regiment, and aircraft group headquarters shall have a safety manager or officer (military or civilian) assigned the primary duty for safety. This safety manager/officer will coordinate the mishap prevention efforts and provide assistance to the unit safety officers of battalions/squadrons and smaller separate units of the command. Commands will comply with the following guidelines:

a. Division, wing, and higher will have a trained full-time (civilian or military) safety manager/officer.

b. Every unit down to the battalion or squadron level will have a trained full-time unit safety officer.

c. Units below the battalion or squadron level will have a trained additional duty unit safety officer.

d. All commands having responsibility for, or control of, aircraft shall have a Department of Safety and Standardization functionally organized per reference (a), to include the following billets:

(1) Director.

(2) Aviation Safety Officer.

(3) Ground Safety Officer.

(4) Naval Air Training and Operating Procedures Standardization (NATOPS) Officer.

(5) Enlisted NATOPS NCO, for organizations with enlisted aircrew assigned.

e. All command and unit safety officers down to, and including the battalion or squadron level will be designated as a special staff officer, appointed in writing by their commanding officer, and given direct access to the commanding and executive officers for safety matters. The term safety officer includes

any of the following personnel: a commissioned, warrant, staff noncommissioned, or noncommissioned officer; and civilian safety specialist, if assigned.

5. Commanders of Marine Corps districts and units of less than 200 personnel shall appoint at least one additional-duty unit safety officer.

3002. PROGRAMMING AND BUDGET

1. Program information will be submitted biennially to CMC (SD) through the chain of command, for a 6-year period in the categories shown below. For example, a report submitted in FY06 should include fiscal years 2008-2014. The actual date of submission will be provided by separate Program Objective Memorandum (POM) correspondence.

a. Facilities. This facilities budget includes Operation and Maintenance, Marine Corps (O&MMC) funded minor construction projects. Details on this project category may be found in MCO P11000.5. Functional category R2 (HQMC funded) construction projects should be submitted to CMC Facilities Branch (LFF). In reporting this category, cite each project, the OSH deficiency, hazard category, risk assessment code, reference standard (e.g., OSHA, ANSI), cost to correct the deficiency, and impact if not funded.

b. Equipment. This category includes that equipment needed to determine a hazardous environment and to protect personnel from hazardous working conditions, e.g., gas and noise detectors, safety shoes, eye and ear protective devices. Cite type and quantity of equipment and associated costs.

c. Training. Included in this category is the projected cost for training CONUS-based civilian safety personnel and both military and civilian safety personnel stationed outside CONUS at military and civilian schools. Also include the expected cost of attendance at conferences and workshops by both military and civilian personnel. Cite desired training and associated costs.

2. The safety manager or officer is responsible for developing, submitting, and executing an annual budget. The budget request will be submitted through the chain-of-command that supports the safety program and carries out the responsibilities contained in chapter 2.

a. The safety budget shall be carried on a separate line item and all safety expenditures accounted for in the Standardized Accounting and Budget Reporting System (SABRS). If the local comptroller does not use SABRS, a separate budget line item will be established. The cost account code for safety is 1D70. Also, the command’s comptroller will identify usage of the U.S. Government credit card in support of the safety office.

b. The Marine Corps Programming Code (MCPC) for safety is 630604.

c. The five program element numbers (PEN) established for safety are:

(1) 0202057M, force installations.

(2) 0502057M, force installation, reserve.

(3) 0702057M, logistics – installation support.

(4) 0802057M, central training – professional military training.

(5) 0902057M, management headquarters.

3. Safety education, promotional materials, publicity materials, and visual aids will be funded and may be ordered directly from the publisher or other appropriate source by the using activity. Where possible, ordering should be done once each year to obtain quantity orders at a substantial savings. Additional information on specific or unusual needs may be addressed to the CMC (SD).

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CHAPTER 4

COUNCILS AND COMMITTEES

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CHAPTER 4

COUNCILS AND COMMITTEES

4000. DISCUSSION

1. As directed by DoD Instruction 6055.1, Department of Defense Safety and Occupational Health (SOH) Program, each command shall establish a safety council and committees that provide the opportunity for various groups and individuals to express their viewpoints and interests on safety issues. The purpose of the safety council is to identify, define and assess issues, problems, and needs and recommend corrective measures on safety hazards and issues that can have a direct effect on readiness and safety of personnel. This effort provides the commander with sound recommendations to develop new or revised policies, procedures and practices to improve the OSH Program.

2. The safety council and committees have three basic functions:

a. To provide program assistance to the commander, including proposing policy and program objectives and recommendations.

b. Create and maintain an active interest in OSH.

c. Serve as a means of communication regarding OSH.

4001. SAFETY COUNCIL

1. Each installation or unit having a total population over 500 military and civilian personnel shall have a safety council. Units may elect to participate in the host command's safety council or joint safety council.

2. Each unit having a total population under 500 military and civilian personnel shall participate in the host command's safety council or have a supervisors safety committee as described in paragraph 4002.

3. Purpose

a. Consider new standards, policies, procedures, recommendations, etc., involving safety and health.

b. Periodically review the mishap experience and analyses of the command.

c. Recommend changes in policies or procedures to minimize unsafe acts and strengthen the command safety program.

d. Develop recommendations on physical or structural alterations designed to eliminate or control hazards.

e. Develop educational and promotional activities that create and maintain an interest in safety and increase the emphasis on mishap prevention.

4. Membership. The commander, deputy commander, or executive officer shall chair the safety council. Members shall be appointed in writing and include military and civilian personnel representing key organizational elements at the activity, as well as safety and health professionals. Minimum membership should include the maintenance, medical, training, personnel, and MCCS officials, safety manager/officer, provost marshal, and a representative of civilian employees.

5. Meetings. The safety council shall meet on a regular basis, at least quarterly or more frequently as directed by the chairperson. Each council will develop its own rules of operation.

6. Meeting Minutes. Safety manager/officers shall assure the preparation, publication and maintenance of the minutes of all safety council meetings are kept in consonance with MCO 5210.11D. The records of safety council meetings will be disposed of in compliance with SECNAVINST 5212.5D, paragraph 6200.2b.

4002. SUPERVISORS' SAFETY COMMITTEE

1. Each Marine Corps installation, command, or unit shall have a supervisors' safety committee. Those units having a population under 500 military and civilian personnel are not required to have a supervisors' safety committee if they participate in the host command's safety council.

2. Purpose

a. Consider new standards, policies, procedures, recommendations, SOP's, etc., involving safety and health.

b. Periodically review the mishap experience and analyses of the command mishaps.

c. Recommend changes in policies or procedures to minimize unsafe acts and strengthen the command safety program.

d. Develop recommendations on physical or structural alterations designed to eliminate or control hazards.

e. Develop educational and promotional activities that create and maintain an interest in safety and increase emphasis on mishap prevention.

3. Membership. Committee membership shall consist of military and civilian supervisors. Membership shall be open to a civilian employee representative when the supervisors' safety committee contains or represents civilian employees. A supervisor shall be elected annually as chairperson from members. The safety manager shall provide safety membership with consultation and advice.

4. Meetings. The committee shall meet at least quarterly or more frequently if circumstances warrant.

5. Minutes. The recorder of this committee shall be elected from membership. Meeting minutes shall be forwarded to the safety council for review and appropriate action. Safety manager/officers shall assure the preparation, publication and maintenance of the minutes of all safety council meetings are

kept in consonance with MCO 5210.11D. The records of safety council meetings will be disposed of in compliance with SECNAVINST 5212.5D, paragraph 6200.2b.

4003. SHOP SAFETY COMMITTEE

1. Each Marine Corps organization or unit having a population of over 500 military and civilian personnel shall establish appropriate shop safety committees.

2. Purpose. To increase interest in safety at the worker level and decrease the potential for mishaps.

3. Membership. Employees of each work center (e.g., office, shop crew, section, department) consisting of five or more persons will constitute a shop safety committee. Each such committee shall include all members of that particular entity and shall be chaired by a supervisor or a journeyman level member.

4. Meetings. One or more committee meetings will be held each month at times and locations scheduled with the supervisor. Meetings should be of short duration and have minimal effect on work schedules.

5. Meeting Minutes. No formalized minutes of shop safety committee meetings are required; however, a roster of attendees and topics discussed will be provided to the concerned supervisor for recording in department records. Supervisors will then forward any pertinent safety information to their safety representative, supervisors' safety committee or safety council as appropriate.

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CHAPTER 5

TRAINING

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CHAPTER 5

TRAINING

5000. RESPONSIBILITIES

1. To ensure Mission Essential Task List (METL) requirements are accomplished and in an effort to embed force preservation throughout the chain of command, commanders, directors, officers-in-charge, small unit leaders, and supervisors shall ensure that all Marine Corps personnel in their organization or under their supervision receive safety and health training as required by this Manual. The training must include standards set forth in the activity and unit SOPS, technical manuals (TMs), performance manuals (PMs), applicable OSHA standards, and other Federal and state directives and standards.

2. ISMs and safety officers shall provide Marine Corps leaders with orientation that will enable them to apply the OSH Program to their organizations and meet METL requirements. Such orientation and training should include references to Public Law 91-596, Occupational Safety and Health Act of 1970, Section 19, Federal Agency Safety Programs and Responsibilities; E.O. 12196, Occupational Safety and Health Programs for Federal Employees; 29 CFR 1960, Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters; and the Installation Safety and Health Program.

5001. TRAINING REQUIREMENTS

1. Job Safety Training. Marine Corps personnel will be given job safety training before their assigned work begins. This training will normally be provided and documented by the person's work center supervisor. As a minimum, the training will consist of: general safety matters related to the work environment; hazards associated with assigned tasks; applicable safety and health standards; PPE required for each task; an overview of the local safety and health program with emphasis on individual rights and responsibilities; prompt reporting to management of unsafe conditions, potential exposure to hazardous

materials, or occupational injury or illness; and any additional specialized safety and health training the person is required to attend and a date and time schedule of applicable training sessions.

2. Specialized Safety and Health Training

a. Supervisors are responsible to provide or obtain job unique safety training. Supervisors must determine the safety training each person will receive based on a job hazard analysis, safety inspection, or industrial hygiene survey. Some training may be available from local safety, occupational health, or preventive medicine personnel. Documentation of this training will be maintained by the person's work center. The work center supervisor will provide the ISM or safety officer with a summary of the training conducted and roster of all personnel trained.

b. When personnel will be involved in work environments, processes, or tasks exposing them to hazardous conditions, specialized safety and health training covering the hazards will be provided. Some safety and health training programs or areas that may apply are:

Asbestos
Bloodborne Pathogens
Confined Space
Construction
Convoy Operations
Ergonomics/Back Injury Prevention
Explosives Safety
Fall Protection
General Industry
Hazard Communication Program
Hearing Conservation
Heat stress
Helicopter Rope Suspension Techniques (HRST) training
Laser
Lead
Lockout/Tagout (Energy Control)
Motorcycle (on and of road)/All Terrain Vehicle (ATV)

Motor Vehicle (may include Emergency Vehicle Operators Course)
Office Practices
Operational Risk Management (ORM)
Personal Protective Equipment
Radiation
Range Safety Officer
Respiratory Protection
Sight Conservation
Sports and Recreation
Weapons Handling and Employment

3. Change-In-Work Training. Events creating a change in working environments, processes, or tasks that affect the safe and healthful performance of work require change-in-work training. Some events that may require change-in-work training are: new process, change in equipment, relocation of work stations, updating SOP, alteration of control devices, modifications to buildings, or changes in TMs. Supervisors will ensure each person affected by a change in work is trained and maintain documentation of this training.

4. Civilian Employee/Shop Safety Representative Training. Civilian employees of the command who are representatives of employee groups, such as labor organizations that are recognized by command, and shop safety representatives shall be afforded applicable training outlined in the three preceding paragraphs. Training is applicable when it enables each shop safety employee representative to ensure safe and healthful working conditions and practices are met in the work center and provides them with the skill and knowledge to effectively participate in work center safety and health inspections. ISMs will maintain documentation of such training.

5. Supervisor Safety Training. ISMs and safety officers shall ensure OSH training is provided to all supervisory personnel. New supervisors shall be provided the training within 90 days of appointment. The training must include standards set forth in SOPs, TMs, and PMs. They shall provide documentation to each attendee's organization and maintain file copies of class rosters. Initial training will be a minimum of four hours of instruction composed of safety indoctrination and mishap prevention.

a. Indoctrination shall cover an overview of the supervisors' responsibilities for providing and maintaining safe and healthful working conditions for personnel, as described in this Manual, 29 CFR 1960, Executive Orders, and the Marine Corps Safety Campaign Plan as they apply to procedures for reporting and investigating allegations of reprisal, procedures for abating hazards, and other appropriate rules, regulations and precautions, and mishap reporting.

b. Mishap prevention methods shall cover processes, procedures, and programs used in identifying, eliminating or reducing OSH hazards. At a minimum, this training will include:

(1) Development and use of job safety and hazard analysis, and other risk management techniques.

(2) Implementing, conducting, and documenting scheduled inspections.

(3) Implementing, documenting, and tracking hazard abatement actions.

(4) Mishap investigation, recording, and reporting procedures.

(5) How to train and motivate subordinates to assure safe and healthful work practices.

(6) Operational risk management.

(7) Hazard control principles.

6. Supervisors' Safety Training Annual Refresher and Update. ISMs and safety officers shall ensure supervisors receive annual training that is a refresher and update to their initial supervisors' safety training. The safety office shall maintain documentation of the training. The ISM or safety officer shall determine subject matter and duration of the training based on needs of the supervisors receiving the training. Training will be directed at supervisors' job tasks with the goal of progressively enhancing supervisors' skills in providing a safe and healthful work center for those supervised.

7. Safety Officer Training. Commanders shall ensure that safety officers attend the Ground Safety For Marines Course (CIN # A-493-0047) or an approved MARFOR Ground Safety Mobile Training Team course within 90 days of assignment. ISMs will track and document training of all safety officers. ISMs will conduct additional safety training designed to develop and enhance the skills needed in their safety duties and to keep safety officers updated on changing OSH standards. Safety officers assigned to primary duty safety billets will also attend the Mishap Investigation (Ashore) Course (CIN # A-49-0078).

8. Safety and Occupational Health Specialists/Personnel Career Development Program. ISMs and safety officers shall ensure personnel filling safety and health positions are fully trained and an Individual Development Plan (IDP) is established for their career development. Training may be accomplished through formal or informal courses, laboratory exercises, field study, and other learning experiences and must ensure competency to perform the necessary technical monitoring, consulting, testing, designing, and other related program development and implementation practices and procedures. Safety and occupational health personnel shall receive a minimum of eight continuing education units (CEU) or equivalent per year. The career development program should provide safety and health personnel the necessary background to become a fully qualified journey level safety specialist (GS-0018/11). These guidelines also apply to personnel in the safety engineer (GS-0803), safety technician (GS-0019), and industrial hygienist (GS-0690) series. Training opportunities should include formal subject matter and field activity assignments.

a. Formal subject matter training shall include OSH standards -- general industry and construction, introduction to hazardous materials, electrical safety standards, hazard prevention and control, mishap investigation, operational risk management, and introduction to industrial hygiene. Training should also include statistics, safety law, explosives safety, confined space entry, ventilation design, fire prevention and life safety, safety training methods, radiation safety, traffic safety, safety engineering/facility design, ergonomics, machines and machine guarding, lead and asbestos program management, and range safety.

b. First aid and/or cardiopulmonary resuscitation (CPR) training is required for safety and occupational health specialists. The courses must be certified through the American Heart Association, American Red Cross, or equivalent certification program.

c. Installation Safety Offices (ISOs) shall develop and instruct, upon request, the following safety courses: tactical safety, explosive safety, range safety; hazard recognition, analysis and abatement; mishap investigation, safety inspections, hazardous materials and emergency action planning, safety program evaluations, conducting safety training, conducting operational risk assessments, safety research, preparation of reports and other documentation, inspection processes, follow-up procedures, equipment and facility design, standards application, analysis of mishap data, and other related tasks. ISMs shall ensure training is documented in appropriate personnel records and maintain an IDP of each person's training and qualifications.

5002. TRAINING STANDARDS. When safety and health training standards are not available or existing standards are not adequate, training standards shall be developed or updated locally. Training standards may include SOPs, technical directives, operator instruction manuals, etc. These standards will ensure all steps are included to perform the applicable task in a safe and healthful manner. Supervisors will ensure suitability of the standards and maintain them at the applicable work location. Supervisors will coordinate locally developed safety and health standards with the ISM or safety officer for initial review and approval, and at least annually thereafter for updates. ISMs and safety officers shall oversee local safety training standards to ensure their adequacy with assistance from the responsible industrial hygienist (when applicable).

5003. COORDINATION AND DOCUMENTATION

1. Safety and health training conducted on Marine Corps installations will be coordinated with the ISM. ISMs will

coordinate and ensure adequate facilities, equipment, and visual aids are available for OSH training.

2. Documentation of safety and health training is a critical program indicator. Each commander, safety manager, safety officer, and supervisor shall ensure all safety and health training is properly documented. Safety managers shall develop local safety and health training documentation formats and procedures with assistance from the responsible industrial hygienist (when applicable). These procedures will ensure all safety and health training is documented and that the documentation is readily available within the installation safety office and specific work locations. Specialized training should be documented in personnel files.

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CHAPTER 6

OCCUPATIONAL SAFETY AND HEALTH (OSH) STANDARDS

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CHAPTER 6

OCCUPATIONAL SAFETY AND HEALTH (OSH) STANDARDS

6000. DISCUSSION

1. This chapter provides guidance and direction in development and application of standards within the Marine Corps OSH Program.

2. Federal agencies are required to establish procedures for the development of agency OSH standards. Agencies are required to comply with standards issued under Section 6 of Public Law 91-596, Occupational Safety and Health Act of 1970.

3. DoD and DON have adopted Federal OSHA standards for use throughout the agencies. Provisions for alternates to the OSHA standards, supplemental standards, other special standards, and exceptions for military unique equipment, systems, and operations are contained in DoD Instruction 6055.1, DoD Occupational Safety and Health Program.

6001. MARINE CORPS OSH STANDARDS. Marine Corps OSH standards shall consist of the following:

1. Marine Corps orders, including the contents of this Manual and any directives issued by commands having technical cognizance or assigned responsibilities under MCO 5100.29A and approved by CMC (SD).

2. The OSHA standards, including temporary standards, promulgated by Public Law 91-596, with minimal minor adaptation will be reviewed to conform to Marine Corps administrative practices. Marine Corps commands will comply with national consensus standards referenced in the OSHA standards.

3. Alternate OSHA standards authorized for component use by Deputy Undersecretary of Defense for Installations and Environment DUSD (I&E) subject to Department of Labor (DOL) approval.

4. Technical standards developed or adopted by voluntary consensus standards bodies and used as standards to carry out policy objectives and operating procedures as required under Public Law 104-113, National Technology Transfer and Advancement Act of 1995. These include nationally recognized sources of OSH guidance such as the American Conference of Governmental Industrial Hygienists (ACGIH), American National Standards Institute (ANSI), National Fire Protection Association (NFPA), and Compressed Gas Association, Inc.

5. Special DoD, DON, or Marine Corps developed standards; e.g., SOPs, TMs, PMs, etc., rules, and regulations cover on-the-job safety and health applicable to military unique equipment, systems, and operations. Once established, DoD, DON and Marine Corps standards, rules, and regulations become federally recognized and meet the requirements of OSHA.

6002. APPLICATION. The above OSH standards shall be applied in Marine Corps work centers, worldwide, with the following qualifications:

1. Military Unique Equipment, Systems and Operations. In the application of military unique equipments, systems and operations, the above standards, except for paragraph 6001.5, do not apply. Instead, Marine Corps orders and command-developed rules and regulations consisting of specialized standards, specifications, and procedures to minimize hazards and prevent mishaps, will continue to apply. These special rules and regulations shall be revised and updated continuously and should include appropriate OSHA and national consensus standards wherever practicable and consistent with military design configuration and the requirement to develop and maintain a combat capability.

2. Special Statutory Authorities. Certain operations are subject to mandatory safety standards or rules that derive from separate, specific statutory authority (e.g., Nuclear Regulatory Commission). Application of any special, functional standards does not exempt any work center from other applicable OSHA standards that address conditions not specifically covered by the special rules, provided there is no substantive conflict. Thus, a work center in a munitions depot, subject to special

explosive safety standards, is also subject to OSHA standards for machine guarding, eye protection, etc. Any publication which sets forth job safety and health requirements for that work center must take special statutory authority into account.

3. Status of Forces Agreements. In overseas work centers where status of forces agreements specify different standards, those standards take precedence subject to the same limiting rationale described in paragraph 6003.2.

6003. IMPLEMENTATION

1. Marine Corps commands may elect to implement the OSH standards by any combination of the following:

a. Issuance of instructions that adopt these standards by reference.

b. Publication of component or subordinate command directives, manuals, etc., which include these organization and administrative practices. Such publications may paraphrase, transpose, or otherwise adapt these standards. They may also contain criteria more stringent than those included in an OSHA standard, but shall not decrease or substantially alter the standard except as provided in paragraphs 6004 and 6005 below.

2. Commanders shall:

a. Ensure all affected personnel understand and comply with criteria contained in OSH standards and are enforced by supervision. In cases of noncompliance, management shall consider disciplinary action against the offender and supervisor under Office of Personnel Management Civilian Personnel Instruction (752), Department of Navy Adverse Actions, or Uniform Code of Military Justice.

b. Ensure all standards are applied in the acquisition process for equipment and material included in goods and services, and during the design and construction of new or upgraded facilities.

c. Ensure all Marine Corps publications, instructions, manuals, specifications, technical orders, etc., that contain OSH provisions, are reviewed and updated as expeditiously as practicable to conform to OSHA standards. In the interim, commands shall issue guidance to resolve conflicts between OSHA standards and current publications.

d. Implement emergency temporary standards (ETS), less administrative requirements, promulgated by OSHA pursuant to Public Law 91-596, not later than the effective date established by DOL. One copy of such ETS implementing publications will be forwarded to CMC (SD).

3. New OSHA standards will be disseminated for implementation by CMC (SD), BUMED, or COMNAVSAFECEN, as appropriate.

6004. ALTERNATIVE STANDARDS APPROVAL. If a Marine Corps command determines that an OSHA standard should be modified for application to a particular working condition, a proposed alternate standard may be submitted to CMC (SD) for approval. Proposed alternate standard must provide protection equivalent to that afforded by the OSH standard it replaces and should apply substantially command wide. The following procedures apply:

1. The originating command shall forward the proposed alternate standard for review and comment to those civilian employee organizations having national consultation rights with the command.

2. Following receipt of the above comments, or after a 45-day suspense period, the originating command shall forward the proposed alternate standard to CMC (SD), through the chain of command, requesting approval. The request should include:

a. A summary statement that delineates differences between the applicable OSHA standard and the proposed alternate standard, with justification.

b. A summary of comments received from civilian employee organizations.

c. A description of the alternate standard.

d. A description of interim protective measures in effect pending decision on the alternate standard.

3. CMC (SD) will review the proposed alternate standard, and upon concurrence, forward it to ADUSD (ESOH) for approval, via ASN (I&E).

4. Upon approval of the alternate criteria, the originating Marine Corps command shall include the alternate standard in implementing instructions prepared under paragraph 6003, with a notation that instructions contain an approved alternate standard.

5. The following are not considered alternate OSH standards, and do not require approval by procedures set forth in paragraph 6004.2:

a. Actions that increase the stringency of Marine Corps safety program criteria (e.g., increase the frequency of prescribed inspections).

b. Actions that implement more current editions of national consensus standards referenced in OSHA standards.

c. Criteria and procedures developed locally and implemented to control hazards for which no Marine Corps OSH standard(s) exists.

d. Interim alternative protective measures adopted while awaiting completion of an abatement project.

6005. USE OF THE TERM STANDARDS. To achieve maximum standardization and to comply with Executive Order (E.O.) 12196, Occupational Safety and Health Programs for Federal Employees, use of the term "standards" by a Marine Corps command to describe any implementing instruction defined in paragraph 6003 is discouraged. However, if a commander determines use of this term is required, such component "standards" shall:

1. Be comprehensive in scope to include all OSHA standards criteria that pertain to the command.

2. Apply command-wide.

3. Apply internally only to the command concerned. They will not be referenced by name in Marine Corps wide military specifications or standards, or otherwise used in procurement of goods or services for use outside the command concerned.

4. Contain a certification that the "standards" are in compliance with paragraph 6001 of this NAVMC.

5. Such "standards" shall be forwarded to CMC (SD) for review prior to publication.

6006. HOST-TENANT RELATIONSHIPS

1. On DoD installations, the installation commander is responsible for the overall health and safety of personnel and equipment aboard the installation. Adherence to host installation OSH standards, as a minimum, is required to promote safety and health at tenant commands aboard Marine Corps installations. Marine Corps tenants of other DoD installations will adhere to the host's OSH standards. Where tenant commands have OSH standards that meet or exceed the host command's requirements, tenant commands will adhere to the more stringent standards.

2. At non-DoD installations or facilities where personnel of Marine Corps commands and other Federal agencies work or carry out operations at the same location, Marine Corps commands shall adhere to the host's OSH standards if feasible. Again, where tenant commands have OSH standards that meet or exceed the host command's requirements, tenant commands will adhere to the more stringent standards. If a conflict between Marine Corps commands and non-DoD hosts cannot be resolved at the local level, the issue shall be referred to higher headquarters.

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CHAPTER 7

WORK CENTER SAFETY INSPECTIONS AND CORRECTIVE ACTION

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CHAPTER 7

WORK CENTER SAFETY INSPECTIONS AND CORRECTIVE ACTION

7000. DISCUSSION. Safety inspections provide commanders with a tool to measure mission readiness and ensure safety concerns for personnel and equipment are identified and corrective action taken. During safety inspections two areas are identified: operational and infrastructure. Operational issues are areas in which a command can take corrective action; infrastructure issues are those areas in which outside assistance and funding are required (e.g., building or electrical findings).

7001. BACKGROUND. Ideally, an effective safety program will eliminate hazards before they contribute to a mishap. To accomplish this, the identification of hazardous conditions and unsafe acts before a mishap occurs is essential. Work center safety inspections are the most effective way of identifying problem areas before they result in mishaps. A properly managed inspection or program audit conducted by qualified safety professional can yield several benefits:

1. Detect hazardous conditions and unsafe acts.

2. Identify safeguards and precautions.

3. Promote the OSH Program.

4. Increase hazard awareness level of all personnel by focusing on particular areas of responsibility.

5. Strengthen the working relationship and establish a common purpose among safety and workforce personnel.

7002. DEFINITION OF SAFETY PERSONNEL

1. CMC, Safety Division (SD). Serves as the Headquarters Marine Corps safety entity to provide support, requirements, and direction.

2. Installation Safety Office (ISO). The base, depot, training center, station or ISO that provides the core safety services as defined by MCO 5100.29A.

3. Installation Safety Manager (ISM). The ISM is responsible to ensure core safety services are provided. The ISO staff is managed by the ISM to best accomplish the ISO mission.

4. Unit Safety. The safety personnel at MARFOR, MEF, Division, Wing, Group, Squadron, or Battalion who are assigned responsibility for the unit safety program and who report directly to the unit commander. These safety personnel will also follow the appropriate safety chain of command, for example, the battalion unit safety officer reports to regiment safety that reports to division safety that reports to MEF safety that reports to MARFOR safety that reports to CMC (SD). Units having a safety officer shall, at the appropriate level, also coordinate their safety efforts with the ISO.

5. Work Center Supervisor. The supervisor at the work center, training facilities, and/or ranges is directly responsible for the implementation of the safety program within the work center.

6. Work Center Safety Representative. The person within the work center, training facilities, and/or ranges who performs the safety responsibilities for the workplace, e.g., RSO, Line Sgt, etc. The work center supervisor usually appoints this person. Upon assignment or change of this person, notification is made to the safety chain of command.

7003. INSPECTION FREQUENCY

1. ISO Inspections

a. All work centers, training facilities, ranges on the installation, including those of tenant commands shall be inspected at least annually by installation safety personnel. Where a tenant command has a full-time safety and occupational health manager, the ISM may accept the tenant's safety inspections as meeting this requirement under procedures previously established in an agreement. Particular attention

must be given to deploying MEUs so that a follow-up of inspection discrepancies continues after deployment of a MEU.

b. For work centers where there is an increased risk of accident, injury, or illness due to the nature of the work being performed, installation safety office (ISO) OSH inspections shall be conducted more frequently. High interest areas shall be identified by the ISO and inspected at least semi-annually. High interest areas should be designated after a risk assessment is done and mishap trends considered in the assessment.

c. Upon notification, the ISO will perform an on-site evaluation when a new process or equipment is acquired by a work center to assure that the procedures or equipment is operated in the safest manner possible in accordance with applicable regulations or manufacturer’s guidelines.

d. Documentation for all routine inspections will be provided to installation safety personnel for review during the formal inspection.

NOTE: Installation safety inspections of the tenant commands will primarily be a building inspection. The tenant unit safety manager shall conduct program inspections unless otherwise agreed to through a Memorandum of Understanding or Inter-Service Support Agreement with the ISO.

2. Other Inspections

a. Work center and program inspections are conducted quarterly, at a minimum, by the assigned work center safety representative or the supervisor to determine that safety is inherent within the processes and within the facility.

b. The work center inspections shall include a review of the SOPs, TMs, and all other directives that govern the operations, processes or management of the facility to assure that:

(1) Guidance materials, orders, regulations, TM’s, etc., are present, current and available.

(2) Applicable procedures are followed in operations.

c. New processes or equipment are identified to the ISO so a job hazard analysis evaluation can be conducted.

7004. RESPONSIBILITIES

1. CMC, SD. SD shall provide guidance in regard to any change in inspection responsibilities.

2. ISO. The manager of the ISO shall provide the installation policy regarding inspections. The ISO shall also conduct or direct the following:

a. Work center inspections that meet the minimum requirements of paragraph 7005.

b. Standardized work center safety inspection training. In addition to guidance provided by the ISO, this training will include on-the-job training in which the work center safety representative accompanies the ISO on a minimum of one work center inspection.

b. Standardize work center safety inspection training. Offer inspection technique classes. As available, offer other safety officers the opportunity to accompany an ISO inspector on a work center inspection.

c. Review the previous work center inspection documentation as part of the annual work center inspection process.

d. Inspections conducted as a result of requests or reports by employees of unsafe or unhealthful working conditions, receipt of an ANYMOUSE report, and under the requirements of 29 CFR 1960, Department of Labor Regulations on Federal Employee Occupational Safety and Health Programs; 29 CFR 1910, Occupational Safety and Health Standards for General Industry; 29 CFR 1926, Occupational Safety and Health Standards for Construction Industry; and this Manual.

e. Preparation of NAVMC 11400, OSH Deficiency Notice, for risk assessment code (RAC) 1, 2, or 3, violations are in accordance with risk assessment code (RAC) Matrix per paragraph 7005 and posted as prescribed in paragraph 7006.

f. Interim measures are developed and provided with each NAVMC 11400, OSH Deficiency Notice, as required and appropriate.

g. Assist the supervisor of the work center inspected and the facilities department, as necessary, in the development of abatement plans.

h. Maintain a log of OSH deficiencies noted during inspections to facilitate follow-up per paragraph 7009.

i. Have the supervisor attach a copy of the deficiency notice to the work request.

j. Appraise the safety council or supervisor safety committee of all outstanding OSH deficiencies having RAC of 1, 2, or 3, that cannot be abated within 30 days.

k. All inspection or discrepancy reports will be routed through the appropriate chain of command.

3. Unit Safety. Unit safety personnel shall assure the following are accomplished, and may delegate down the safety chain of command to the appropriate level, the responsibility for:

a. Request an inspection when a report of unsafe or unhealthful working conditions or an ANYMOUSE report is received that indicates a formal safety inspection is required.

b. If appropriate, endorse and/or revise work requests initiated by a supervisor of a work center concerning OSH deficiencies prior to submission to facility department. If a work request is revised, the originator of the work request should be so informed.

c. Provide copies of formal inspection reports to all affected work areas with a request for a written response to noted discrepancies.

d. In a timely manner, consolidate all work center responses to formal inspection reports and send the consolidated report through the chain of command to the inspecting safety office. (Tenant commands may do their own OSH inspections.)

e. Ensure the commander is informed of the results of any inspection.

f. Provide in depth information to the commander of any OSH or operational deficiency that may present a high risk to the mission. ORM processes should be used to determine the level of risk. ISM may provide assistance.

g. Maintain a list of the work center supervisors and their safety representatives.

h. Ensure work center supervisors are reviewing workplace inspections and providing feedback to the chain of command when deemed appropriate.

i. At the appropriate level, manage the unit safety budget.

j. Maintain an active role in hazard abatement, training of all personnel in matters relating to safety, keeping the unit commander informed of the command safety climate and of any potential unsafe trends or tendencies.

4. Work Center Supervisor. The supervisor shall:

a. Ensure work center safety inspections are conducted in accordance with unit and installation safety requirements.

b. Ensure the safety representative for each work center is present for any OSH inspection.

c. Accompany the formal OSH inspection party to encourage exchange of information, provide access, answer questions, and develop an immediate record of deficiencies identified.

d. Review completed inspection reports to determine if any deficiencies are present within the area of responsibility and institute action as directed by the inspecting safety office.

e. Complete required responses to be sent up the chain of command for any OSH inspection for supervisor’s area of responsibility.

f. Provide for, or ensure abatement of all identified work center OSH deficiencies.

g. Within 30 workdays of receipt of notification of work center OSH deficiencies, complete Section B of NAVMC 11400, OSH Deficiency Notice, and return a copy to the ISM via the chain of command. For hazards that cannot be abated within 30 workdays, the supervisor of the work center, in cooperation with the facilities department, must develop an abatement plan. The abatement plan status shall be updated every 30 workdays annotating Section B of NAVMC 11400, OSH Deficiency Notice.

h. Post the OSH Deficiency Notice as directed by the OSH inspector and in accordance with paragraph 7007.

i. Initiate interim control measures at work areas as directed by the inspecting safety office for those hazards awaiting permanent abatement.

5. Work Center Safety Representative. This person should be appointed in writing. Every shop is considered a separate work center. The work center safety representative shall:

a. Serve as the safety representative within the work center.

b. Ensure routine work center safety inspections are conducted and documented.

c. Identify to the work center supervisor any suspected deficiencies.

d. Brief deficiencies identified during formal or informal safety inspections to work center personnel.

e. Contact the work center supervisor if a timeline for a deficiency correction is not met.

f. Ensure that upon designation as the work center safety representative notification of the designation is provided to the safety chain of command.

g. Receive, as soon as possible after designation, standardized work center safety inspection guidance from the unit safety officer or the ISO. Receive, at least annually, an on-the-job training session conducted during an annual OSH inspection or other safety training opportunity.

h. Document routine work center safety inspections and provide to the supervisor so appropriate notification can be made as warranted.

i. Develop a written checklist of the work center for ease of work center safety review. The checklist must be updated prior to each formal OSH inspection to assure currency and accuracy and should cover all processes and inspection items as completely as possible for review by the ISM.

7005. INSPECTION PROCEDURES

1. Inspections shall be conducted in a manner to preclude unreasonable disruption of operation of the work center and should be consistent with established operational concepts of command. Inspections may be conducted with or without prior notice. No-notice inspections shall be conducted when, in the judgment of safety and health personnel, they will provide a more meaningful assessment of actual operating conditions and practices, or at the request of unit department heads or tenant commanders. No notice inspections are particularly important when evaluating operations in which the safety and occupational health of individuals depend heavily on work practices or use of personal protective equipment. No-notice inspections shall be used when evaluating reports of unsafe or unhealthful working conditions or an ANYMOUSE report. See chapter 9.

2. A representative of the official in charge of the work center, other individuals authorized by that official, and a representative of civilian employees (i.e., union representative) under that official's supervision shall be afforded an opportunity to accompany inspectors during the inspection to facilitate exchange of information concerning existing or potential unsafe or unhealthful conditions. Inspectors are authorized to deny the right of accompaniment to

any person whose participation interferes with a fair and orderly inspection.

3. Inspectors may discuss with personnel those matters affecting their safety and occupational health, and offer them the opportunity to identify unsafe and/or unhealthful working conditions.

4. TMs, directives and the 29 CFR 1910 or 29 CFR 1926 may be referenced. Inspectors shall comply with all appropriate OSH rules applicable to the work center being inspected. Baseline industrial hygiene surveys help to identify some of these requirements.

5. Upon the conclusion of an inspection, the inspector will debrief the unit safety or unit commander, as appropriate. The inspector should solicit any additional safety concerns the command may have.

6. Imminent danger situations discovered during an inspection shall be brought to the immediate attention of the affected personnel and supervisors, including the commander, for necessary action.

7. The inspector shall provide a written inspection report to the unit commander of the work center within 10 working days of the conclusion of the OSH inspection. This report of inspection must describe the procedures followed during the inspection, the findings which form the basis for issuance of any NAVMC 11400, OSH Deficiency Notice, and any recommendations for correction. If required, an OSH Deficiency Notice shall be issued within 15 days of the inspection. The report is exempt from reports control and requires no report control symbol.

8. Inspectors shall maintain copies of OSH inspections for 5 years after the end of the calendar year in which they were conducted.

7006. POSTING DEFICIENCY NOTICES

1. In all cases where military or civilian personnel are exposed to unsafe or unhealthful working conditions that are

critical, serious, or moderate (RAC 1, 2, or 3), a NAVMC 11400, OSH Deficiency Notice, advising exposed personnel of the unsafe and/or unhealthful working condition, shall be posted by the supervisor of the workplace in the immediate vicinity of the hazardous condition.

2. The notice shall remain posted until the hazardous condition has been abated or for 30 working days, whichever is later. Upon notification of abatement, the safety inspector shall authorize removal of the notice and appropriate documentation of the hazard abatement.

7007. INTERIM CONTROLS. It is recognized immediate abatement of deficiencies in work areas may not always be possible and some temporary deviation of safety standards may be required. Therefore, it is necessary the supervisor and safety inspector establish appropriate interim controls as soon as a deficiency is noted. Such controls shall be outlined and followed on the NAVMC 11400, OSH Deficiency Notice. Interim control measures to be in effect for more than 60 days must be approved by the ISM.

7008. CORRECTIVE ACTIONS. When corrective actions cannot be accomplished within 30 days due to circumstances beyond the control of the work center supervisor, assistance should be requested from the an appropriate higher authority. Records of actions taken to effect compliance, such as work requests for assistance, shall be annotated in Section B of the NAVMC 11400, OSH Deficiency Notice, until corrective measures are implemented. After 30 days, the notice should be annotated with a weekly update unless the interim measures have been deemed to be appropriate for a longer period of time.

7009. HAZARD ABATEMENT LOG

1. Safety managers shall establish a hazard abatement log for follow-up of required corrective action to ensure timely and effective controls are implemented.

2. The log shall include the date, building inspected, description of deficiency, RAC and follow up date. The log can be kept manually or electronically.

7010. RISK ASSESSMENT CODES (RAC). Each hazard identified that cannot be corrected immediately shall be assigned a RAC by the safety manager. Figure 7-2 provides guidance for determining RACs.

OSH DEFICIENCY NOTICE
NAVMC 11400 (10-98)
SN: 0000-00-888-0750

SECTION A

DEFICIENCY INFORMATION	I.D. NO:
ORGANIZATION:	LOCATION:
DESCRIPTION OF HAZARD:	
SUGGESTED CORRECTIVE ACTION:	
STANDARD VIOLATED:	RAC:
OSH OFFICIAL:	DATE:

SECTION B - ABATEMENT STATUS (COMPLETE ALL APPLICABLE PARTS)

INTERIM CONTROLS		
ABATEMENT PROJECT INITIATED		
PROJECT DESCRIPTION:	ACTION TAKEN (INCLUDED WORK ORDERS/PURCHASE REQUEST NUMBERS AND DATE AS APPROPRIATE):	
	COST ESTIMATE:	COMPLETION DATE (EST):
DEFICIENCY CORRECTED		
CORRECTIONS MADE:	DATE:	
	COST	
	LABOR:	MATERIAL;
SIGNATURE:		

SECTION C - COMMENTS

Designed using FormFlow 2.15, HQMC/ARSE, Oct 98

Figure 7-1. --NAVMC 11400, OSH Deficiency Notice.

RISK ASSESSMENT CODES

Risk Assessment Matrix. The RAC defined by a matrix represents the degree of risk associated with a hazard considering the elements of hazard severity and mishap probability. The RAC is derived as follows:

1. Hazard Severity. An assessment of the worst potential consequence, defined by degree of occupational injury, illness or property damage which is likely to occur as a result of the deficiency. Roman numerals shall assign hazard severity categories according to the following criteria:

a. Category I. May cause death, permanent total disability, or loss of a facility/asset.

b. Category II. May cause permanent partial disability, temporary total disability in excess of 90 days (severe injury or severe occupational illness), or major property damage.

c. Category III. May cause minor injury, minor occupational illness, or minor property damage.

d. Category IV. Presents minimal threat to safety, health, or property, but is still in violation of a standard.

2. Mishap Probability. The probability that a hazard will result in a mishap or loss, based on an assessment of such factors as location, exposure (cycles or hours of operation), affected populations, experience, or previously established statistical information. Mishap probability shall be assigned an English alphabet symbol according to the following criteria:

a. Subcategory A. Likely to occur immediately or within a short period of time.

b. Subcategory B. Probably will occur in time.

c. Subcategory C. May occur in time.

d. Subcategory D. Unlikely to occur.

4. Risk Assessment Code. Using the matrix shown below, the RAC is expressed as a single Arabic number that is used to help determine hazard abatement priorities.

	Mishap Probability			
Hazard Severity	A	B	C	D
I	1	1	2	3
II	1	2	3	4
III	2	3	4	5
IV	3	4	5	5

RAC Definition

1-Critical
2-Serious
3-Moderate
4-Minor
5-Negligible

Figure 7-2. --Risk Assessment Codes.

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CHAPTER 8

FEDERAL AND STATE OCCUPATIONAL SAFETY AND HEALTH INSPECTIONS AND INVESTIGATIONS AT FEDERAL AND CONTRACTOR WORKPLACES ON MARINE CORPS INSTALLATIONS

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CHAPTER 8

FEDERAL AND STATE OCCUPATIONAL SAFETY AND HEALTH INSPECTIONS AND INVESTIGATIONS AT FEDERAL AND CONTRACTOR WORKPLACES ON MARINE CORPS INSTALLATIONS

8000. OSHA INSPECTIONS. This chapter establishes guidance for installation commanders to use for Federal and state OSH inspections and investigations at Federal and contractor workplaces on Marine Corps installations.

8001. OSH ACT. Public Law 91-596, Occupational Safety and Health Act of 1970, provides for the development, promulgation, and enforcement of OSHA standards. The law applies to employment within the U.S., its territorial waters, territories, or possessions.

1. In accordance with E.O. 12196, Occupational Safety and Health Programs for Federal Employees, Occupational Safety and Health Administration (OSHA) and National Institute for Occupational Safety and Health (NIOSH) officials, acting as representatives of the Secretary of Labor, are authorized to conduct announced or unannounced inspections of all DoD workplaces -- except military-unique workplaces and nonmilitary-unique workplaces that are staffed exclusively with military personnel.

2. DoD contractors operating from DoD or privately owned facilities, located on or off USMC installations, are "employers" as defined in OSH Act and are subject to enforcement authority by Federal and state safety and health officials.

a. Federal and state OSHA officials must be granted access to USMC and DoD contractor workplaces on DoD installations without delay and at reasonable times, in accordance with Section 8(a) of Public Law 91-596, except as provided in this Manual.

b. Subject to terms of any variance, tolerance, or exemption granted by the Secretary of Labor pursuant to Public

Law 91-596, a state may exercise jurisdiction over OSH matters involving a USMC and DoD contractor workplace, provided the state OSH plan has been approved by the Secretary of Labor. USMC and DoD contractors will be responsible for determining the status of applicable state OSH plans.

3. Authorized OSH officials from states without OSHA approved plans may, subject to the exceptions provided elsewhere in this chapter, exercise jurisdiction over OSH matters involving a USMC and DoD contractor workplace only when there are no relevant OSHA standards applicable to the work in progress.

4. Federal OSH officials may perform OSH inspections in USMC and DoD contractor workplaces situated in areas where the U.S. holds exclusive Federal jurisdiction.

5. Regardless of whether or not a state has a Secretary of Labor approved plan, state OSH officials have no authority in USMC and DoD contractor workplaces situated in areas where the United States holds exclusive Federal jurisdiction.

6. Section 4(b)(l) of Public Law 91-596 does not authorize the Secretary of Labor to assert authority over working conditions for which another Federal agency exercises statutory authority. The Secretary of Labor's authority does not extend to working conditions specifically covered by:

a. Any state nuclear safety or health standard or regulation.

b. Any explosives safety or health standard or regulation.

8002. STANDARDS. OSH standards, promulgated under provisions of Public Law 91-596, are enforceable by Federal or state OSHA officials as follows:

1. Federal OSHA officials will enforce only Federal standards in USMC and DoD contractor workplaces.

2. State OSH officials operating under a federally-approved plan may enforce state standards.

8003. USMC AND DoD CONTRACTOR RESPONSIBILITIES

1. USMC and DoD contractors have the responsibility of responding to any citations issued by Federal or state OSH officials for violations of applicable Federal or state OSHA standards.

2. Full information regarding citations and notices issued to USMC and to DoD contractors for violations of Federal or state OSHA standards involving USMC furnished equipment, facilities, or other property, shall be referred to the responsible Administrative Contracting Office (ACO) for appropriate action and provided to CMC (SD).

3. USMC and DoD contractor workplaces may be inspected for accidents or complaints by Federal or state OSHA officials subject to the exceptions noted in paragraph 8002.

4. USMC and DoD contractors shall not be provided advance notice of OSH inspections by Federal or state OSHA officials except:

a. In cases of apparent imminent danger to any USMC or contractor employees.

b. When requested by Federal or state OSHA officials.

NOTE: Any person who violates the foregoing may be subject to a fine of not more than $1,000 or imprisonment for not more than 6 months, or both.

5. Before conducting an inspection of a USMC or DoD contractor workplace situated on a Marine Corps installation, Federal and state OSHA officials shall present appropriate identifying credentials and state the purpose of the visit to the installation commander and ACO, as appropriate.

6. When Federal or state OSHA officials require entry to a secured area, and they cannot effectively be prevented from access to classified material by such means as covering the material, the following procedures shall apply:

a. USMC official or contractor official shall immediately notify the OSHA official and DoD activity exercising security supervision over the workplace of need for a personnel security clearance to enter the closed area.

b. In case of Federal OSHA officials, the USMC and DoD security activity, after verifying need for a personnel security clearance, shall contact the appropriate cognizant security office and require verification of the Federal OSHA official's security clearance. If the OSHA official's name is not on the access list, the responsible security officer shall contact the OSHA regional or area office and request an appropriately cleared OSHA official.

c. In case of state OSHA officials, the USMC and DoD security activity, after verifying the need for a personnel security clearance, shall coordinate with the state OSHA official and request that the responsible office contact the nearest OSHA regional or area office for a cleared Federal OSHA official.

7. Federal and state OSHA officials shall be accompanied on their inspections and investigations by ISO and ACO representatives (as appropriate). DoD contractor’s representatives may also accompany them when requisite security clearances are verified.

8. Federal or state OSHA officials shall not be permitted to take photographs on any Marine Corps installation. Photos requested by these officials shall be taken only by authorized personnel and shall not be delivered to the requesting official until all film, negatives and photos, have been fully screened and classified by higher authority. Requests for documented data, sketches of military installations and equipment, reports or design information such as noise levels, profiles, etc., shall be forwarded to the appropriate screening official for similar action. This process shall normally be completed by the screening official within a period of 15 working days from receipt of the material.

9. The USMC and DoD contractor is responsible for resolving issues related to citations or requests for delays, variances, tolerances or exemptions of applicable OSHA standards.

10. Federal and state OSHA officials shall be provided with copies of records and reports pertinent to specific USMC and DoD contractor accident investigations upon request unless release is prohibited by the Privacy Act or exempted under the Freedom of Information Act.

11. OSH inspections and investigations of USMC and DoD contractor workplaces by Federal or state OSHA officials shall be conducted during regular working hours, except when other times are mutually agreed upon by the concerned officials.

12. USMC installation commanders shall, as a courtesy, advise the applicable state OSHA official in writing of contractor workplaces located within areas of exclusive Federal jurisdiction.

13. Commanders shall report through their chain of command to CMC (SD) any situation where compliance with procedures in this chapter could impair national defense mission or adversely affect national security.

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CHAPTER 9

REPORTS AND APPEALS OF UNSAFE OR UNHEALTHFUL WORKING CONDITIONS

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CHAPTER 9

REPORTS AND APPEALS OF UNSAFE OR UNHEALTHFUL WORKING CONDITIONS

9000. DISCUSSION

1. Early detection of unsafe or unhealthful working conditions and prompt correction of these and related hazards, are major elements in the mishap prevention and the OSH Program. Correction at the lowest possible level is an essential element of mishap prevention. All military and civilian personnel shall participate fully in the installation or unit OSH Program by reporting either orally or in writing any unsafe or unhealthful working condition. It is essential to inform installation or unit safety personnel of the existence or potential for unsafe or unhealthful working conditions.

2. This chapter provides guidelines and procedures to report unsafe or unhealthful working conditions to management for correction, establish a process for management response to these identified conditions, and establish an appeal process for individuals who disagree with the initial assessment.

9001. BACKGROUND. E.O. 12196, Occupational Safety and Health Programs for Federal Employees, encourages all military and civilian personnel to participate in OSH Program activities. 29 CFR 1960, Department of Labor Regulations Basic Program Elements for Federal Employee Occupational and Safety Programs and Related Matters, requires that workplace hazard reporting and appeal procedures be developed for employees, including safeguards to ensure personnel are not subject to any restraints or fear of reprisals that might prevent full participation in OSH Programs.

9002. HAZARD REPORTS

1. Any military or civilian personnel, or employee representative, observing unsafe or unhealthful work practices, conditions or violations of established OSH standards, shall

advise the work center supervisor of the condition noted, either orally or in writing. Initial oral reports are required for imminent danger situations. Reprisals against personnel for submitting hazard reports are prohibited.

2. Upon receipt of an oral or written report of unsafe or unhealthful work practice or condition, the supervisor responsible for the area in question shall investigate and initiate appropriate corrective action. When an unsafe or unhealthful work practice or condition cannot be corrected at the supervisory level, the supervisor shall notify the ISM or unit safety officer within 5 working days.

3. Any employee desiring anonymity may submit a NAVMC 11401, "Unsafe or Unhealthful Working Conditions" form, (figure 9-1) to the ISM. Blank copies of this form and procedures shall be posted in or near all Marine Corps work centers (e.g., official bulletin boards, time clocks). Military personnel may use the NAVMC 11401 or the ANYMOUSE report as described in paragraph 9006.

4. If anonymity is requested, the ISM or unit safety officer shall delete the originator's name and any individual named in the report, and advise the responsible supervisor that a hazardous condition has been reported.

5. The safety office shall record each report on a log maintained within the installation or unit safety office. A sequentially numbered case file shall be assigned for purposes of maintaining an accurate record of the report. The log shall include the following: date, time, RAC code, reference, file number, location of condition, brief description of the condition, classification (i.e., imminent danger, serious, or other), and date/action taken. See figure 9-2 for log page example.

6. The safety office shall investigate all hazard reports. Alleged imminent danger situations shall be investigated within 8 hours, potentially serious conditions within 3 working days, and other safety and health conditions within 20 working days. If the report involves a health hazard, the safety office shall refer the hazard report to the local medical facility within one day for investigation.

7. After receipt of a report of unsafe or unhealthful working condition, a safety office written response will be provided to the originator within 15 days either verifying the reported condition and providing corrective actions, or stating review concluded and no hazard exists. If response time cannot be met for any reason, an interim reply will be made. If anonymity has been requested, a notice should be posted on the official or safety bulletin board near the unsafe or unhealthful reports to advise personnel of the status of the complaint. Weekly newsletters or plan of the day notices may be used in addition to or instead of posting.

8. The completed response shall encourage, but not require, the originator to informally contact the safety office if the originator desires additional information or is not satisfied with the response. The response shall indicate formal appeals may be made and provide appeal process reference.

9003. HAZARD REPORT APPEALS

1. If the originator of a NAVMC 11401, Unsafe or Unhealthful Working Conditions, or the NAVMC 11509, ANYMOUSE report as described in paragraph 9006, is dissatisfied with the final determination or corrective action taken, the originator should first talk with the ISM or unit safety officer and attempt resolution. If, after a discussion with the safety manager or officer, the originator remains dissatisfied, an appeal to the commander shall be made in writing, describing in detail the hazardous condition to include the following:

a. The OSH standard violated (if known).

b. How, and to whom, the original report of the condition was given.

c. What action resulted?

d. An explanation of the dissatisfaction and any recommendation for correction.

2. If first level of appeal response does not satisfy the originator of the report, additional appeals may be submitted.

The appeals process is normally coincident with the originator's chain of command. At each level of the appeal process, originator shall provide complete documentation, including a copy of the initial report, information on actions taken by review authority, and reasons why dissatisfied with action taken.

3. The final appeal authority within the Marine Corps is CMC (SD). If the CMC (SD) response does not satisfy originator, the next level of appeal shall be the Assistant Secretary of the Navy (Installations and Environment) (ASN (I&E)). The final level for appeals within DoD is to Deputy Undersecretary of Defense (Installations and Environment) (DUSD (I&E)). The originator shall provide copies of all appeals to CMC (SD) and the originator's commander. The appeal shall describe, in detail, the Marine Corps disposition of the report (i.e., results of the previous level appeal) and originator's objections to the disposition.

4. If not satisfied with final DoD disposition and as a last resort, the originator may contact, in writing, the Office of Federal Agency Safety Programs, Department of Labor (OSHA), Washington, DC 20210. The appeal must describe in detail the entire processing of the report, furnish copies of all previous level appeals, and describe originator's objections to the final disposition of the unsafe or unhealthful work condition.

5. Sequence of appeals for military personnel is via the chain of command concluding at the Office of the Secretary of Defense.

6. The appeal originator should receive a response within 20 working days. If at any time during the appeal process, the originator does not receive a response within 20 working days, the appeal may be submitted to the next higher reviewing authority without waiting for a reply. An interim reply shall be made to the originator of the report when the 20 working days suspense cannot be met. An interim reply may meet the response time criteria; however, an interim reply shall not take the place of a final reply.

7. Any appeal that bypasses these established procedures will be returned to the originator.

9004. OSH DEFICIENCY NOTICES. A NAVMC 11400, OSH Deficiency Notice (figure 7-1) of the unsafe or unhealthful working condition shall be posted at the sight of the deficiency in a highly visible location, in the immediate vicinity of the hazardous condition. This notice shall not be removed until the condition has been corrected.

9005. RETENTION OF REPORTS. Copies of unsafe and unhealthful working condition reports and records of abatement actions taken shall be retained at installation or unit safety offices for at least 5 years after the end of the calendar year in which final action is completed.

9006. ANYMOUSE REPORTS. NAVMC 11509, ANYMOUSE reports are an informal way to report safety concerns anonymously. The report box and blank reports shall be posted in a discreet location as to prevent identification of the individual. It is intended to encourage personnel to make voluntary reports of safety concerns that they are not comfortable reporting through the established chain of command or reporting channels. The vast majority of ANYMOUSE reports will be resolved at the local level. See Figure 9-3.

1. The safety office shall investigate all NAVMC 11509 ANYMOUSE reports and inform the commanding officer within 30 days of receipt. Upon investigation and if conditions warrant, bring concerns to the appropriate supervisor for corrective action. Alleged imminent danger situations shall be investigated within 24 hours. If the report involves a health hazard, the safety office shall coordinate efforts with the local medical facility for investigation.

2. A response to the NAVMC 11509 ANYMOUSE report should be posted within 35 days of receipt informing the originator of the corrective action or advising that no hazard exists. Notification of receipt shall be posted near the ANYMOUSE box, on the safety bulletin board, in weekly newsletters, or safety council meeting minutes, verifying receipt of the report and corrective action taken. If response time cannot be met for any reason, information should be posted advising of such.

3. Personnel submitting a NAVMC 11509 ANYMOUSE report shall complete the report and place it in an ANYMOUSE box or location designated to collect the report. The safety office will retrieve the reports and provide follow up by posting results on an ANYMOUSE board, safety bulletin board, weekly newsletter, or minutes of safety council meetings.

4. If an individual is not satisfied with the results, they should appeal to higher headquarters, or mail or fax the NAVMC 11509 ANYMOUSE report to CMC (SD), (703) 695-3231 or DSN 225-3231 to request resolution. Anonymity will be preserved.

5. ANYMOUSE reports may be used to highlight conditions that may add “lessons learned” value to others. These reports may be used to produce articles for safety magazines (e.g., Ground Warrior), newsletters, or used as a topic of discussion at safety standdowns.

6. Upon investigation, if design or manufacturing flaws are found, a hazard report message (HAZREP) shall be initiated per OPNAVINST 5102.1D/MCO P5102.1B.

7. Additional information on the ANYMOUSE program may be obtained at http:/www.hqmc.usmc.mil/safety.nsf.

8. NAVMC 11509 ANYMOUSE reports shall be retained for a period of 3 years.

UNSAFE OR UNHEALTHFUL WORKING CONDITION
NAVMC 11401 (8-98) (EF)
SN: 0109-LF-071-1000

1. I believe a condition exists which is a safety or health hazard to Marine Corps personnel or property. ((check one)

Civilian: ☐ Military: ☐

Employee Representative: ☐ Other: ☐

2. Does this hazard immediately threaten life or health?

Yes ☐ No ☐

3. Building, worksite, or other location where you believe the unsafe or unhealthful condition exists.

4. Supervisor (if know) at this location is: | and phone number is:

5. Briefly describe hazard:

6. Number of employees exposed to or threatened by hazard:

7. If know, list any safety or health standard which you believe may apply to this condition.

8. To your knowledge, has this condition been reported to, discussed with, or brought to the attention of a supervisor?

Yes ☐ No ☐

9. If yes, please give the results, including any efforts by management to correct condition.

10. Name (Optional): | phone number (Optional):

11. If you, are a representative of employees, provide name of your organization.

Case) number: (Filled in by Installation or Unit Safety Office).

Designed using FormFlow 2.15, HQMC/ARSE, Aug 98

Figure 9-1. --NAVMC 11401, Unsafe or Unhealthful Working Condition.

SAMPLE

LOG OF UNSAFE OR UNHEALTHFUL
WORKING CONDITIONS

DATE/TIME REC'D	FILE #	EXACT LOCATION	DESCRIPTION	CLASS OF HAZARD	DATE /ACTION TAKEN

Figure 9-2. --Log of Unsafe or Unhealthful Working Conditions.

ANYMOUSE

Please fill out this report as completely as possible.

Marine Information

Marine's Position (Mech, Rifleman, etc.): _____ Primary Qualification (MOS): _____

Total Years of Service: _____ Years of MOS Experience: _____ Secondary Quals. (MOS): _____

ENVIRONMENTAL INFORMATION

Date/Time: _____ Location: _____ Light Conditions: _____

Type of Equipment: _____ Tools Used: _____

Mission: _____

Phase of Event: _____

Significant Work: _____

Additional Information: _____

Please describe the event/situation in as much detail as possible. Use additional paper if necessary.

Figure 9-3. --ANYMOUSE Reporting Form (front).

Did any of the following contribute to the safety concern? Please explain. Use additional paper if necessary.

Supervisory condition: _____

Inadequate SOP: _____

Violation, e.g., Breaking SOP: _____

Medical condition (fatigue, stress): _____

Maintenance/material issues: _____

Crew coordination (conflict, assertiveness, etc.): _____

Facilities issue: _____

Inattention (missed radio call, forgot briefing checklist): _____

Other: _____

Please list your recommendations to prevent this safety concern from occurring in the future. Use additional paper if necessary.

_____

Figure 9-3. --ANYMOUSE Reporting Form (back).

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CHAPTER 10

PREVENTION AND CONTROL OF WORK CENTER HAZARDS

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CHAPTER 10

PREVENTION AND CONTROL OF WORK CENTER HAZARDS

10000. DISCUSSION

1. Public Law 91-596, Occupational Safety and Health Act of 1970, executive orders, and public laws establish the requirement for commanders to provide all Federal employees with a safe and healthful place of employment. Although Public Law 91-596 applies to installations and garrison environments, there are provisions that also apply to those areas that are military unique. In both garrison and operational environments, identification of hazardous conditions may be accomplished at the planning and design stage, as a result of annual or more frequent inspections, industrial hygiene reports, or by personnel reporting hazards NAVMC 11509 ANYMOUSE or NAVMC 11401, Unsafe/Healthful Working Conditions.) All recognized hazards shall be eliminated or controlled as quickly as possible subject to prioritization based upon risk assessment and assignment of RACs. See figure 7-2.

2. The preferred method of hazard abatement shall be through the application of engineering controls or substitution of materials, tools, equipment, and improved work procedures identified in SOPs, PMs, and TMs. The use of administrative controls, possibly in conjunction with personal protective equipment (PPE), is acceptable only when all other methods are proven not technically or economically feasible.

10001. RESPONSIBILITIES

1. Commanders and Commanding Officers shall establish and maintain an effective operational risk management program as described in MCO 3500.27B. This process is an effective approach to hazard identification, risk assessment, and monitoring the effectiveness of controls. RACs are used as the basis for developing risk decisions and controls.

2. Installation safety managers shall:

a. Manage the program for abatement of work center hazards.

b. Ensure an annual inspection is conducted of all work centers.

c. Assist tenant commands in the tracking of infrastructure hazards.

d. Ensure all vending machines having an empty weight exceeding 700 pounds, and cold drink vending machines (regardless of weight), at Marine Corps activities are affixed with a safety label and firmly anchored to the floor or wall with an industry standard stabilizing bracket. The safety label shall be displayed near the coin slot and warn about hazards of tipping or rocking the machine. The type of anchor is a local determination based on the material and construction of the wall or floor.

3. Supervisors shall:

a. Ensure an annual inspection of each work center is conducted.

b. Report mishaps in the work center to the ISM or unit safety officer.

c. Ensure personnel are trained on the hazards associated with work being performed and follow procedures described in command’s SOPs, PMs, TMs, and this Manual.

d. Ensure an emergency plan is available and posted.

4. Marine Corps personnel shall:

a. Report unsafe work conditions to supervisors.

b. Report injuries and illnesses to supervisors.

10002. HAZARD CONTROL PRINCIPLES. Safety professionals are specialists who, through training and experience, develop proficiency in risk assessment and hazard abatement. Their training includes the recognition, evaluation, and control of work center hazards and in operational training environments. Both the safety professional and the industrial hygienists shall be thoroughly familiar with potential hazards created by various materials, equipment, and operations used in facilities. They shall also be aware of special designs required by OSH standards to minimize certain work center hazards. Some of the principles applied to prevent or mitigate work center hazards are:

1. Engineering Controls

a. Substitution. The risk of injury or illness may be reduced by replacement of an existing (or intended) process, material, or equipment with a similar item having a more limited hazard potential. An example of beneficial process change includes airless painting vice spray-painting to reduce noise and atomization levels. Equipment changes might include use of electric motors rather than internal combustion engines to reduce carbon monoxide exposures. Also, the use of safety cans in place of bottles to store flammable solvents is a method to reduce fire hazards. Examples of material substitution include switching from trichloroethylene to 1,1,1 trichloroethane (methyl chloroform) for solvent degreasing, to reduce risk of injury to the liver and kidneys of exposed workers. Care must be exercised in any substitution to ensure the substitute is not more hazardous than the item being substituted.

b. Isolation. Hazards are controlled by isolation whenever an appropriate barrier is placed between the hazard and an individual who may be affected by the hazard. This isolation can be in the form of physical barriers, time separation, or distance. Examples include machine guards, electrical insulation, acoustical enclosures for a loud compressor, and remote controlled equipment.

c. Ventilation. Control of potentially hazardous airborne substances by ventilation can be accomplished by one of two methods. The first is termed general ventilation or dilution ventilation; the second is called local exhaust ventilation.

General ventilation is the dilution of a hazardous concentration by mixing with uncontaminated air. Local exhaust ventilation is the capture of the hazardous concentration at the point of generation. Local exhaust ventilation is generally preferred and can be a more economical method of hazard control. Properly used, however, general ventilation can be very effective for the removal of large volumes of heated air, or for the removal of low concentrations of nontoxic or low toxicity contaminants.

2. Administrative Controls. This method of hazard control depends on effective operating practices that reduce the exposure of individuals to chemical or physical hazards. These practices may take the form of limited access to hazardous areas, preventive maintenance programs to reduce the potential for leakage of hazardous substances, or adjusted work schedules which limit work in high interest areas. Industrial hygienists or safety specialists should be consulted for current standards. The most stringent regulation or consensus standard shall be applied in all instances. Commanders have established SOPs, PMs, and TMs that have administrative controls identified and are a starting point for all to consider in promoting an active hazard control program.

3. PPE. This method of hazard control is the least preferred because PPE may reduce productivity while affording less effective protection against the recognized hazard than previously mentioned methods of control. Nevertheless, there are instances where adequate levels of risk reduction cannot be achieved through other methods, and PPE must be used, alone or in conjunction with other protective measures. Chapter 13 describes requirements applicable to the use of PPE (e.g., respirators, gloves, safety glasses).

10003. HAZARD CONTROL APPLICATIONS

1. Hazards can be prevented through appropriate risk management. The planning of operational training, designing of new facilities, and planning self-help repair programs are just a few of the areas in which application of hazard controls can be used to assess and manage risk.

2. Design Reviews. OSH requirements shall be considered, designed, and engineered into all facilities that are acquired, constructed, or modified for use by Marine Corps personnel. OSH requirements shall be considered during systems planning, design, development, acquisition, operation, and disposal (life cycle). Facility design engineers in many instances are not totally familiar with potential health hazards created by various materials, equipment and operations used in industrial facilities, nor are they aware of the special design considerations required to control these hazards. To ensure that appropriate hazard control techniques are applied, commanders are encouraged to contact the installation safety, fire prevention, and environmental managers, and the responsible industrial hygienist to review plans and specifications for all projects. All projects shall be evaluated for lead, asbestos, or other hazards requiring specific abatement procedures prior to commencement of the project. The ISM will sign off on all plans at the 35 percent and 100 percent design stages.

3. SOPs. SOPs or similar directives that are issued to direct the manner in which work is performed shall include appropriate OSH requirements. SOPs shall be reviewed by the installation or unit safety manager to ensure that all OSH requirements are met before submission to the commander for final approval. SOPs shall be reviewed and updated at least annually.

4. Purchasing Procedures. Many hazards can be avoided by incorporating appropriate specifications for purchased equipment or material and contracted efforts. Marine Corps organizations responsible for developing specifications for such purchases shall coordinate with the ISM and industrial hygienist to ensure OSH Program requirements are considered in these specifications. Similarly, contracted work shall be coordinated with ISM and industrial hygienist. Coordinate with the ISM and industrial hygienist prior to purchasing equipment, hazardous material, and furniture, to ensure OSH Program requirements are considered for compatibility and health related issues that may arise from the use of the equipment or material.

5. Interim Hazard Abatement Measures. During the time needed to design and implement permanent hazard control measures, immediate temporary measures may be needed. Where engineering controls are not immediately applicable for use, interim control

measures shall be employed. They shall be noted on the OSH Deficiency Notice, abatement logs, and posted hazard notices as described in chapter 7.

6. Permanent Hazard Abatement. Engineering control methods are the preferred method of hazard control, followed by administrative controls, and finally PPE. Feasible engineering controls shall be used to reduce hazardous exposure, even when only partial reduction of exposure is possible through engineering methods. Criteria may be applied to determine whether engineering controls are feasible. First, a control is technologically feasible if it is available "off the shelf" or if technology exists which can be adapted to the hazard in question. Second, a control is economically feasible if it can be shown that the cost is justified by the benefit it produces. On the other hand, if the expected reduction of the hazard through implementation of engineering controls will not significantly increase personnel protection, and cost of the control is too great, then the control is not economically feasible.

10004. HAZARD ABATEMENT

1. Some projects developed to address work center hazards may exceed the funding capability of the local command and may qualify for centrally managed funds. Applications for these funds should be submitted per chapter 3 and MCO P11000.5F, Real Property Facilities Projects Manual.

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CHAPTER 11

OCCUPATIONAL HEALTH AND INDUSTRIAL HYGIENE PROGRAMS

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CHAPTER 11

OCCUPATIONAL HEALTH AND INDUSTRIAL HYGIENE PROGRAMS

11000. DISCUSSION

1. Commanders have at their disposal two specialists (occupational medicine and industrial hygiene professionals) who can provide hard information concerning risk as they apply to training, operational requirements, and work environments. The Occupational Health Program is primarily concerned with long-term (chronic) exposure to toxic chemicals (e.g., lead, asbestos, carbon monoxide), physical agents (e.g., noise, radiation, heat, lasers), biological hazards, ergonomic problems, and the treatment of work related injuries IAW the appropriate workers' compensation rules and regulations.

2. The Occupational Health Program element is divided into two major specialties, industrial hygienist and occupational medicine. Each of these specialties has a long-term surveillance program.

a. Industrial hygienist involves anticipation, recognition, evaluation, and control of health hazards affecting workers in the occupational environment.

b. Occupational medicine involves the evaluation, diagnosis, treatment, and care of acute and chronic occupational illnesses and injuries.

11001. INDUSTRIAL HYGIENE PROGRAM. Industrial hygiene programs shall be established at Marine Corps installations per OPNAVINST 5100.23F, Navy Occupational Safety and Health Program, and this Manual.

1. Workplace Monitoring. Each work center must be thoroughly evaluated to identify and quantify potential health hazards. This requires a baseline survey followed by periodic update surveys in all Marine Corps installations. The baseline is a comprehensive survey of an entire installation against which all

subsequent periodic surveys will be compared. Permanent changes in a work center will require establishment of a new baseline for new or altered operations. The baseline industrial hygiene survey is routinely updated by periodic surveys and through representative sampling programs in the work environment. Analysis and interpretation of the sampling data will assist in the assessment of health hazards, making recommendations for hazard abatement and control measures, and determining requirements for medical surveillance of personnel at risk. The following subparagraphs provide basic requirements for workplace monitoring.

a. Workplace Assessment (Walk-Through Survey). The responsible medical treatment facility (MTF) industrial hygienist or other trained industrial hygiene personnel shall conduct a baseline survey. If the organization has its own industrial hygiene assets, responsibilities for workplace monitoring, inspections, etc., shall be defined in a formal agreement between the organization and the MTF. Baseline will include, as a minimum, the following information:

(1) A description of operations and work practices that take place in the work center (e.g., welding, spray-painting), to include a layout sketch incorporating relevant aspects of the tasks. The time course of events taking place within the work center must be carefully described.

(2) A list of hazardous materials (including biological hazards and radioactive material) used, handled, stored, or produced in the work center in terms of quantity per unit time, including a brief description of how the materials are used in the operations.

(3) A list of potential harmful physical agents (e.g., noise, radiation) including a brief description of their sources.

(4) A brief description of existing controls (e.g., ventilation hoods, hearing protection devices), and an evaluation of their use and effectiveness.

b. Exposure Assessment. Based on information obtained during the walk-through survey, the next step is to assess

whether or not there is potential for employee exposure to toxic chemicals or harmful physical agents. The responsible industrial hygienist shall make this determination and maintain a written record for each work center where toxic chemicals or harmful physical agents may be found. A copy of this assessment shall be provided to the installation or unit safety office so that recommendations can be tracked or incorporated into the hazard abatement log. The record will include rationale for any finding and discrepancies.

c. Workplace Monitoring Plan. If the exposure assessment indicates workers are exposed to toxic chemicals and/or harmful physical agents, a work center monitoring plan shall be prepared and implemented. The industrial hygienist, responsible MTF, and ISM or unit safety officer shall develop the plan jointly.

d. Periodic Evaluation. All Marine Corps work centers with recognized potential health hazards shall be evaluated at least annually. The baseline survey will identify those work centers not requiring annual evaluations due to a negative exposure assessment. The baseline may indicate that the periodic evaluation should be performed more frequently as dictated by the nature and degree of hazards present. Supervisors shall notify the responsible industrial hygienist of any changes in procedures, materials, or equipment that could affect personnel exposures to potential health hazards, and may require a re-evaluation. During the periodic evaluation, a determination shall be made on the status of the work center, and any changes required in the monitoring plan or frequency of periodic follow-ups.

2. Industrial Hygienist Responsibilities

a. The industrial hygienist or industrial hygiene officer (IHO) assigned to naval medical activities that support Marine Corps commands shall provide comprehensive baseline and periodic workplace evaluations, technical direction of workplace monitoring programs, training and certification of workplace monitors, and special assistance, as requested by the activity commander (e.g., selection of PPE, review of engineering designs, member of process hazard analysis team).

b. The IHO assigned to Marine Corps activities (i.e., FSSG, MAW) shall establish industrial hygiene programs specific to their command. The IHO shall ensure that monitoring and exposure data is provided to the medical department for entry into personnel medical records.

c. Industrial hygienists shall practice their profession following recognized scientific principles with the realization that the lives, health, and well-being of personnel may depend upon their professional judgment and that they are obligated to protect the health and well-being of Marine Corps personnel. They shall counsel affected parties factually regarding potential health risks and precautions necessary to avoid adverse health effects. They shall keep confidential personal and business information obtained during the exercise of industrial hygiene activities except when required by law or overriding health and safety considerations. They shall avoid circumstances where a compromise of professional judgment or conflict of interest may arise. They shall perform services only in the areas of their competence, and act responsibly to uphold the integrity of their profession.

3. Monitoring Records (Disposition, Retention, and Access). Those records that are pertinent to an individual's exposure shall be incorporated into their medical record. The responsible MTF shall retain survey, evaluation, and monitoring records in consonance with General Records Schedule 1, Item 21, Transmittal No. 12, July 2004. They shall provide to Marine Corps personnel and employee representatives access to those records that are pertinent to individual exposures in accordance with the provisions and definitions of DoD Instruction 6055.5, Industrial Hygiene and Occupational Health.

11002. OCCUPATIONAL HEALTH PROGRAM

1. Occupational medicine and medical surveillance programs shall be established at Marine Corps commands per OPNAVINST 5100.23F. Both 29 CFR 1910.20, Access to Employee Exposure and Medical Records and NEHC-TM OM-6260, Occupational Medical Surveillance Procedures Manual and Medical Matrix, provide the medical surveillance requirements and guidance.

2. These programs shall be based on the industrial hygiene recommendations. The installation safety manager or unit safety officer shall ensure that affected Marine Corps personnel are entered in the medical surveillance program.

11003. CIVILIAN EMPLOYEE MEDICAL RECORDS

1. The cognizant MTF or contracted health service shall maintain records consisting of forms, correspondence and other files that relate to an employee's medical history, occupational injuries or illnesses, physical examinations, and all other treatment received in a health unit.

2. Upon separation, the medical records of civilian employees who have worked at installations under hazardous environmental or occupational working conditions are transferred to the National Personnel Records Center (NPRC), St. Louis, MO 30 days after separation. Records will be retained in accordance with General Records Schedule 1, Item 21, Transmittal No. 12, July 2004. The medical records of these employees, as described in General Records Schedule 1, Item 19, Transmittal No. 12, July 2004, are destroyed 6 years after the date of the last entry. The medical records of those employees who, in the opinion of responsible medical authority, have worked at installations where no known environmental or occupational health hazards exist, are destroyed 6 years after the date of the last entry.

3. Installations shall ensure that all medical records of employees who transfer to other positions within the DoD and other Federal agencies are provided to the gaining activity within 60 days from the day of transfer.

11004. MILITARY MEDICAL RECORDS. Maintenance, retention and disposition of military personnel medical records shall be in accordance with BUMED and SECNAV directives.

11005. ACCESS TO RECORDS. Access to occupational health medical records shall be provided to civilian employees and their representatives upon reasonable request in accordance with

the provisions and definitions of 29 CFR 1910.20; NEHC-TM OM-6260; and NEHC-TM IH 6290.91-2B, Industrial Hygiene Field Operations Manual. Access to medical examination records shall be made available to a physician of the individual's choice or the NAF third party administrator after execution of the proper release documents. Access to military medical records shall be provided to military personnel by request. Safety and occupational health managers (e.g., ISM, industrial hygienist, radiation safety officer) will coordinate with the MTF to verify individuals are on medical surveillance and examinations are up-to-date, as required for their respective programs.

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CHAPTER 12

LOCKOUT/TAGOUT ENERGY CONTROL PROGRAM

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CHAPTER 12

LOCKOUT/TAGOUT ENERGY CONTROL PROGRAM

12000. DISCUSSION

1. The Lockout/Tagout Program ensures Marine Corps personnel are protected from injury during any servicing or maintenance done on machinery or equipment, where the unexpected energization, start-up, or release of any type of energy (e.g., electricity, steam, and hydraulic, pneumatic, gravity) could occur. The machinery or equipment will be rendered safe to work on by being locked or tagged out under requirements of 29 CFR 1910.147, Control of Hazardous Energy (Lockout/Tagout); and 29 CFR 1910.333, Selection and Use of Work Practices; and guidance of ANSI Z244.1-2003, American National Standard for Control of Hazardous Energy, Lockout/Tagout and Alternative Methods.

2. An energy-isolating device is considered capable of being locked out in one of two ways. It is capable of being locked out if designed with a hasp, other attachment, or integral part to which, or through which, a lock can be affixed. Also, it is capable of being locked out if it has a locking mechanism built into it. Other energy isolating devices are also considered capable of being locked out if lockout can be achieved without need to dismantle, rebuild, or replace the energy-isolating device or permanently alter its energy control capability.

3. The Lockout/Tagout Program does not apply to the following:

a. Work on cord and plug connected electric equipment where exposure to hazards of the unexpected energization or start-up of equipment is controlled by unplugging the plug, which is under exclusive control of the person performing the servicing or maintenance.

b. Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water, or petroleum products when performed on pressurized pipelines, provided the following is demonstrated:

(1) Continuity of service is essential.

(2) Shutdown of system is impractical.

(3) Documented procedures are followed, and special equipment is used which will provide proven effective protection for employees. Industry standards published by the American Petroleum Institute and other trade organizations shall be used to develop these specific work procedures.

c. Installations where electric utilities to include power generation, transmission, and distribution, as well as related equipment for communication or metering, are under control of a private utility company.

d. Exposure to electrical hazards from work on, near, or with conductors or equipment in electric utilization at installations as defined by 29 CFR 1910.147, Control of Hazardous Energy (Lockout/Tagout).

e. Minor tool changes and adjustments, and other minor servicing activities which: occur during normal production operations; are routine, repetitive, and integral to use of the equipment for production; or use other safeguards that provide effective protection.

f. Operations aboard naval ships that are covered under OPNAVINST 5100.19D, Navy Occupational Safety and Health (NAVOSH) Program Manual for Forces Afloat.

12001. BACKGROUND

1. All equipment and machinery shall be locked out or tagged out to protect against accidental or inadvertent start-up, or operation that may cause injury to personnel performing maintenance, service, repair, or modifications to machinery or equipment. Marine Corps personnel operating or attempting to operate any switch, valve, or other energy isolating device that is locked or tagged out may be subject to disciplinary action.

2. Lockout is the preferred method of isolating machines or equipment from energy sources and shall be used whenever possible.

3. When a tagout device is used as an energy-isolating device on machinery or equipment that is not capable of being locked out, a tagout device shall be attached at the same location where the lockout device would be attached, and shall provide an equivalent level of safety.

4. Whenever major replacement, repair, renovation or modification of machinery or equipment is performed, and whenever new machines or equipment are installed, contracting or purchasing agents and designing engineers shall ensure energy isolating devices are provided with operating procedures.

5. Affected Worker. An affected worker is defined as a person whose job requires operating or using a machine or equipment on which service or maintenance is being performed under lockout or tagout, or whose job requires working in an area in which such service or maintenance is being performed.

6. Authorized Worker. An authorized worker is defined as a person who locks out or implements a tagout system procedure on machinery or equipment to perform service or maintenance on that machinery or equipment. An authorized worker and an affected worker may be the same person when the affected worker's duties also include performing maintenance or service on a machine or equipment that must be locked or tagged out.

12002. RESPONSIBILITIES. Marine Corps personnel who could be exposed to hazardous energy sources shall be instructed in the safety significance of the lockout or tagout procedure. Personnel authorized to perform lockout or tagout shall receive training commensurate with their responsibilities and requirements of 29 CFR 1910.147 and 29 CFR 1910.333. Each new or transferred person whose work operations are or may be affected shall be instructed in the purpose and use of lockout/tagout procedures. Lockout/tagout system procedures shall be followed at all times.

1. Commanders shall:

a. Ensure all Marine Corps personnel who could be exposed to hazardous energy sources receive formal training in the purpose and function of the Lockout/Tagout Program.

b. Ensure the Lockout/Tagout Program is evaluated using NAVMC 11402, Lockout/Tagout Program Evaluation, figure 12-1.

c. Ensure specific lockout/tagout energy control procedures are developed and maintained for all systems and equipment under their cognizance. NAVMC 11403, Lockout/Tagout Checklist, figure 12-2, shall be used for this purpose.

d. Ensure the Lockout/Tagout Program is implemented and followed within their area of cognizance. Supervisors and individuals will be held accountable for any failure to comply with the Lockout/Tagout Program, and overriding or removing any lockout/tagout device without authorization.

e. Designate in writing a lockout/tagout coordinator(s) who is delegated responsibility and authority for controlling and administering the lockout/tagout program for their area of cognizance. Send a copy of this letter to the ISM or unit safety officer.

2. ISM/Unit Safety Officer shall:

a. Coordinate initial and annual lockout/tagout training.

b. Evaluate the Lockout/Tagout Program using NAVMC 11402, Lockout/Tagout Program Evaluation, figure 12-1.

c. Provide technical assistance in drafting specific energy control procedures for each piece of affected equipment.

3. Lockout/Tagout coordinators shall:

a. Administer the Lockout/Tagout Program within their respective organizations.

b. Enforce lockout/tagout procedure compliance and ensure an ample supply of standardized locks and tags are available. Each organization is responsible for supplying lockout/tagout devices.

c. Develop lockout/tagout procedures using NAVMC 11403, Lockout/Tagout Checklist, figure 12-2 for all applicable systems and equipment.

d. Maintain a lockout/tagout log in accordance with this Manual. NAVMC 11404, Lockout/Tagout Log, figure 12-3 shall be used for this purpose. Control the issue of lockout and tagout devices and ensure a particular locking device can be traced to a specific authorized worker.

4. Affected workers shall comply with all requirements of the Lockout/Tagout Program.

5. Authorized workers shall:

a. Comply with the Lockout/Tagout Program when performing maintenance, service, repair, or modifications including, but not limited to, mechanical, potential, electrical and thermal energy sources.

b. Inform the lockout/tagout coordinator of any hazardous situations that may be harmful to personnel or equipment pertaining to lockout/tagout procedures.

12003. LOCKOUT/TAGOUT DEVICES

1. Lockout Devices

a. Padlocks shall be utilized as the primary lockout device. Padlocks shall be singularly identifiable (not used for other purposes) and standardized for color, shape or size.

b. Lockout devices shall be capable of withstanding the environment to which exposed.

c. Lockout devices shall be substantial enough to prevent removal without use of excessive force such as bolt cutters.

d. Lockout identification tags are used in conjunction with the locking device when performing a lockout. An example of a tag is provided in figure 12-4. The tag identifies the person applying the lock. It shall be singularly identifiable and capable of withstanding the environment to which exposed without becoming deteriorated or illegible. The tag shall bear the name and shop/code of the authorized worker, authorized worker's telephone number and date of lockout.

2. Tagout devices

a. In situations where equipment must be worked on and cannot be locked out, equipment shall be tagged out. An example of a tag is provided in figure 12-4. Tag equipment under repair or maintenance that could jeopardize the safety of workers or damage equipment to alert personnel to prevent energization of the tagged equipment. Equipment will not be operated, worked on, or removed when tagged out.

b. The tag and its means of attachment shall be strong enough to prevent inadvertent or accidental removal. Attachment devices shall be non-reusable, attachable by hand (no tools required), self-locking, and non-releasable with a minimum unlocking strength of 50 pounds.

12004. WRITTEN LOCKOUT/TAGOUT PROCEDURES

1. Specific written procedures shall establish the minimum requirements for lockout or tagout of energy isolating devices.

NOTE: Specific SOPs for control of hazardous energy sources must be developed at the shop level for each piece of equipment or machinery before maintenance or servicing is performed. Machines and equipment shall be evaluated using NAVMC 11403, Lockout/Tagout Checklist, at figure 12-2.

2. Exceptions. Written procedures are not required when all of the following elements exist:

a. The machine or equipment has no potential for stored, residual, or reaccumulation of energy after shutdown.

b. The machine or equipment has a single energy source that can be readily identified and isolated.

c. The isolation and locking out of that energy source will completely deenergize and deactivate the machine or equipment.

d. The machine or equipment is isolated from the energy source and locked out during service or maintenance.

e. A single device will achieve a locked out condition.

f. The lockout device is under exclusive control of the authorized worker performing service or maintenance.

g. The service or maintenance does not create hazards for other personnel.

h. In utilizing this exception, no accidents have occurred involving the unexpected activation or reenergization of the machine or equipment during service or maintenance.

12005. PERFORMING LOCKOUT/TAGOUT PROCEDURE

1. Preparation for Lockout/Tagout. The authorized worker shall locate and identify all isolating devices to be certain which switch(es), valve(s), or other energy isolating devices apply to the equipment to be locked or tagged out. More than one hazardous energy source or means of disconnect (electrical, mechanical, or others) may be involved.

2. Lockout or Tagout System Procedure

a. Notify all affected personnel and responsible supervisor that a lockout or tagout procedure is going to be utilized. The authorized worker shall know the type and magnitude of energy

the machine or equipment utilizes and understand all inherent hazards.

b. If machine or equipment is operating, shut it down by the normal stopping procedure. In addition, ensure that all stored energy is dissipated or properly restrained.

c. Operate the circuit breaker, valve, or other energy isolating device(s) to ensure that the equipment is isolated from its energy source(s).

3. Lockout/Tagout Device Application

a. The authorized worker shall affix locks or tags to each energy-isolating device.

b. Lockout devices shall be affixed in a manner that will hold the energy-isolating device in a SAFE or OFF position.

c. Tags, when used, shall be affixed in a manner that will clearly indicate that operation or movement of the energy-isolating device from the SAFE or OFF position is prohibited.

d. Tags that cannot be affixed directly to the energy isolating device shall be located close enough to be immediately obvious to anyone attempting to operate the device.

e. All potentially hazardous stores or residual energy shall be relieved, disconnected, restrained, or otherwise rendered safe by the authorized worker. If there is a possibility of reaccumulation of stored energy to a hazardous level (e.g., capacitor), verification of isolation shall continue until possibility of reaccumulation no longer exists.

f. Prior to starting work, the authorized worker shall verify that isolation and de-energizing have been accomplished. After ensuring no personnel are exposed, he/she will activate the normal operating controls to make certain the equipment will not operate. The worker will not activate controls that cannot be returned to the SAFE, NEUTRAL, or OFF position without the application of power to equipment (e.g., dog and clutch assemblies). Caution: return operating control(s) to the safe or off position after the verification test.

g. Enter all pertinent data into the lockout/tagout log.

12006. TEMPORARY REMOVAL OF LOCKOUT DEVICES. In situations in which lockout devices must be temporarily removed from the energy-isolating device, the following sequence of action shall be followed:

1. Clear the machine of tools and materials.

2. Ensure all affected workers have been safely positioned or removed from the area.

3. Lockout/tagout devices can then be removed by the authorized worker who applied the device, except as otherwise authorized by paragraph 12011.

4. Energize and proceed with testing, positioning, etc., as required.

5. De-energize all systems and establish lockout/tagout measures in accordance with this Manual before continuing work on machine or equipment.

12007. RESTORING MACHINES OR EQUIPMENT TO NORMAL OPERATION

1. When service or maintenance is completed and machine or equipment is ready for normal production operations, check the area around machines or equipment to ensure personnel are safe.

2. After tools are removed from machine or equipment, guards reinstalled, personnel safely repositioned or removed, and operating controls verified to be in safe or off position, remove all lockout/tagout devices and notify affected workers and responsible supervisor of their removal. Operate energy isolating devices to restore energy to machine or equipment.

3. Complete applicable portions of lockout/tagout log.

4. Ensure a signaling system is in place and effective for warning workers exposed to the unexpected release of energy during maintenance and servicing operations.

12008. MORE THAN ONE WORKER INVOLVED. In the preceding steps, if more than one worker is required to service a piece of equipment, each shall place their own assigned lockout/tagout device on energy isolating device(s). If necessary, an energy isolating device hasp may be used. As each worker finishes their portion of work, that worker will remove their lock from the gang hasp. Only the last worker to remove their lock or tag may reenergize machine or equipment. Each person applying a lock or tag shall make an entry into lockout/tagout log when applying the device, and clear their device from the log when their portion of work is completed.

12009. REMOVAL OF LOCKOUT/TAGOUT DEVICES BY OTHER THAN AUTHORIZED WORKER. Lockout/tagout devices may be removed by the lockout/tagout coordinator if the authorized worker who applied it is not available, and:

1. All reasonable efforts were made to contact the authorized worker about the need to remove lockout/tagout device.

2. The authorized worker will be informed that the lockout or tagout device has been removed before resuming work at the facility.

3. An appropriate entry shall be made in lockout/tagout log to indicate name of person who notifies authorized worker, and the time and date lock or tag was removed.

12010. LOCKOUT/TAGOUT REQUIREMENTS FOR CONTRACTORS AND OTHER DoD PERSONNEL

1. Contractors performing service or maintenance on Marine Corps equipment shall comply with 29 CFR 1910.147. The resident officer in charge of construction (ROICC) or other responsible contracting agent shall ensure all outside contractors are informed of elements of this program and obtain information regarding the contractor's Lockout/Tagout Program. The contract shall require the contractor to inform supervisory personnel in the affected work site of the contractor's Lockout/Tagout Program.

2. Personnel from other DoD activities performing service or maintenance on Marine Corps machinery or equipment shall comply with respective activity's Lockout/Tagout Program. These instructions must meet requirements of this Manual and 29 CFR 1910.147. The responsible management officials of the outside activity and affected work site shall inform each other of their respective lockout/tagout programs.

3. Commanders will ensure their personnel understand and comply with restrictions and prohibitions of outside activity's Lockout/Tagout Program.

12011. SHIFT OR PERSONNEL CHANGES. In case of shift or personnel changes, the lockout/tagout coordinator shall brief replacement personnel and ensure the orderly transfer of lockout/tagout devices between off-going and on-coming authorized workers. Change of locks or tags shall be done with a face-to-face meeting of off-going and on-coming authorized workers with no gap in protection.

12012. PERIODIC EVALUATION. The ISM or unit safety officer shall evaluate effectiveness of the entire program at least annually. Any deviation or inadequacies shall be documented and corrected. NAVMC 11402, Lockout/Tagout Program Evaluation, figure 12-1, shall be used for this evaluation.

12013. TRAINING

1. Training shall be provided to all authorized and affected workers, and other personnel as required by 29 CFR 1910.147. Only lockout/tagout coordinators or authorized workers may perform lockout/tagout procedures.

2. Instructors qualified by the ISM or unit safety officer will conduct training and prepare a record certifying that employee training has been accomplished. Training records shall be maintained IAW chapter 5. Retraining shall be conducted whenever there is:

a. A change in job assignment, machine, equipment, or process that presents a new hazard.

b. A change in the energy control procedures.

c. Additional retraining shall be conducted whenever the annual evaluation or other reason indicates there may be inadequacies in personnel knowledge or use of energy control procedures.

12014. ELECTRICAL LOCKOUT/TAGOUT

1. Electrical work requires a lock and tag be used together. However, a tag can be used by itself if the electrical disconnecting source does not have lockout capabilities per 29 CFR 1910.333.

2. A qualified person shall test circuit elements and electrical parts of equipment to which personnel will be exposed and verify all circuit elements and parts are de-energized. The test shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage back-feed even though specific parts of circuit were de-energized. Test equipment shall be checked for proper operation immediately before and after this test.

12015. LOCKOUT/TAGOUT MISHAPS. Supervisors are responsible to fully investigate mishaps and report causes of such mishaps to the ISM or unit safety officer. If a mishap involved control of hazardous energy with a single lockout source, a specific procedure will be written and included in the SOP before work is continued. If a mishap involved a specific procedure for a piece of equipment, the lockout/tagout SOP will be re-evaluated and modified (if necessary) prior to authorizing work to continue.

LOCKOUT/TAGOUT PROGRAM EVALUATION
NAVMC 11402 (10-98)
SN: 0000-00-888-0860

Unit/Department evaluated:	
Date(s) of evaluation:	Evaluation conducted by: (Signature/Printed Name)
1. General policy has been reviewed: YES ☐ NO ☐	Comments on general policy:
2. Following specific procedures were reviewed (list below):	
3. Following specific procedures were modified (list below):	
4. Following specific procedures were added (list below):	
5. Review of the Occupational Injuries and Illnesses Log and associated mishap reports was conducted: YES ☐ NO ☐	
6. Following injuries resulted from lockout/tagout related mishaps:	

Designed using FormFlow 2.15, HQMC/ARSE, Oct 98

NOTE: Conduct evaluation annually

Figure 12-1. --NAVMC 11402, Lockout/Tagout Program Evaluation.

NAVMC 11403 LOCKOUT/TAGOUT CHECKLIST (8-98) (EF)
SN: 0109-LF-071-1100

Procedure Reference No.	Date Approved
Equipment Name	Equipment No.
Location	Work Center
General Description	

NOTE: Required for all equipment, machinery, or processes that fail to meet exceptions of MCO P5100.8F, Chapter 12, paragraph 12003.

Use this checklist to document procedures for lockout or tagout of energy isolating devices and energy sources identified whenever maintenance or service is performed on machines or equipment. All equipment and machinery shall be stopped, isolated from all potentially hazardous energy sources, and locked or tagged out before personnel perform service or maintenance where unexpected energization, start-up, or release of stored energy could injure personnel or damage equipment.

A. Operator Controls: Determine type of controls available to operator. Identify energy sources and lockout/tagout capacity for equipment.

List typed of operator controls: _____

B. Energy Sources: Check or list energy sources on equipment.

Electrical	☐	Steam	☐	Hydraulic	☐
Pneumatic	☐	Gas	☐	Other	☐
Stored Energy Sources	☐				

Identify Energy Source and Location	Lockable? Yes or No	Type of Device

C. Shutdown Procedure: List in order the steps necessary to re-activate or energize the equipment.

NOTIFY ALL AFFECTED WORKERS WHEN IMPLEMENTING THIS PROCEDURE

D. Start up Procedure: List in order the steps necessary to re-activate or energize the equipment.

NOTIFY ALL AFFECTED EMPLOYEES WHEN IMPLEMENTING THIS PROCEDURE

NOTES:

Designed using FormFlow 2.15, HQMC/ARSE, Aug 98

Figure 12-2. --NAVMC 11403, Lockout/Tagout Checklist.

LOCKOUT/TAGOUT
NAVMC 11404 (10-98)
SN: 0109-LF-071-1200

DEVICE TYPE. SER. NO. & SEQ. NO.	EQUIPMENT ID &/OR DESCR. & LOCATION	PURPOSE	POS. TAG'D	DATE & TIME	AUTHORIZED WORKER SHOP/CODE	CLEARANCE AUTHORIZED BY *	REMOVED BY *	DATE & TIME REMOVED

* SIGNATURE _____ SHOP/UNIT _____

THE PERSON DESIGNATED TO SIGN FOR AN ACTION VERIFIES, BASED ON PERSONAL OBSERVATION, AND CERTIFIES BY HIS/HER SIGNATURE THAT THE ACTION HAS BEEN COMPLETED IN ACCORDANCE WITH REQUIREMENTS.

Designed using FormFlow 2.15, HQMC/ARSE, Oct 98

Figure 12-3. –NAVMC 11404, Lockout/Tagout Log.

SAMPLE LOCKOUT/TAGOUT TAG

Figure 12-4. --Sample Lockout/Tagout Tag.

MARCOR OSH PROGRAM MANUAL

CHAPTER 13

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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CHAPTER 13

PERSONAL PROTECTIVE EQUIPMENT (PPE)

13000. DISCUSSION. The use of PPE is the last recourse for a commander to protect personnel from identified hazards and to manage associated risk. This chapter establishes requirements for the provision and use of PPE in compliance with 29 CFR 1910, General Industry, Subpart I, Personal Protective Equipment.

1. The issue, maintenance, and use of PPE is necessary to protect Marine Corps personnel when engineering and administrative controls are not available or effective. Appropriate PPE shall be provided and used for emergencies such as hazardous material spills (including biohazards), hazardous material cleanup operations, ventilation malfunctions, emergency egress, and damage control activities.

2. Marine Corps installations, commands, and units will fund for provision and maintenance of PPE described in this Manual and DoD Instruction 4150.7, DoD Pest Management Program for Marine Corps personnel.

3. Environmental differential pay for civilian employees, where warranted, does not relieve the responsibility to provide appropriate PPE or continue efforts to abate hazardous conditions that justify such pay. Requirement to wear PPE in any particular work area does not, of itself, provide justification for differential pay.

4. Managers will ensure compliance with the prescribed use of PPE and document cases of noncompliance. Managers should consider disciplinary action as a corrective measure against the offender and supervisor, as necessary.

13001. PPE SURVEY

1. The ISM shall conduct a hazard assessment per 29 CFR 1910.132, General Requirements, to determine if hazards are, or are likely to be, present which necessitate use of PPE.

Assistance is available from the local medical industrial hygienist. The PPE survey shall be a certification of the hazard assessment and include at least the following:

a. Work center evaluation.

b. Job title or MOS designation of personnel.

c. List of specific types of PPE required for jobs (e.g., chemical resistant gloves, welding gloves, chemical splash resistant goggles, respirator) that will protect the affected worker from identified hazards. Respiratory protection requirements are available from industrial hygiene surveys.

d. Name and title of person certifying completion of PPE survey.

e. Dates of PPE survey.

2. The ISM shall ensure copies of the written PPE survey report are provided to the supervisor, commander, and local industrial hygienist.

3. Based on the hazard assessment, supervisor shall:

a. Select appropriate PPE for affected personnel to use from the list in PPE survey.

b. Advise affected personnel of PPE selection decisions and require its use.

c. Ensure PPE selected properly fits affected personnel.

13002. POSTING. All areas designated as eye, foot, head, and noise hazardous shall be posted with an appropriate warning sign as determined by the safety manager.

13003. TRAINING

1. The ISM shall provide training to all Marine Corps personnel who are required to use PPE as identified by the PPE survey.

2. Personnel shall be trained to know at a mimimum the following:

a. When PPE is necessary.

b. What PPE is necessary.

c. Limitations of PPE.

d. Proper care, maintenance, useful life, and disposal of PPE.

3. All Marine Corps personnel trained shall demonstrate an understanding of the training and the ability to use the PPE properly before performing tasks requiring use of PPE.

4. Supervisors shall verify that affected personnel have received and understood required training through a written certification that contains the following:

a. Name of each person trained.

b. Dates of training.

c. Identification of subject of certification.

d. A training syllabus or outline of subjects covered.

e. A testing mechanism to ascertain retained knowledge.

5. Training records shall be maintained in accordance with chapter 5.

13004. HEAD PROTECTION

1. Head protection equipment is designed to protect personnel's head from bumps, cuts, impact, penetration, and electric shock, or any combination thereof.

2. Safety helmets protect against impact, penetration, and electric shock. Types of these helmets are:

a. Full brimmed.

b. Brimless with beak.

c. Class A, limited voltage resistance.

d. Class B, high voltage resistance.

e. Class C, no voltage resistance.

f. Class D, protective for fire fighters.

3. All safety helmets used shall meet standards of ANSI Z89.1-1997, American National Standard for Protective Headwear for Industrial Workers Requirements, and be labeled on the inside with the manufacturer's name, ANSI designation (Z89.1), and protection class.

4. Before each use, head protection must be visually inspected for shell or suspension damage. Head protection should be thoroughly washed every 30 days, or more frequently as necessary.

5. Head-hazardous areas are designated where there is reasonable possibility of head injury caused by cuts, bumps, falling or flying objects, and from limited electric shock and burns.

6. Marine Corps personnel assigned to head-hazardous or hardhat areas shall wear approved industrial head protection that is appropriate to the exposure during the entire work shift. Any other personnel entering head-hazardous areas shall wear appropriate head protection that is approved for the hazard.

13005. HEARING PROTECTION

1. Hearing protective devices shall be worn by all personnel when entering or working in an area where the operations generate noise levels:

a. Greater than 84 decibels, A weighted (dBA) sound level.

b. 140 dB peak sound pressure level or greater.

2. A combination of insert type and circumaural hearing protective devices (double protection) shall be worn in all areas where noise levels exceed 104 dBA (8 hour time-weighted average (TWA)) sound level.

3. All personnel exposed to gunfire in a training situation or to artillery, mortar, missile firing, or jet aircraft noise under any circumstances, shall wear hearing protection devices.

4. Ensure all personnel that enter or work in designated hazardous noise areas receive training under the requirements of MCO 6260.1E.

5. Hearing conservation program management information is contained in MCO 6260.1E.

13006. FOOT PROTECTION

1. All Marine Corps personnel occupationally exposed to foot-hazardous operations or areas shall be furnished appropriate safety footwear at organizational expense. Foot-hazardous operations are those with a high incidence of, or a potential for, foot or toe injuries. Some of these operations or areas include:

a. Construction.

b. Material handling.

c. Maintenance.

d. Transportation.

e. Aircraft maintenance, fuels, and avionics.

f. Weapons.

g. Supply, warehousing.

h. Vehicle maintenance facilities.

2. Safety footwear with a built-in protective toe box is intended primarily to provide protection for the toes from impact and compression forces. These shoes shall conform to the requirements of ANSI Z41.1-1999, American National Standard for Personal Protection - Protective Footwear. Safety footwear issued for flight line operations shall also meet requirements of OPNAVINST 3710.7T, Naval Air Training and Operating Procedures Standardization (NATOPS) General Flight and Operating Instructions.

3. All safety footwear shall conform to requirements of ANSI Z41.1 stated above. Approved safety footwear will have ANSI Z41.1 stamped on the inside by the manufacturer.

13007. EYE PROTECTION

1. Marine Corps personnel working in eye-hazardous areas or operations identified in the PPE survey shall be provided adequate eye protection at organizational expense. All persons entering an eye-hazardous area or a hazard radius of an eye-hazardous operation, including other workers, supervisors, or visitors, shall also be required to wear eye protection.

2. Objectives of this program are to safeguard personnel from eye injuries by providing protective eye wear.

3. Eye-Hazardous Areas. Personnel working or visiting in such areas shall be furnished with and required to wear eye protective equipment. Eye-hazardous areas shall be included on the PPE survey. Whenever new processes or procedures are adopted, or changes are made, an evaluation shall be conducted by the ISM or responsible industrial hygienist.

a. Warning signs with "EYE HAZARD WHILE EQUIPMENT OPERATING" shall be displayed prominently at entrances and inside eye hazardous areas. All personnel working in or entering these places shall wear appropriate eye protection.

b. Warning decals or signs with "WEAR GOGGLES WHILE OPERATING THIS MACHINE" shall be placed on equipment involving eye hazardous operations as indicated by the PPE survey.

4. Types of Eye Protection. The type of eye protection used is dependent upon the operation and hazard, and shall be identified in the PPE survey.

a. Plano or prescription safety glasses with side protection are the basic eye protection required for eye hazardous areas or operations.

b. Goggles may be substituted for safety glasses or required for adequate protection. Goggles must be appropriate to the operation (e.g., splash-resistant goggles with covered ventilation ports for working with chemicals, impact-resistant goggles with open ventilation for working with particles). Splash goggles will also protect against particles.

c. Guidance for laser eye protection (LEP) is provided in MCO 5104.1B, Navy Laser Hazards Control Program.

d. Face shields may be required, in addition to safety glasses or goggles, for operations that generate flying particles or objects (e.g., concrete chips, wood knots, splinters) or chemical splashes. Face shields do not meet eye protection requirements and cannot be substituted.

e. Welding goggles, hoods, and shields shall have the appropriate filter lens for protection against radiant energy during welding, brazing, and oxygen cutting as listed in ANSI Z87.1-2003, American National Standard Practice for Occupational and Educational Eye and Face Protection.

f. All eye protection shall conform to requirements of ANSI Z87.1 above. Approved eye protection will have ANSI Z87.1 stamped on glasses or goggles (e.g., temple piece).

5. Impaired Vision. Marine Corps personnel whose vision is completely or practically missing in one eye, as determined by a medical officer, is more at risk for disability resulting from injury to the better eye and, therefore, warrants more aggressive protection regardless of occupation. Requirements for work restrictions and the attending medical officer will determine use of eye-protective equipment.

6. Prescription Safety Eyewear. The ISM shall consult with the supply officer and cognizant medical treatment facility to determine the most suitable procurement procedures when prescription eyewear is required. When Navy medicine provides these services, all medical forms and evaluations must be documented according to the Bureau of Medicine and Surgery, Manual of the Medical Department. When the Naval medical treatment facility cannot provide this service, a contract funded by the ISM will be established with a local prescription eyewear provider. Prescription safety eyewear shall be provided to Marine Corps personnel engaged in eye-hazardous areas, processes, and occupations that require correction by prescription. The ISM or unit safety officer shall take appropriate action to ensure the required corrective eye protection is provided. Goggles may be used as a temporary measure while waiting on delivery of prescription eyewear.

7. Temporary Protective Eyewear. Where protective eyewear is required, safety glasses or goggles shall be provided to visitors, instructors and others who must enter or pass through eye-hazardous areas.

8. Maintenance of Eye Protection. Protective eyewear furnished under this program is government property and will be repaired or replaced if damaged in the course of employment.

9. Contact Lens Restrictions. Marine Corps personnel SHALL NOT wear contact lenses when assigned to work involving the handling of caustics, acids, and toxic chemicals or dust. Such materials are difficult to remove, without delay, when they get under the contact lens.

10. Emergency Eyewash Facilities

a. Emergency eyewash facilities shall be provided in all areas where corrosive chemicals are used or stored. All such emergency facilities shall be located where they are easily accessible to those in need, and shall be installed, maintained, flushed, and inspected per the manufacturers' recommendations and ANSI Z358.1, Emergency Eyewash and Shower Equipment. Plumbed eyewash stations shall be checked and flushed weekly. Portable eyewash stations shall be drained and flushed

quarterly, or per the manufacturers directions if an antibacterial agent is used.

b. Plumbed eyewashes are preferred and shall be installed where feasible. Where plumbed units are used, they shall be eye and face wash units since chemical splashes to the eyes often also involve the face. Portable eyewashes shall have sufficient volume to meet the flow requirements of ANSI Z358.1. Personal eyewash equipment (e.g., 1-quart squeeze bottles) shall not be substituted for emergency eyewash, but may be used to supplement plumbed or portable eyewashes.

11. Sterilization. Arrangements shall be made for the issue, care, sterilization, and reissue of the "common use" eye protectors and coverall goggles.

12. Disposition of Eye Protection. Corrective eye protection prepared from the prescription of one person is not medically appropriate for reissue to another person. For personnel who are retiring, resigning, or otherwise separating from service, their corrective eye protection has served its useful life cycle and need not be collected.

13008. RESPIRATORY PROTECTION

1. Marine Corps personnel working in areas where they may be exposed to harmful levels of airborne dust, fogs, fumes, mists, gases, smokes, sprays, or vapors shall be provided appropriate respiratory protection, per guidelines of industrial hygienist, at government expense. A Respiratory Protection Program shall be implemented as required to safeguard the health of Marine Corps personnel from respiratory hazards by use of respirators and provide written guidelines per 29 CFR 1910.134, Respiratory Protection.

2. Commanders shall designate a Respiratory Protection Program Manager (RPPM) for Marine Corps installations and units, in writing, based on recommendations from the ISM. Supporting occupational health professionals will provide consultation to the RPPM on all aspects of the Respiratory Protection Program.

3. The RPPM shall:

a. Complete one of the following courses before appointment (training or travel costs are normally provided at organizational expense):

(1) OSHA Training Institute Course 2220, Respiratory Protection.

(2) OSHA Training Institute Education Centers Course 2225, Respiratory Protection.

(3) Naval Occupational Safety and Health, and Environmental Training Center (NAVOSHENVTRACEN) RPPM Course (A-493-0072).

(4) Respiratory protection course with at least 32 hours of training which covers: minimum program requirements and administration; respirator types, selection, certification, and limitations; respirator cleaning, maintenance, and inspection; fit testing; respirator cartridge change out schedules; and medical considerations. The course must provide training in all aspects of 29 CFR 1910.134.

b. Develop written SOPs governing the selection, issue, care and use of respirators. Also develop and post work center SOPs in the general work areas. SOPs shall include pertinent regulations, consensus standards, and emergency and rescue guidance, as necessary.

c. Approve in writing, all purchases of nonstandard respiratory-protective equipment.

d. Ensure respiratory protection recommended by the responsible industrial hygienist is provided to appropriate personnel by their organizations.

e. Request the responsible industrial hygienist to conduct a health hazard evaluation of new or modified work operations to ensure appropriate respirators are specified.

f. Ensure tenants establish central maintenance facilities for respirator storage, issue, cleaning, and maintenance.

g. Provide annual training to all respirator users and their supervisors.

h. Ensure all respirator users receive a medical evaluation prior to being fit tested.

i. Ensure all users of tight-fitting respirators are fit tested initially and annually.

j. Maintain all records pertaining to respirator training and fit testing. Coordinate medical evaluations for user qualification or suitability and worker exposures with medical department.

k. Conduct an annual audit of the Respiratory Protection Program.

4. Supervisors shall:

a. Ensure only trained and medically qualified personnel are assigned to tasks requiring the use of respirators.

b. Ensure respirators are used per this Manual and 29 CFR 1910.134.

5. Supply Department representatives shall purchase only respiratory protective equipment that has been approved and authorized by the RPPM.

6. Respirator users shall:

a. Use respirators in accordance with this Manual and 29 CFR 1910.134.

b. Report work site problems involving use of respirators to their supervisors.

c. Properly store, maintain, and clean the respirators issued to them (see paragraph 13008.11a).

7. Respirator Selection

a. Respirators shall be selected by the RPPM in accordance with the guidelines of the industrial hygiene survey, this Manual and 29 CFR 1910.134.

b. The responsible industrial hygienist shall specify type of respirators in the annual industrial hygiene evaluation and upon request by RPPM.

8. Respirator Use

a. Respirators shall be used as issued. No modifications or substitutions to the equipment are permitted.

b. Respirators shall be used only by the person to whom issued. Users shall inspect the respirators before donning.

c. Respirators with tight-fitting face pieces shall not be worn by individuals with facial hair that interferes with the face piece seal to the face.

d. Wearing of contact lenses with a respirator shall be authorized on a case-by-case basis by medical department personnel only.

e. A positive and negative pressure user seal check shall be performed each time an air-purifying respirator is donned.

f. While using respiratory protection, if odor or taste from the work process is detected, difficulty in breathing is encountered, or other sign of leakage is present, the user shall leave the area without delay. Reentry shall not be permitted until the problem has been solved by replacing cartridges or filters, adjusting respirator fit, or by other means, as necessary.

g. When respirators are temporarily removed during breaks in work operations, removal shall be done away from the work area to prevent personnel exposure and keep the interior of the respirator face piece clean. Respirators shall be protected from contamination prior to re-donning.

h. Chemical cartridge/canister air-purifying respirators may be used (up to their maximum use concentration) for protection against substances without good warning properties, including isocyanates, if a cartridge change out schedule is developed and implemented. Activities shall:

(1) Implement a change out schedule for chemical canisters/cartridges based on objective information or data that will ensure that canisters and cartridges are changed before the end of their service life. Activities must describe this data, along with the logic for relying on the change out schedule, in their respirator programs. The change out schedule should be included in written SOPs.

(2) Change chemical canisters/cartridges according to the manufacturer's directions, or based on objective data obtained as indicated in 29 CFR 1910.134.

i. Voluntary Respirator Use. When respirators are not required, voluntary use of respirators are limited to a filtering face piece, which will be selected by the RPPM. Marine Corps commands will supply the respirators. Personnel must be trained on the proper use and care of this respirator; however, they do not have to be placed in the medical surveillance program.

9. Respirator Inspection

a. All respirators shall be inspected before and after use.

b. Respirators and self-contained breathing apparatus kept for emergency use shall be inspected monthly. Records of inspection dates and findings shall be maintained.

10. Respirator Cleaning and Disinfecting. Respirators shall be cleaned and disinfected after each use. Follow procedures provided by the RPPM, manufacturer, or 29 CFR 1910.134.

11. Storage of Respirators

a. Clean respirators shall be stored in sealed plastic bags, away from sunlight, heat, extreme cold, excessive

moisture, or damaging chemicals. The storage area shall be clean and sanitary.

b. Respirators shall be stored in such a way as to prevent crushing which can result in deformation of face piece.

c. Respirators shall not be stored by hanging from the head straps.

12. Repair and Maintenance

a. Only trained and qualified personnel shall perform respirator assembly and repair.

b. Repair of respirators shall be accomplished with the appropriate parts designated by the respirator manufacturer. Parts from one manufacturer will not be used on another manufacturer's respirators, including filters and cartridges.

c. No attempt shall be made to replace, adjust, or repair respirator components beyond the manufacturer's recommendations.

13. Breathing air for supplied air and self-contained breathing apparatus (SCBA) respirators must meet Grade D specifications of CGA Pamphlet G-7.1, Compressed Gas Association, Inc., Commodity Specification for Air.

14. Medical Examinations

a. Activities shall not fit test personnel, or assign them to work in or permit them to enter, areas requiring respiratory protection unless medically evaluated by a physician or other licensed health care professional per NEHC-TM OM-6260, Occupational Medicine Surveillance Procedures Manual and Medical Matrix.

b. Users of prescription eye wear who must wear a full-face respirator shall be fitted with respirator spectacles as recommended by the respirator manufacturer and prescribed by an optometrist or ophthalmologist.

15. Fit Testing

a. All users of negative-pressure respirators shall be fit tested in a test atmosphere to ensure proper respirator fit.

b. All users of negative-pressure, air purifying respirators shall be trained in using positive and negative user seal checks prior to donning these respirators.

c. All users of negative pressure respirators shall be fit tested annually.

d. Individuals with interfering facial hair will not be allowed to use respiratory protection equipment except for positive-pressure supplied air hoods where appropriate. Personnel with facial hair that interferes with the sealing surface of the respirator shall not be fit tested.

e. Fit testing shall be performed per requirements of 20 CFR 1910.134 and this Manual.

16. Training

a. Personnel entered into the respiratory protection program shall be trained according to 29 CFR 1910.134 which includes the nature and degree of respiratory hazards, respirator selection, donning and fit testing procedures, care of respirators (storage, cleaning, maintenance), respirator cartridge change out schedules, wear of contact lenses, and use and limitations of respirators (including signs and indications of respirator failure).

b. Personnel training records shall include entries for respirator training and fit testing.

MARCOR OSH PROGRAM MANUAL

CHAPTER 14

CONFINED SPACE ENTRY PROGRAM

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CHAPTER 14

CONFINED SPACE ENTRY PROGRAM

14000. DISCUSSION

1. Confined Spaces. 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 occupancy. Confined spaces are found in garrison and field environments. Every year, over a million and a half workers enter confined spaces. Many are seriously injured or killed as a result of asphyxiation, electric shock, heat stress, or engulfment by earth, liquids, or other organic materials. Commanders have at their disposal safety professionals that can evaluate and test areas that are questionable. Per 29 CFR 1910.146, Permit-Required Confined Spaces, the Marine Corps must have a confined space entry program (non-maritime). Examples of such spaces include sumps, chemical cleaning tanks, degreasers, industrial ventilation ducts, chlorine storage areas, storage tanks, pits, boilers, fuel cells, sewers, underground utility vaults, tunnels, and manholes. Hazards encountered in these spaces are often compounded by poor illumination. The following characteristics define a confined space:

a. Not designed for routine human occupancy.

b. Large enough for bodily entry.

c. Has restricted access or exit.

NOTE: A confined space does not have to be a covered enclosure, hence, trenches deeper than 4 feet are also confined spaces.

2. Permit-Required Confined Space. Confined spaces with one or more of the following characteristics meet the OSHA definition of a permit-required confined space (PRCS) and an entry permit must be issued before personnel may enter:

a. Excessive oxygen, which increases the danger of fire or explosion (greater than 23.5 percent).

b. Contains or has potential to contain a flammable or explosive atmosphere or materials.

c. Contains or has potential to contain a toxic atmosphere or materials.

d. Contains any other recognized serious safety and health hazard such as:

(1) Slippery surfaces.

(2) Deteriorated or unstable ladders.

(3) Machinery and electrical devices that may require an energy isolation (lockout/tagout) procedure.

(4) Potential for engulfing an entrant from loose materials (e.g., sand, sawdust).

(5) Potential for entrapment or asphyxiation from inwardly sloping walls or a floor that slopes downward to a smaller cross-section.

3. All confined spaces shall be considered hazardous and entry into or work on the boundaries of such spaces is prohibited until the space has been evaluated by a qualified person per this Manual and 29 CFR 1910.146 to establish appropriate safety precautions.

14001. PROGRAM MANAGEMENT

1. Commanders of Marine Corps installations shall appoint, in writing, a qualified confined space program manager (CSPM) and assistant confined space program manager (ACSPM) responsible for implementing a confined space entry program that is consistent with this Manual and 29 CFR 1910.146. Only the CSPM is authorized to amend the installation’s confined space program. The CSPM shall normally be assigned to the installation safety office. However, in the event the CSPM is not assigned to the

installation or the unit safety office, then the CSPM shall have direct access to the commander.

2. Tenant commands shall adhere to the installation confined space entry program. Tenant commands or separate units without a qualified CSPM shall use the services of the installation CSPM. These services will be described in the installation SOP and may be stipulated in host-tenant agreements.

3. Contractors and other non-DoD agencies shall implement their own confined space entry program that meets all pertinent OSHA standards and installation regulations and procedures.

14002. PROGRAM ELEMENTS. The Confined Space Entry Program consists of six basic program elements.

1. Identification and Preliminary Testing

a. Confined Space. The CSPM, in coordination with appropriate line managers, shall identify all confined spaces on the installation or in the unit and maintain this list.

b. Permit-Required Confined Space (PRCS). The CSPM, with the assistance of an industrial hygienist or qualified safety person, as necessary, shall evaluate each confined space to determine whether it meets criteria of a PRCS. All manholes and unvented vaults under control of Marine Corps personnel that meet the criteria of a confined space shall be considered a PRCS. The CSPM shall maintain a current inventory of all PRCSs at the installation or unit.

2. Prevention of Unauthorized Entry. Supervisors shall brief all assigned workers on the restrictions regarding entry and use of physical means (e.g., locks, barriers) to secure spaces under their control. In addition, each PRCS shall be posted with a standard caution sign. The sign shall be posted in a conspicuous location near likely entry points. Street manholes are considered a PRCS and require a caution sign (may post signs inside the manhole). PRCS caution signs shall contain the following information:

a. Unauthorized entry prohibited.

b. General nature of hazard inside (e.g., potentially hazardous atmosphere).

c. Person to contact if entry is required.

3. Comprehensive Hazard Evaluation. Many factors must be evaluated prior to entry into or work in a confined space. Such an evaluation shall be in accordance with 29 CFR 1910.146. The evaluations should include at least the following:

a. Initial Atmospheric Testing. Upon completion of this testing, each space is classified as on of the following:

(1) Class I Space. Contains atmospheres or conditions which are immediately dangerous to life or health (IDLH).

(2) Class II Space. Contains atmospheres or conditions which are dangerous, but not IDLH.

(3) Class III Space. Contains atmospheres or conditions which are contaminated.

(4) Class IV Space. Contains no flammable or toxic agents, has an oxygen content consistent with outside ambient conditions (20-21 percent), and presents little potential for generation of hazardous conditions. An entry permit is not required for this class of space.

b. Periodic and Continuous Atmospheric Testing. Many operations, due to the potential to generate hazardous conditions, require periodic or continuous monitoring as the work progresses to ensure safe conditions are maintained. The types of testing vary and no single rule can be established for all operations. The CSPM shall establish the frequency and type of test for periodic or continuous monitoring. The following types of operations shall be carefully considered for periodic or continuous monitoring:

(1) Hot work as defined in paragraph 14004, with the potential of generating hazardous concentrations of toxic agents.

(2) Application of preservatives, paint, epoxies and similar operations, which may generate hazardous concentrations of toxic or flammable vapors.

(3) Cleaning operations, sludge removal and similar operations, which may produce or cause release of hazardous concentrations of toxic or flammable vapors.

(4) Any other similar operations which possess the potential for producing or releasing toxic, flammable, or asphyxiating atmospheres or materials.

NOTE: The CSPM shall ensure that appropriate instruments are available to perform required atmospheric testing. These instruments shall be suitable for the task as indicated by certification from the National Institute for Occupational Safety and Health (NIOSH), Mine Safety and Health Administration (MSHA), or other nationally recognized testing authority such as Underwriters Laboratory (UL) or Factory Mutual (FM). The CSPM shall ensure equipment is properly used, maintained, and calibrated per the manufacturer's instructions. Functional or calibration checks shall be made before and after use and a record of these checks shall be maintained for 1 year.

c. Other Hazard Evaluations. In addition to potentially hazardous atmospheres, other confined space hazards such as the presence of piping, slippery surface, unstable ladders, engulfment potential, and energy sources shall also be evaluated prior to entry into a PRCS.

4. Issuance of Confined Space Entry Permits. If entry into a PRCS is required, the responsible line supervisor shall request a permit (NAVMC 11405) from the CSPM. Request shall include a description of the space, operation to be performed, and a list of the personnel that will enter the space. Based on results of the comprehensive evaluation discussed above, the CSPM (or a qualified assistant working under direction of CSPM) shall grant the permit only if entry or work can be performed safely. Permits shall be valid for a period of time specified by the CSPM, but not to exceed one work shift or 8 hours. Confined space entry permits will be distributed as follows:

a. One copy shall be posted at the primary entrance to the space. All other entry points shall be under control of the entry supervisor.

b. One copy shall be provided to the supervisor requesting the permit.

c. One copy shall be retained by the CSPM for 1 year after its expiration date. If the CSPM is not assigned to the installation or unit safety office, one copy shall be provided to that office.

d. If the space is rejected, then a reject permit shall be written. One copy of the reject permit should be red or pink with ‘reject’ imprinted on it for high visibility.

5. Training and Qualifications

a. The CSPM and ACSPM shall have successfully completed a course that fully qualifies them to perform all the requirements of 29 CFR 1910.146 and this Manual (training or travel costs are normally provided at organizational expense). Recommended courses include the following or equivalent courses:

(1) OSHA 2260, Permit-Required Confined Space Entry.

(2) NAVOSHENVTRAINCEN A-493-0030, Confined Space Safety.

b. When the training course is completed, the appointed CSPM and ACSPM should also receive 80 hours of on-the-job training (OJT) from a qualified CSPM.

c. Personnel found qualified because of their training and proven competency shall be recommended to the commander by the CSPM for formal certification and appointment as the ACSPM. Records of training and certification of competency shall be maintained by the CSPM for as long as such personnel are involved in the program. All assistants shall be re-certified by the CSPM annually.

d. The CSPM shall ensure attendants, when required, are instructed in their duties, knowledgeable in the execution of the emergency alert system, and formally informed of their

restriction from entry into the confined space regardless of circumstance. Issuance of such instructions shall be noted on the permit. Attendants shall be provided training in basic first aid and cardiopulmonary resuscitation (CPR). Attendant is an individual stationed outside one or more permit-required confined spaces who monitors the authorized entrants and performs the attendant duties assigned in the installation's permit space program.

e. The CSPM shall ensure an emergency plan is written for the installation's permit space emergency rescue procedures (see paragraph 14006).

f. All affected personnel to include entry supervisors shall be trained and certified IAW with 29 CFR 1910.146. The responsible manager or supervisor shall certify all authorized entrants are trained on skills necessary for the safe performance of assigned duties, including specific hazards likely to be encountered as well as the appropriate safety equipment and safety measures. The CSPM shall assist in this training, as necessary, and seek the assistance of the RPPM, fire, and industrial hygiene personnel to assist in this training, where needed. The actual training and refresher training received by confined space entry workers must be formally included in their official training record. The responsible entry supervisor shall certify on the permit that the proposed entrants are properly trained in their duties under this Manual and 29 CFR 1910.146.

g. Control of energy sources, electrical and mechanical, shall be noted on the confined space permit and shall be locked out or tagged out in accordance with chapter 12.

h. Personnel assigned confined space entry duties should have their duties included in their position description and/or personnel records. They shall receive a pre-placement physical examination based upon the type of work to be performed and potentially hazardous exposures. An annual physical examination will be given based on the exposure information compiled by the industrial hygienist or medical examination protocol developed by medical officials. Termination examinations will be given when personnel are permanently reassigned from confined space entry duties or leave the employment of the organization.

i. NAVAIR 01-1A-35, Aircraft Fuel Cells and Internal/External Tanks, provides safety precautions on the maintenance and repair of aircraft fuel cells which involve entry into or work on confined spaces. The CSPM or ACSPM must also complete the formal training required by NAVAIR 01-1A-35 to oversee fuel cell entry.

6. Program Evaluation. Commanders shall ensure that an evaluation of the confined space entry program is conducted at least annually and immediately following any serious mishap or near miss mishap incident.

14003. REQUIREMENTS FOR CONFINED SPACE ENTRY AND WORK. Issuance of a permit for confined space entry and work starts with a thorough evaluation, by competent and trained personnel, of potential hazards that may be encountered and establishment of necessary control measures. In addition to hazard evaluation, the following requirements and restrictions also apply:

1. Authorized Entry Personnel. Only personnel authorized by the responsible entry supervisor shall be allowed to enter a permit required confined space. The responsible entry supervisor shall ensure personnel are aware of hazards likely to be encountered and the appropriate safety measures initiated. The responsible entry supervisor shall also ensure personnel are fully trained and medically qualified for such activity.

2. Attendants. Attendants are mandatory for all entries into permitted spaces. Attendants shall be equipped with radios or other communications equipment to ensure prompt emergency response. The following requirements apply to attendants:

a. Attendants shall remain outside of the main opening of the space to monitor conditions inside and summon assistance in event of any emergency. This practice must be strictly adhered to because a high number of fatalities in confined spaces are due to untrained personnel attempting a rescue.

b. Attendants shall be instructed regarding proper notification procedures in event of an emergency and that attendants may only attempt non-entry rescues until trained

rescue personnel have arrived. A non-entry rescue means authorized entry personnel can be extracted from the confined space by pulling them out by their rescue harness gear. Attendants must remain outside of the confined space at all times.

c. Attendants shall not be assigned additional duties.

d. Attendants must be aware of possible hazards during entry, familiar with possible behavioral effects of hazard exposure, continuously maintain a count of authorized entrants, and monitor activities inside and outside the space.

e. Attendants shall order immediate evacuation of the space if any situation arises which makes it impossible to effectively or safely perform all of their required duties. If the attendant must leave the main opening for any reason, then the authorized entrants must evacuate the space.

f. Attendants will warn unauthorized personnel to stay away from the permitted space, advise any unauthorized personnel who have entered a space to leave immediately, and inform the authorized entrants and responsible supervisors if unauthorized persons have entered space.

3. Personal Protective Clothing and Equipment. The CSPM, in coordination with a safety specialist, respirator program manager, and an industrial hygienist shall determine the requirements for appropriate PPE based on the type of confined space operations and exposures involved. See chapter 13 for specific requirements. The required PPE shall be listed on the entry permit. The responsible supervisor shall ensure that all confined space entry personnel are trained in the proper use of required PPE.

4. Preparation of Spaces. Appropriate protective measures shall be implemented to ensure:

a. The space is isolated from unwanted forms of energy and accidental releases of potentially hazardous material (HM).

b. Workers inside confined spaces are protected from vehicular or pedestrian traffic, dropped objects, etc.

c. Bystanders are prevented from falling into spaces such as open manholes.

d. Adequate lighting is provided in and around the vicinity of the opening to a confined space, especially at night. Electrical lighting or other electrical equipment in use shall meet requirements of Class I, Division 1 explosion-proof equipment if a flammable atmosphere may be present.

14004. RESTRICTIONS FOR CLASS I AND II SPACES

1. Class I Spaces. Entry into and work in or on Class I spaces shall be not permitted under normal operations and is authorized only under the following circumstances.

a. Entry into Class I spaces is authorized only in cases of rescue efforts, life threatening, or other extreme emergencies. In event of any such emergencies, personnel entering the space shall be equipped with:

(1) A NIOSH or MSHA approved pressure-demand self-contained breathing apparatus (SCBA) or airline respirator with escape bottle for entry into Immediately Dangerous to Life or Health (IDLH) atmospheres.

(2) A harness of a type suitable to permit extraction of the person from the space.

(3) A lifeline securely attached to the harness.

(4) Other necessary PPE suitable to the conditions and exposure.

b. Emergency rescue personnel with appropriate equipment shall be stationed immediately outside entry to a Class I space. Communications shall be established and maintained between the person(s) entering the space and attendant personnel outside the space. Where flammable or explosive vapors, gases, or materials are present, only approved explosion-proof, spark-proof, or intrinsically safe equipment shall be used and all other potential ignition sources shall be prohibited.

c. Cold work may be performed on the external areas of a Class I space from outside the space, provided that the work performed does not generate heat or other ignition sources which may cause ignition of atmospheres within the space.

d. Hot work may be performed on the external areas of a Class I space when it does not contain a flammable, explosive, or oxygen enriched atmosphere. A Class I space classification, in this case, would be based on oxygen depletion or the presence of toxic agents and would include spaces which are inert, pressed up, or a combination thereof. A hot work permit must be obtained prior to performing work. Permits can be obtained from the base or station fire department. For facilities located off base, permits can be obtained from local fire departments, or state, county, or city agencies authorized to issue hot work permits. Contractors must obtain hot work permits prior to commencing work.

2. Class II Spaces. A flammable or toxic atmosphere, or deviation of oxygen content may be due to materials and conditions within the space. The cause or source of contamination shall be identified and removed to the maximum degree possible by cleaning, ventilating, or other such treatments prior to entry or work. An attendant shall be stationed immediately outside the space entrance. Where operations are conducted within the space, such as spray finishing, welding, cutting or solvent cleaning, the following precautions apply:

a. Where toxic or flammable materials are present or may be introduced into the space by work procedures, general dilution or local exhaust ventilation, or combination thereof, shall be provided. Air cannot be blown into Class II spaces.

b. Where toxic materials are present or may be introduced into the space, personnel within the space shall be provided with respiratory protective equipment approved by NIOSH or MSHA for the specific contaminant. See chapter 13 for respiratory protection requirements.

c. Where flammable gases or vapors are present or may be introduced into the space, approved explosion-proof, spark-proof

or intrinsically safe equipment shall be used and all potential ignition sources shall be closely controlled.

14005. SPECIAL PRECAUTIONS

1. Hot Work. Hot Work includes all flame heating, welding, torch cutting, brazing, carbon arc gouging, or any work that produces heat of 400° F or more; or, in the presence of flammable materials or atmospheres, use of ignition sources such as spark or arc producing tools or equipment, static discharges, friction, impact, open flames or embers, and non-explosion-proof lights, fixtures, motors, or equipment.

2. Aircraft Fuel Cell Repair. Safety precautions relative to maintenance and repair of aircraft fuel cells which involve entry into or work on internal or external tanks are provided in NAVAIR 01-1A-35.

14006. EMERGENCY RESCUE PROCEDURES. The CSPM, in coordination with responsible emergency response personnel, medical, line managers or supervisors, shall prepare a written emergency plan to cover confined space entries under their control per 28 CFR 1910.146. To be most effective, emergency and rescue procedures must be planned consistent with the nature of operations and conditions within the confined space. When confined space entries concern hazardous waste operations or emergency response operations for release of, or substantial threats of release of hazardous substances, the written emergency plan shall meet requirements of 29 CFR 1910.120, Hazardous Waste and Emergency Response.

14007. CONTRACTOR OPERATIONS. Where contractors are performing work at Marine Corps installations or units, the following provisions apply:

1. In all cases involving contractor operations, the contracting officer or ROICC shall inform the contractor that confined space entry personnel shall be adequately qualified. In addition, all operations are to be conducted under

requirements of 29 CFR 1910.146 since Marine Corps personnel, equipment, and facilities may also be at risk.

2. The contractor shall provide a competent person as required in 29 CFR 1910, General Industry; 29 CFR 1915, Shipyard Employment; or 29 CFR 1926, Construction, and as recommended by NIOSH Criteria Document for Confined Spaces; U.S. Army Corps of Engineers Safety and Health Requirements Manual EM 385-1-1; or state OSH requirements, as applicable. Contractors shall furnish their own test and monitoring equipment, including personal protective equipment.

3. Laws and regulations make no provision for Marine Corps personnel to issue permits for contractor operations. Performance of such functions may involve assumption of liability by the Marine Corps in event of a mishap. Marine Corps personnel shall not certify spaces or issue confined space entry permits for contractor operations or personnel.

4. Where Marine Corps and contractor personnel are to occupy the same space at the same time, installation or unit CSPM and the appropriate contractor representative shall issue separate permits and the contractor shall be informed of Marine Corps findings. However, the contracting officer shall inform the contractor or ROICC that contractor retains legal obligation for safety of contractor personnel.

4. Marine Corps personnel cannot make an entry or perform hot work based upon a National Fire Protection Association (NFPA), Certified Marine Chemist, or Competent Person Certification written for contractor operations.

14008. CONFINED SPACE ENTRY PERMIT

1. A special permit is required for entry into permit-required confined spaces. Use NAVMC 11405, figure 14-1 for all confined space entry permits. This form is available through Marine Corps Electronic Forms System (MCEFS) and is also available in the Navy Supply System. A locally produced permit may be used if all elements of figure 14-1 are included.

2. The permit shall be printed in quadruplicate with the last page being red or pink. If space is rejected, REJECT shall be printed across the red or pink page.

3. Permits shall be retained for 1 year to include the cancelled entry permits to facilitate review of the confined space program.

MARINE CORPS OCCUPATIONAL SAFETY AND HEALTH PROGRAM
NAVMC 11405 (10-98)
SN: 0109-LF-071-1300

CONFINED SPACE ENTRY PERMIT

DATE:	EXPIRATION DATE/TIME:
LOCATION:	DESCRIPTION:

PURPOSE OF ENTRY: (Operations to be conducted)

AUTHORIZED ENTRANTS:	AUTHORIZED ATTENDANTS:

ATMOSPHERIC TEST DATA

TEST	PRE-ENTRY	FOLLOW-UP					
OXYGEN CONTENT							
EXPLOSIVE (%LEL)							
TOXINS							

TESTED BY:	DATE TESTED:
NAME	TIME TESTED:

INSTRUMENT	MODEL	SERIAL NO.	CAL DATE	COMMENTS (HAZARD OF PERMIT SPACE)

REQUIRED SAFETY PRECAUTIONS

REQUIREMENT	YES	NO	SPECIFICS
ATTENDANT			
RESPIRATORY PROTECTION			
PROTECTIVE CLOTHING			
PROTECTIVE EQUIPMENT			
FIRE EXTINGUISHER			
RESCUE EQUIPMENT			
LOCKOUT/TAGOUT			
HOT WORK PERMIT			
VENTILATION			
FOLLOW-UP TESTING			(EQUIPMENT TO BE PROVIDED
OTHER CONTROLS			
COMMUNICATION			

EMERGENCY CONTACT:	PHONE:

COMMENTS:

ENTRY SUPERVISOR'S SIGNATURE:	CSPM/ACSPM SIGNATURE:

Designed using FormFlow 2.15, HQMC/ARSE, Oct 98

Figure 14-1. --NAVMC 11405, Confined Space Entry Permit.

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CHAPTER 15

ASBESTOS SAFETY PROGRAM

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15-1 NAVMC 11406 (EF), CHECKLIST FOR ASBESTOS REMOVAL OPERATIONS 15-15

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CHAPTER 15

ASBESTOS SAFETY PROGRAM

15000. DISCUSSION

1. This chapter provides guidance for controlling or eliminating the exposure of Marine Corps personnel to asbestos during the use, removal, and disposal of asbestos-containing materials (ACM). Before conducting any self-help programs, the installation safety office must be notified and a survey conducted to ensure the self-help project does not contain ACM. The Asbestos Safety Program implements the requirements of 29 CFR 1910.1001, Asbestos; 29 CFR 1926.1101; Asbestos, and 40 CFR 763, Asbestos. This Program provides precautionary measures, health practices, and training and certification requirements to be used for asbestos removal or encapsulation projects; and describes compliance programs, which include engineering and work practices controls (including administrative controls) to reduce and maintain workers' exposure to asbestos below the permissible exposure limit (PEL).

2. Provisions of this chapter apply to industrial and construction activities performed by all military and civilian personnel aboard Marine Corps installations or units, including contractor operations. These provisions pertain to asbestos operations conducted in or on Marine Corps buildings, grounds, and structures.

3. Marine Corps commands are required to eliminate asbestos exposure by substitution with non-asbestos containing materials or, where this is not feasible, through use of engineering and administrative controls and personal protection equipment.

15001. BACKGROUND. Asbestos is a general term used to describe several mineral silicates which are separable into fibers. Although there are many asbestos minerals, only six are of commercial importance: chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite. Major uses of asbestos are for asbestos cement sidings, floor tiles,

fireproofing, high temperature insulation, asbestos cloth, friction materials such as brake linings and clutch facings, various gasket materials, and other miscellaneous products. Materials with more than one percent asbestos are called asbestos containing materials.

1. Hazard. Asbestos exposure is a major health hazard. Inhalation of asbestos fibers can produce severe lung damage in the form of disabling or fatal fibrosis of lungs. Asbestosis means fibrosis of lungs due to inhaled asbestos fibers. Asbestos has also been found to be a causal factor in the development of lung cancer and cancer of the gastrointestinal tract. It can take 20-40 years between first exposure to asbestos and the appearance of cancer.

2. Detection. Asbestos fibers cannot be seen without a microscope and have no odor or taste. These fibers are so light that once disturbed they may float in the air for 24 hours or more. Only trained personnel using specialized air-sampling techniques and equipment can detect these fibers.

3. Exposure. Some examples of tasks which can generate airborne asbestos having potential to exceed PELs are the fabrication, installation, repair or removal ("rip-out") of asbestos insulation materials, power sawing of asbestos-containing fire retardant building materials, brake relining and repair work, and removal of floor tiles or mastics containing asbestos. Personnel performing these tasks must be protected from exposure to airborne asbestos fibers.

4. Substitution. Although asbestos-free substitute materials are being used, asbestos material may still be encountered in such applications as clutch, gasket, and brake repairs. Brake pads provided by the supply system may still contain asbestos and, in some cases, are the only brake pads available for older vehicles.

15002. ASBESTOS OPERATIONS. Asbestos removal or containment operations must be controlled so they are not hazardous to Marine Corps personnel. However, they must be identified to the ISM or unit safety officer and properly monitored and evaluated by an industrial hygienist or qualified safety specialist.

Control of asbestos fibers is a mandatory requirement. Chapter 10 provides procedures for prevention and control of work center hazards.

15003. PERMISSIBLE EXPOSURE LIMITS (PELS)

1. Time-Weighted Average Limit (TWA). The TWA for asbestos is 0.1 fibers per cubic centimeter (f/cc) of air, calculated as an 8-hour time-weighted average (TWA) exposure. This is referred to as the PEL-TWA. Fibers are defined as rod shaped particles having a length-to-width ratio of three (or more) to one (3:1), and an overall length greater than five micrometers.

2. Excursion Limit (EL). The EL is 1.0 f/cc as averaged over a sampling period of 30 minutes (as determined by Appendix A of 29 CFR1910.1001, or by an equivalent method). This is referred to as the PEL-EL. No employees shall be exposed to airborne asbestos fibers in excess of either PEL without approved PPE, controls, and exposure monitoring.

3. Personnel Notification. Any monitored individual shall be notified in writing about results of the monitoring within 15 working days after receipt of exposure data. Notification shall contain corrective action being taken to reduce employee exposure below the PEL-TWA or PEL-EL.

15004. RESPONSIBILITIES

1. Commanders/department heads/directors shall:

a. Ensure work operations with asbestos or materials containing asbestos are conducted in accordance with this Manual and references 29 CFR 1910.1001; 29 CFR 1926.1101; 40 CFR 763; and 40 CFR 61, National Emission Standards for Hazardous Air Pollutants.

b. Ensure all personnel under their supervision are aware of provisions of this Manual and comply with them at all times.

c. Take prompt action to contain and correct asbestos discrepancies when notified of their existence.

d. Provide Asbestos Hazard Emergency Response Act (AHERA) approved training (training courses are approved by states) for all supervisors and workers involved in asbestos removal operations. Provide a copy of the appropriate AHERA training certificate to the installation asbestos program manager (APM) upon request.

2. The ISM shall:

a. Have oversight for all asbestos related activities aboard the installation.

b. Provide advice and guidance to the APM.

3. The APM will be appointed in writing by the commander and shall:

a. Attend AHERA training for supervisors, which include accreditation as an Asbestos Project Designer, Building Inspector, and Management Planner per 40 CFR 763. Recommended training courses include the following: 5-day asbestos abatement contractor/supervisor training course, 3-day asbestos inspector course, and 2-day asbestos management planner course.

b. Have cognizance for all asbestos related activities aboard the installation or unit.

c. Provide coordination in development of installation or unit asbestos control program.

d. Provide asbestos awareness training for personnel who do not ordinarily work with asbestos in the performance of their duties.

e. Coordinate AHERA training for personnel directly involved with asbestos removal or containment projects.

f. Verify and annotate NAVMC 11406, Checklist for Asbestos Removal Operations, figure 15-1, with the dates training was received by all personnel performing building-related asbestos work as workers, supervisors, building inspectors, or project designers in buildings owned or operated by the Marine Corps.

Table 15-1 summarizes training and certification requirements for various asbestos workers, supervisors, inspectors, etc.

g. Review NAVMC 11406 to ensure the form, through part 2, is appropriately completed and part 3, step 1 reflects supervisor's signature certifying job ready to start. The APM then certifies NAVMC 11406, part 3, and step 1.

h. Maintain records of all required training per 40 CFR 763.

i. Coordinate laboratory analysis of asbestos samples.

j. Record the results of asbestos surveys for all facilities in the installation or unit and hold these records indefinitely.

k. Require environmental monitoring and verify compliance with the requirements for asbestos operations.

l. Notify individuals of asbestos exposure.

m. Coordinate an asbestos medical surveillance program in accordance with chapter 11.

n. Provide technical support and guidance for asbestos hazard operations.

o. Ensure all required equipment and tools are provided for asbestos operations.

p. Ensure proper containment is used to protect workers and the general public from asbestos hazards that may be generated. See paragraph 4a below.

q. Ensure work area is visually free of any debris or residual insulation and other types of non-fibrous insulation (e.g., cork, rubber) after the ripout operation is completed. Certify by signature that the area is visually clean, part 3, step 2 of NAVMC 11406.

r. Ensure that a qualified (as defined in table 15-1) industrial hygienist or authorized workplace monitor determines

the space is free of asbestos fibers before removing containment, part 3, and step 3 of NAVMC 11406.

s. Notify shop upon receipt of completed part 3, step 3 by industrial hygienist/workplace monitor that space is asbestos free, that asbestos containment area can be disestablished. Complete part 3, step 4 of NAVMC 11406 with date and time shop was notified. All completed NAVMC 11406 checklists are permanently filed by the APM.

t. Require contracting officials to receive health and safety plans from contractors before any work operations begin which may generate asbestos hazards. Evaluate the health and safety plans to ensure Marine Corps personnel and property will not be endangered by contractor operations.

4. Industrial Hygienist/Authorized Workplace Monitors. The industrial hygienist or authorized workplace monitor for asbestos operations shall:

a. Conduct review of the NAVMC 11406, and certify “Job Ready to Start” by signature of part 3, step 1. Job may now commence.

b. Ensure during asbestos removal or encapsulation operations that the work center is monitored for asbestos, and that personnel are monitored and wearing appropriate required PPE.

c. Certify NAVMC 11406, part 3, step 3, upon completion of asbestos removal or encapsulation operations when determined that all certification samples are satisfactory. Notify the APM that clean certification samples are satisfactory and the containment area can be disestablished.

5. Supervisors. Supervisors of personnel conducting operations with asbestos or asbestos containing materials shall:

a. Verify that bulk samples have been properly collected and analyzed, and written clearance to begin work is received from the APM before beginning work on suspected asbestos containing material.

b. Coordinate with the APM for planning and scheduling asbestos removal operations.

c. Ensure personnel are trained and qualified respirator users in accordance with chapter 13 and are AHERA trained and accredited.

d. Complete the NAVMC 11406, part 2, and certify part 3, step 1 for asbestos removal operations before beginning work, and provide a copy to the APM. Work shall commence only upon receipt of a completed and certified NAVMC 11406 (certification by the APM and industrial hygienist/workplace monitor).

e. Ensure all tools removed from a regulated area are completely sealed in two layers of six mil polyethylene or completely decontaminated by being thoroughly vacuumed, washed with amended water, and dried.

f. Ensure only High Efficiency Particulate Air filter (HEPA) vacuums are used at jobs containing asbestos material.

g. Ensure all asbestos waste is properly disposed of (confer with the installation or unit environmental compliance department for guidance). 40 CFR 61 provides guidance concerning disposal.

h. Ensure the job is certified visually clean after work is complete on the NAVMC 11406, part 3, step 2 and provide to the APM.

i. Disestablish asbestos containment area upon notification by the APM that authorization is permitted.

15005. CONTROL METHODS

1. Work Clearance. Due to the inability to detect and contain asbestos without specialized monitoring equipment and training, Marine Corps organizations or units are prohibited from initiating any maintenance, renovation, demolition, or self-help project without first contacting the APM for work clearance.

2. Containment. If suspected asbestos containing material is discovered and it is broken, chipped, or in friable condition (can be crumbled by hand), personnel will evacuate the area, seal the room to prevent entry, and immediately contact installation/unit APM.

3. Work Protocol. The APM shall prescribe required work practices for all cleanup and containment operations conducted by Marine Corps personnel. At no time may suspected asbestos containing material be dry-swept. Contractors shall be required to submit a health and safety plan detailing procedures they will employ to protect Marine Corps personnel (plan must be reviewed by APM).

15006. REQUIREMENTS

1. Asbestos Controls in Work Center Environment. Basic principles for controlling asbestos hazards in the occupational environment include substitution with less hazardous materials, engineering controls (e.g., isolation, ventilation), administrative controls, and use of PPE. Employee rotation as a means of keeping exposures below the PELS is prohibited. Employees involved in asbestos related activities shall not eat, smoke, chew tobacco or gum, or apply cosmetics in work areas.

2. Training

a. Training and certification requirements are summarized in table 15-1. The four classes of asbestos workers addressed in the table are:

(1) Class I workers: Remove thermal system insulation (TSI) and surfacing Asbestos Containing Material (ACM) or Presumed Asbestos Containing Material (PACM).

(2) Class II workers: Remove ACM, which is not TSI or surfacing material.

(3) Class III workers: Repair and maintain ACM including TSI and surfacing ACM and PACM.

(4) Class IV workers: Clean up dust, waste, and debris resulting from Class I, II, and III activities. Class IV workers include maintenance and custodial personnel. They contact but do not disturb ACM and PACM.

b. Occupationally exposed personnel or those personnel with potential exposure in excess of the PELS, and their supervisors, shall receive detailed indoctrination and annual refresher instruction. This training may be conducted by the APM. Supervisors shall coordinate with the APM to schedule training. Shop supervisors are also responsible for scheduling of asbestos training before its expiration date. Training shall include the following:

(1) Health effects and hazards of asbestos.

(2) Association between use of smoking tobacco products and asbestos exposure in producing lung cancer.

(3) Uses of asbestos that could result in an occupational exposure.

(4) Purpose, proper use, and limitations of PPE.

(5) Purpose and description of the asbestos medical surveillance program.

(6) Description of emergency and cleanup procedures.

(7) Review of this chapter.

c. Personnel and their supervisors who work with asbestos containing material and are not exposed above the PELS shall receive training annually. This category includes personnel who handle, cut or otherwise work on fixed asbestos material. The training will include the above topics and will be conducted by the shop instructors. Shop instructors will be trained by the installation/unit APM and receive annual refresher training.

d. Personnel working with low levels of asbestos contaminated materials should have asbestos awareness training.

e. Training records will be forwarded to and maintained by the installation APM and a copy furnished to the safety office.

3. Warning Signs and Labels

a. Warning signs shall be displayed at each location where airborne asbestos fibers may exceed the PELS.

b. Warning signs shall be approved by the installation/unit APM before being displayed. An example of the warning sign is:

DANGER

ASBESTOS

CANCER AND LUNG DISEASE HAZARD

AUTHORIZED PERSONNEL ONLY

RESPIRATORS AND PROTECTIVE CLOTHING
ARE REQUIRED IN THIS AREA

c. Warning labels shall be affixed to containers of raw materials, mixtures, scrap, waste, debris and other products containing asbestos fibers if, in any foreseeable way, levels of airborne asbestos could be produced that might constitute a threat to health. Warning labels shall be printed in letter of sufficient size and contrast as to be readily visible and legible. These labels shall comply with requirements of 29 CFR 1910.1001 and include the following information:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

4. Medical Examinations. Medical examinations shall be conducted IAW chapter 11 and 29 CFR 1910.1001. The NEHC-TM OM 6260, Occupational Medicine Surveillance Procedures Manual and Medical Matrix; and NEHC TM OEM 6260.96-2, Occupational Medicine

Field Operations Manual, provide the medical requirements and guidance for implementing the medical examinations.

5. Disposal

a. Per DoD 4160.21-M, Defense Materiel Disposition Manual, Chapter 10, Environmental Regulated and Hazardous Property, only approved sealed impermeable bags (or other closed, impermeable container) marked with the standard asbestos warning label shall be used for the disposal of asbestos waste (e.g., waste generated from an asbestos rip-out operation, scrap material from asbestos gaskets, asbestos contaminated PPE). Impermeable bags marked in this way shall not be used to carry clean PPE or tools, to dispose of general trash or to store asbestos material.

b. Asbestos waste shall be adequately wetted down, placed in a sealed impermeable bag, goose-necked, sealed, double bagged, and sealed. Bags shall be sealed with duct tape.

c. Asbestos waste bags shall be deposited in the specially marked white asbestos dumpsters located at the job site.

15007. SPILLED OR UNCONTROLLED ASBESTOS

1. Asbestos Spill

a. An asbestos spill is the inadvertent or uncontrolled release of asbestos fibers into the atmosphere. For example, personnel removing a piece of equipment may damage and break open pipe insulation on the overhead causing pieces of insulation to fall to the ground and fibers being released into the atmosphere.

b. Any individual that causes or discovers a spill shall:

(1) Secure work and move out of area to a distance of at least 15 feet.

(2) Warn others in the area of the spill, and secure the space or have it guarded to prevent other personnel from entering the area.

(3) Ensure any ventilation or air conditioning affecting the immediate spill area is secured.

(4) Contact the immediate supervisor. If the supervisor is not available, the installation or unit safety office and APM will be contacted.

2. Uncontrolled Asbestos. Asbestos material, which is not properly sealed, stored, or contained, but from which there is no obvious evidence of release of fibrous material into the atmosphere. For example, small tears in asbestos cloth covering on pipe insulation damaged asbestos gaskets, or broken pieces of vinyl asbestos tile lying loose on deck. Consult with environmental staff for appropriate procedures to follow in the event uncontrolled asbestos is discovered.

MARINE CORPS OCCUPATIONAL SAFETY AND HEALTH PROGRAM

THIS CHECKLIST PROVIDES CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT REQUIRED DURING THE REMOVAL OPERATIONS OF ASBESTOS/FIBROUS INSULATION. CHECKLIST HELPS ENSURE THAT APPROPRIATE ACTIONS ARE TAKEN FOR THE PREVENTION OF UNHEALTHFUL ASBESTOS/FIBROUS DUST EXPOSURE TO PERSONNEL WHO DIRECTLY OR INDIRECTLY ENGAGE IN THE REMOVAL OPERATION. THIS CHECKLIST IS REQUIRED FOR ALL ASBESTOS REMOVAL OPERATIONS REGARDLESS OF THE SIZE OF THE OPERATION.

ASBESTOS BULK ANALYSIS SERIAL NO: _____

DATE	BLDG	FLOOR	ROOM
SHOP	JOB DESCRIPTION		

TYPE OF CONTAINMENT (CHECK ONE): GLOVEBAG ☐ CONTAINMENT TENT ☐

TYPE OF ACM (CIHECK ONE): CEILING TILE ☐ ASBESTOS INSULATION ☐ FLOOR TILE ☐

MASTIC ☐ FIBROUS INSULATION ☐ OTHER _____

EMPLOYEES ASSIGNED: (RANK, FULL NAME, SSN, AND SHOP OR ORGANIZATION, DATE TRAINING REC'D)

1.	4.
2.	5.
3.	6.

PART 1: ESTABLISHMENT OF CONTROLS	REQ	SAT	REMARKS
A. APPLICABLE CONTAINMENT (S) ADEQUATELY SUPPORTED			
B. MAKE-UP AIR FILTER (HEPA)			
C. 6 MIL DROP CLOTH (S)			
D. BOUNDARIES ESTABLISHED			
E. WARNING SIGN (S) POSTED			
F. HVAC VENTILATION SECURED			
G. HEPA FILTER VACUUM CLEANER			
H. NEGATIVE AIR MACHINE			
I. NEGATIVE PRESSURE MANOMETER			
J. WATER SPRAY BOTTLES			
K. ASBESTOS WASTE BAGS			

CHECKLIST FOR ASBESTOS REMOVAL OPERATIONS
NAVMC 11406 (10-98)
SN: 0000-00-888-0770

Designed using FormFlow 2.15, HQMC/ARSE, Oct 98

Figure 15-1. –-NAVMC, Checklist for Asbestos Removal Operations.

NAVMC 11406 (10-98) (BACK)

PART 2: PERSONAL PROTECTIVE EQUIPMENT	REQ	SAT	REMARKS
A. AIRLINE RESPIRATOR			
B. POWERED AIR PURIFYING RESPIRATOR			
C. HALF MASK RESPIRATOR W/HEPA FILTER			
D. HOODED TYVEK DISPOSABLE COVERALLS			
E. THIN COTTON UNDER GLOVES			
F. APPROVED GLOVES			
G. DISPOSABLE BOOTIES			
H. APPROVED EYE PROTECTION			

PART 3: AUTHORIZATION

Step 1 JOB READY TO START:

SUPERVISOR	DATE/TIME
APM	DATE/TIME
IH/AUTHORIZED WORKPLACE MONITOR	DATE/TIME

Step 2 JOB CERTIFIED VISUALLY CLEAN AFTER WORK IS COMPLETED:

SUPERVISOR	DATE/TIME
APM	DATE/TIME

Step 3 CLEAN CERTIFICATION SAMPLES SATISFACTORY AND CONTAINMENT AREA CAN BE DISESTABLISHED:

IH/AUTHORIZED WORKPLACE MONITOR	DATE/TIME

Step 4 AUTHORIZATION TO DISESTABLISHED ASBESTOS CONTAINMENT AREA GIVEN TO SHOP:

AMP	DATE/TIME SHOP NOTIFIED

Figure 15-1. –-NAVMC 11406, Checklist for Asbestos Removal Operations--Continued.

Asbestos Training and Certification Requirements

OPERATION	PERSONNEL	CERT REQUIRED	INITIAL TRAINING REQUIRED	ANNUAL TRAINING REQUIRED	REGULATION
DESIGN OF PROJECTS WHICH INVOLVE REMOVAL OF ACM OR WORK IN PROXIMITY OF ACM/PACM	ARCHITECTS, ENGINEERS, PLANNERS, ESTIMATORS (P&ES) & APMs	ABATEMENT PROJECT DESIGNER	3 DAY ABATEMENT PROJECT DESIGNER COURSE	YES 1 DAY	40 CFR 763.92
REVIEW OF PROJECTS TO DETERMINE ADEQUACY OF CONTROL	ENGINEERS, INDUSTRIAL HYGIENISTS, SAFETY PERSONNEL & APMs	ABATEMENT PROJECT DESIGNER	3 DAY ABATEMENT PROJECT DESIGNER COURSE	YES 1 DAY	40 CFR 763.92
RESPONSIBLE FOR ASBESTOS REMOVAL, ENCAPSULATION, ENCLOSURE AND/OR REPAIR (CLASS I & II ASBESTOS WORK)	ASBESTOS ABATEMENT SUPERVISOR OR COMPETENT PERSON, QUALIFIED PERSON, ROICC PERSONNEL	ASBESTOS ABATEMENT CONTRACTOR OR SUPERVISOR	5 DAY ASBESTOS ABATEMENT CONTRACTOR/ SUPERVISOR TRAINING COURSE	YES 1 DAY	29 CFR 1915.1001(o)(4)(I) 29 CFR 1926.1101(o)(4)(I) 40 CFR 763.92 40 CFR 61 SUBPART M
RESPONSIBLE FOR MAINTENANCE & HOUSEKEEPING (CLASS III & IV ASBESTOS WORK)	MAINT. & HOUSEKEEPING SUP., COMPETENT, QUALIFIED PERSON	NONE	2 DAY OPERATIONS & MAINTENANCE TRAINING	YES NOT SPECIFIED	29 CFR 1915.1001(o)(4)(II) 29 CFR 1926.1101 (o)(4)(I) 40 CFR 763.92
BULK SAMPLING FOR LAB ID.	SAFETY PERSONNEL, INDUSTRIAL HYGIENISTS, P&Es, WORKPLACE MONITORS & FACILITY INSPECTORS	ASBESTOS INSPECTOR	3 DAY ASBESTOS INSPECTOR COURSE	YES	29 CFR 1915.1001 (k)(5) 29 CFR 1926.1101 (k)(5) 40 CFR 763.92
DEVELOPMENT OF ASBESTOS MANAGEMENT PLANS & ASBESTOS O&M PLANS	FACILITY INSPECTORS, SAFETY PERSONNEL & INDUSTRIAL HYGIENISTS	ASBESTOS MANAGEMENT PLANNER	2 DAY ASBESTOS MANAGEMENT PLANNER COURSE (INSPECTOR CERTIFICATION IS A PREREQUISITE)	YES 2 DAY	40 CFR 763.92
LAB ANALYSIS OF BULK AND AIRBORNE SAMPLES	INDUSTRIAL HYGIENISTS, CLEARANCE SAMPLERS, TRAINED SAFETY PERSONNEL	PROFICIENCY-CY ANALYTICAL TESTING (PAT) ROUNDS	5 DAY NIOSH 582 COURSE (FIBER) AND 5 DAY NIOSH 9002 COURSE (BULK) OR EQUIVALENT	YES (PAT)	29 CFR 1910.1001 APP A 29 CFR 1915.1001 APP A 29 CFR 1926.1101 APP A

Table 15-1. --Asbestos Training and Certification Requirements.

Asbestos Training and Certification Requirements

OPERATION	PERSONNEL	CERT REQUIRED	INITIAL TRAINING REQUIRED	ANNUAL TRAINING REQUIRED	REGULATION
CLASS II WORKERS ONLY (REMOVE ACM THAT IS NOT TSI OR SURFACING MATERIAL)	ABATEMENT WORKERS	NONE	8 HR ASBESTOS TRAINING	YES NOT SPECIFIED	29 CFR1915.1001 (κ)(9) 29CFR 1926.1101 (κ)(9)
CLASS III WORKERS ONLY (REPAIR, MAINTAIN TSI & SURFACING ACM/PACM	MAINTENANCE WORKERS	NONE	16 HR O&M	YES NOT SPECIFIED	29 CFR 1915.1001 (κ)(9) 29 CFR 1926.1101 (κ)(9)
CLASS IV WORKERS ONLY (WHERE ACM/PACM IS PRESENT)	MAINTENANCE & CUSTODIAL WORKERS	NONE	2 HR ASBESTOS AWARENESS TRAINING	YES 2 HRS	29 CFR 1910.1001 (J)(7) 29 CFR 1915.1001 (κ)(9) 29 CFR 1926.1101 (κ)(9)
RESPONSIBLE FOR OVERALL ASBESTOS PROGRAM	ACTIVITY APMs	LETTER OF APPOINTMENT FROM COMMANDER	5 DAY ASBESTOS ABATEMENT CONTRACTOR SUP. TRAINING COURSE, 3 DAY ABATEMENT PROJECT DESIGNER COURSE AND 2 DAY ASBESTOS INSP./ MANAGEMENT PLANNER COURSE, NFESC ASBESTOS PROGRAM MANAGER COURSE(INSPECTOR ACCREDITATION IS A PREREQUISITE)	YES 1 DAY	RECOMMENDED TRAINING
AUTOMOTIVE BRAKE AND CLUTCH	AUTO MECHANICS	NONE	2 HOUR AWARENESS PLUS HANDS-ON TRAINING	NONE	29 CFR 1910.1001 (J)(7) 29 CFR 1915.1001 APP. L

Table 15-1. --Asbestos Training and Certification Requirements--Continued.

Asbestos Training and Certification Requirements

OPERATION	PERSONNEL	CERT REQUIRED	INITIAL TRAINING REQUIRED	ANNUAL TRAINING REQUIRED	REGULATION
GENERAL INDUSTRIES OPERATIONS ABOVE PELS (NOT OTHERWISE CLASSIFIED)	VARIOUS	NONE	2 HOUR AWARENESS AND OPERATION SPECIFIC	YES NOT SPECIFIED	29 CFR 1910.1001(J)(7)
AIR SAMPLING	ASBESTOS WORKPLACE MONITOR AND CLEARANCE SAMPLERS	NONE	2 DAYS AND ON THE JOB TRAINING	NONE	

Table 15-1. --Asbestos Training and Certification Requirements—-Continued.

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CHAPTER 16

LEAD SAFETY PROGRAM

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CHAPTER 16

LEAD SAFETY PROGRAM

16000. DISCUSSION

1. This chapter establishes the procedures and requirements for a lead safety program to control personnel exposures to lead hazards. It provides precautionary measures and health practices to be used for lead removal projects. It also describes compliance programs that include engineering and work practices controls (including administrative controls) to reduce and maintain personnel exposure to lead below the Permissible Exposure Limit (PEL) as defined in 29 CFR 1910.1025, Lead; and 29 CFR 1926.62, Lead.

2. Provisions of this chapter apply to industrial and construction activities performed by all military and civilian personnel aboard Marine Corps installations or units. These provisions apply to lead operations conducted in or on Marine Corps buildings, grounds, and structures.

3. The intent of the Lead Safety Program is to prevent lead poisoning and related injuries during the use, handling, removal and melting of materials containing lead at installations or units. The goal is to reduce potential and actual lead exposures to levels as low as reasonably achievable.

16001. BACKGROUND

1. Lead, as used in this chapter, means metallic lead, all inorganic lead compounds, and organic lead soaps. All organic lead compounds are excluded. The abundance, low melting point, high molecular weight, high density and malleability of lead make it a useful structural material. When added to resins, grease, or rubber, lead compounds act as antioxidants (inhibit reactions promoted by oxygen or peroxides). Common uses for lead and lead compounds include ballast, radiation shielding, ammunition, paint filler and hardener, rubber antioxidant, an acoustical insulation component, solder for electrical

components and pipe joints, high voltage cable shielding, batteries, roof flashing, and weights. While not an absolute indicator, red, forest green, chrome yellow, "school bus" yellow and "OSH" yellow paints typically contain lead components such as lead oxides and lead chromates. Lead may also be contained in varnish, polyurethane, and water based paints.

2. Significant lead exposures can occur during lead and babbit melting and casting; ballast handling; clean-up of firing ranges; use of indoor firing ranges; spraying, sanding, grinding, burning, and abrasive blasting of lead containing materials and paint; soldering with torches; high voltage cable repair; abrasive blasting with smelting slag; lead-acid battery reclaiming; machining lead; working on gasoline engine components (which have used leaded gasoline); and wearing or shaking lead contaminated clothing.

3. Lead has long been a recognized health hazard. Lead can damage the nervous system, blood-forming organs, kidneys, and reproductive system. Chronic (long term) lead exposure initially damages the blood-forming and reproductive organs with higher levels of exposure causing peripheral nerve and central nervous system damage. Lead interferes with the formation of hemoglobin in blood and will cause anemia. Lead causes cellular kidney damage that reduces urine output and leads to water retention and kidney failure. Reduced sperm counts and decreased fertility have been found in workers chronically exposed to lead. Additionally, lead poisoning in children can be extremely serious because it may also permanently affect their ability to learn.

4. In recognition of the serious health hazards associated with and numerous sources of potential lead exposure, the Marine Corps established strict controls to limit both occupational and environmental exposures.

16002. EXPOSURE DEFINITIONS

1. Permissible Exposure Limit (PEL). The PEL for lead is 50 micrograms per cubic meter of air (50 ug/m^3) calculated as an 8-hour time-weighted average (TWA) exposure.

2. Action Level. The action level means personnel exposure, without regard to the use of respirators, to an airborne concentration of lead of 30 ug/m^3 of air averaged over an 8-hour period. Personnel who are or may be exposed above the action level are required to be provided training and placed in a medical surveillance program.

3. Personnel Notification. Any monitored individual shall be notified in writing about the results of the monitoring within 5 working days after receipt of exposure data.

16003. RESPONSIBILITIES

1. Commanders, department heads, and directors shall ensure work operations using lead or materials containing lead are conducted per this Manual, 29 CFR 1910.1025 and 29 CFR 1926.62. Ensure the ISO is notified before commencing self-help projects in which paint removal or sanding will be performed to ensure lead levels are identified and appropriate safety precautions are established.

2. Supervisors of personnel conducting operations with lead or lead containing materials shall:

a. Notify the ISM or unit safety officer before commencing operations that may generate any amount of airborne lead. This will ensure all proper PPE is provided and environmental work center containment and monitoring is conducted.

b. Ensure personnel who enter lead controlled boundaries are trained per 29 CFR 1910.1025, 29 CFR 1926.62 and this Manual, and are knowledgeable in the provisions of this chapter and the work to be conducted.

c. Ensure personnel who are assigned duties inside of lead controlled boundaries receive required medical examinations given by the responsible MTF.

d. Provide technical support and guidance on written aspects of the Lead Safety Program.

e. After consulting with the ISM and industrial hygienist, provide required PPE for personnel involved in lead operations.

f. Notify the ISM and industrial hygienist of any significant change in the process or equipment that may affect personnel exposures to lead.

g. Maintain a list of personnel on the medical surveillance program for lead. This list shall be made available to the ISM or unit safety officer.

3. The ISM shall:

a. Appoint in writing a lead program manager (LPM) who has received appropriate training (e.g., lead abatement courses offered by one of the NIOSH Education and Research Center (ERC) Grants schools).

b. Redirect to the responsible industrial hygienist any requests for evaluation of operations involving lead.

c. Ensure a hazard assessment survey is completed per chapter 13. Provide required PPE training for personnel involved in lead operations. Personnel must understand they should not breathe, absorb, or ingest lead or lead contaminated materials, and not expose other personnel or family members to lead carried on clothing and equipment.

d. Notify the responsible industrial hygienist of any personnel entering or working inside of lead controlled boundaries.

e. Ensure supervisors are informed of proper safety equipment acquisition procedures.

4. The responsible industrial hygienist shall:

a. Evaluate work operations involving lead and conduct air sampling as required.

b. Develop and recommend lead controlled boundaries based on air sampling data.

c. In coordination with the ISM or unit safety officer, and supervisors, recommend required PPE.

d. Advise supervisors of personnel recommended to be included in the medical surveillance program for lead. These recommendations shall be made available to the ISM or unit safety officer.

e. Provide technical support and guidance to the ISM or unit safety officer.

5. The MTF shall provide medical surveillance, to include biological monitoring of blood lead level and protoporphyrin tests under the lead standard for personnel working inside lead controlled boundaries. This applies to Marines that are directly involved in testing weapons systems or operating ranges where the potential for exposures above the action level may occur.

6. Personnel working with lead shall:

a. Comply with work control procedures.

b. Properly wear or use the prescribed PPE.

c. Report to supervisor any observed unsafe work conditions.

d. Ensure they have received the proper medical examinations as required.

16004. LEAD EXPOSURE CONTROLS

1. Mechanical vacuum capture shall be the primary means of controlling exposure to lead. Dust should be collected as much as possible by local exhaust ventilation (shrouded tools) at the point of origin and be captured by HEPA filters. Emissions shall not be exhausted into another workspace. Re-circulation of HEPA filtered air from lead operations is not recommended. At no time will a non-HEPA vacuum be used in lead operations.

2. On a case-by-case basis, the installation LPM or responsible industrial hygienist will identify specific vacuum and ventilation requirements for dust producing operations.

3. Ventilation systems used to control personnel exposure to lead are required to be evaluated by the installation LPM and industrial hygienist quarterly and within 5 days of any significant change in either the work process or equipment.

16005. TRAINING

1. For purposes of training, designated lead workers are defined as those individuals who are exposed to airborne lead concentration in excess of the action level. Training will be coordinated by the installation LPM.

2. Initial training and qualification shall be conducted before allowing any designated lead worker to work with or be exposed to lead dust or fumes. Training for designated lead workers shall include:

a. Description of the operation during which exposure to lead above the action level is possible with information on specific hazards associated with their work.

b. Information on all protective measures which will be implemented to include engineering controls, clean change rooms, laundry facilities, PPE, etc. Purpose, selection, fit testing, use, and limitations of respirators will be included.

c. Description of the medical surveillance program and the dangerous health effects of lead to their bodies (including their reproductive systems).

d. Review of lead regulations in 29 CFR 1910.1025 or 29 CFR 1926.62.

e. The engineering controls and work practices associated with the personnel job assignment.

f. The contents of any compliance plan in effect.

g. Instructions to personnel that chelating agents should not be routinely used to remove lead from their bodies and should not be used at all except under direction of a physician.

3. A copy of the lead standard, its appendices, and any other materials from OSHA pertaining to lead must be made readily available to all personnel working with lead, including those exposed below the action level.

16006. WARNING SIGNS AND CAUTION LABELS. Warning signs shall be posted at each location where airborne lead may exceed the PEL of 50 ug/m^3 as an eight hour TWA. See 29 CFR 1910.1025 and 29 CFR 1926.62 for information on how to calculate the PEL for work shifts longer than eight hours. These signs may contain a listing of required PPE and shall state as a minimum:

WARNING

LEAD WORK AREA

POISON

NO SMOKING, EATING, OR DRINKING

16007. HOUSEKEEPING. Compressed air shall not be used to clean work surfaces or personnel clothing. Vacuuming with HEPA-filtered vacuum cleaners or washing down with tri-sodium phosphate based cleaners is recommended. Wet sweeping, shoveling, or brushing shall only be used when other methods have been tried and found to be ineffective or not feasible. At no time will dry-sweeping be employed. Cleaning materials, boundary materials, and wastewater shall be treated as lead contaminated hazardous materials.

16008. WORKER NOTIFICATION. Within 5 working days after receipt of a health hazard evaluation, the responsible industrial hygienist shall notify each worker in writing of his or her exposure. Whenever results indicate a worker was exposed above the PEL without regard to respirator use, the statement

shall include that fact and a description of corrective action(s) to be taken.

16009. LEAD MEDICAL SURVEILLANCE PROGRAM. This program consists of three basic elements: pre-placement medical evaluation, semi-annual blood leads monitoring, and follow-up medical evaluation. Personnel who are or may be exposed above the action level for more than 30 days per year, based on the industrial hygiene evaluation, shall be included in the Lead Medical Surveillance Program. Inclusion in this program is based on potential lead exposure without regard to use of PPE.

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CHAPTER 17

HAZARDOUS MATERIALS CONTROL

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FIGURE

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CHAPTER 17

HAZARDOUS MATERIALS CONTROL

17000. DISCUSSION

1. In accordance with DoD Instruction 5050.5, DoD Hazard Communication Program; and MCO 5090.2A, Environmental Compliance and Protection Manual; the Marine Corps is required to identify and control the storage, use, handling, and disposal of hazardous materials.

2. All Marine Corps personnel shall handle hazardous materials in a manner that safeguards personnel, property, and the environment. All pertinent regulations and standards will be adhered to at all times.

3. This chapter applies to all Marine Corps personnel who handle, transport, store, use, or dispose of hazardous materials aboard Marine Corps installations or units.

17001. BACKGROUND

1. Necessity to use hazardous and potentially hazardous materials requires effective application of procedures, equipment, and barriers to prevent overexposure and provide protection for exposed personnel and property. Materials or waste products should be considered hazardous if container labels or Material Safety Data Sheets (MSDS) include precautions for handling, storage or use (e.g., corrosive, explosive, flammable, oxidizer, poison, danger, do not mix with acids) or meets the definition of hazardous material in appendix A.

2. Prior to working with hazardous materials, personnel must receive hazard communication (HAZCOM) training that complies with 29 CFR 1910.1200, Hazard Communication. DoD 6050.5-G-1, Department of Defense Federal Hazard Communication, Training Program – Trainer’s Guide and DoD 6050.5-W, Department of Defense Federal Hazard Communication, Training Program – Student’s Workbook provide the DoD HAZCOM training program.

These references are available from the local training and audiovisual support center or the ISM.

3. Requirements of this chapter do not apply to:

a. Hazardous materials purchased by the military exchange system for subsequent resale; however, the Consumer Product Safety Commission or other regulatory agency may regulate sale of that material.

b. Acquisition of chemicals and other hazardous materials for use by qualified professionals in laboratories as defined in 29 CFR 1910.1200.

c. Receipt, storage, and handling of ammunition and explosives at DoD activities are governed by DoD Directive 6055.9-STD, DoD Ammunition and Explosives safety manuals and regulations. Marine Corps management and safety policy for munitions are also contained in the MCO P8020.10A, Marine Corps Ammunition Management and Explosives Safety Policy Program. Joint publication DLAI 4145.11/TM 38-410/NAVSUP PUB 573/AFJMAN 23-209/MCO 4450.12A, Storage and Handling of Hazardous Materials contains general broad procedures applicable to the storage of ammunition and explosives to assist warehousing personnel in performing their jobs more effectively.

17002. RESPONSIBILITIES

1. Commanders, department heads, and directors shall ensure use or disposal of hazardous materials complies with this Manual, MCO 5090.2A and MCO 4450.12A. Installations, tenant commands on DoD installations, and commands conducting training operations onboard DoD installations shall comply with DLAI 4145.11/TM 38-410/NAVSUP PUB 573/AFJMAN 23-209/MCO 4450.12A.

2. Supervisors of personnel conducting operations with hazardous materials shall:

a. Ensure each work center is inspected and an inventory is developed of all hazardous materials on hand. The inventory shall include both open-purchase and Government stock items and shall also include miscellaneous cleaning materials and

chemicals not used in main shop production. An inventory shall be provided to the ISM or unit safety officer annually or when significant changes occur. Mishaps involving hazardous materials and exposure to hazardous chemicals shall be reported to the ISM or unit safety officer.

b. Examine all work processes and materials with the intent of substituting hazardous materials with less hazardous substances whenever possible.

c. Ensure MSDSs are available to users for all hazardous materials used in work centers.

d. Ensure all hazardous materials are maintained in an approved, properly labeled container.

e. Ensure all used or outdated hazardous materials are reutilized or disposed of per MCO 5090.2A, MCO 4450.12A, Federal, state, and installation or unit requirements.

f. Ensure all personnel working with hazardous materials are trained per 29 CFR 1910.1200.

17003. HAZARDOUS MATERIALS INFORMATION RESOURCE SYSTEM (HMIRS)

1. DoD established HMIRS to acquire, store, and disseminate manufacturer's data on hazardous materials, whether centrally or locally procured and managed. The Defense Logistics Information Service (DLIS) manages the DoD HMIRS and maintains a central database on all hazardous materials purchased for use within DoD. Access to HMIRS is available at http://www.dlis.dla.mil/hmirs. The help desk is available at DSN 661-7766 or (269) 961-7766.

2. The Navy Environmental Health Center (NAVENVIRHLTHCEN) is the DON focal point for MSDS submissions into HMIRS. Marine Corps commands shall send MSDSs to: Navy Environmental Health Center, 620 John Paul Jones Circle, Suite 1100, Portsmouth, VA 23708-2103 or e-mail to navyhmirs@mar.med.navy.mil.

17004. PROCESS SAFETY MANAGEMENT. Commands with highly hazardous chemicals, at or above the specified threshold quantities defined in the American Conference of Governmental Industrial Hygienists (ACGIH) Manual, Industrial Ventilation, A Manual of Recommended Practice, shall develop plans documenting systematic analyses of potential hazards for every step in their chemical processes. This plan shall include safe operating procedures, training requirements on specific safety and health hazards, emergency operations, safe work practices, inspection and maintenance, and mishap investigation and reporting procedures. Commands shall review any contractor’s safety records regarding these chemicals before entering into contracts.

17005. VENTILATION. In areas where injurious air contaminants are routinely generated by fixed installations, permanent exhaust or ventilation systems shall be provided. The ACGIH Industrial Ventilation Manual will be used as the standard for industrial ventilation designs where applicable. At temporary work sites or for interim measures, portable ventilation equipment may be used. Contaminants will not be exhausted into areas that could endanger others. If flammable atmospheres are being removed, the ventilation equipment selected must be labeled by the manufacturer as explosion-proof or intrinsically safe. All industrial ventilation systems must be evaluated and approved by the responsible safety manager, industrial hygienist, environmental manager, and fire department.

17006. HEALTH HAZARDS

1. Due to the variety and diversity of hazardous or potentially hazardous substances available for use, an overview of health hazards is presented here in a generalized manner. For specific hazards of a substance and protective measures for use and handling, go to the MSDS; 29 CFR 1910, Subpart Z, Toxic and Hazardous Substance Standard; or other standard recommended by the responsible industrial hygienist.

2. Types of Hazards

a. Toxic. Substance that causes damage to any structure or function of the body.

b. Carcinogen. Substance that promotes growth of cancer or tumor in an exposed worker.

c. Mutagen. Substance that causes changes in the genetic structure of cells. A mutation of body cells may manifest itself as cancer. A mutation of reproductive cells may manifest itself as birth defects or stillbirth in children of affected parents, or sterility of the exposed worker.

d. Teratogen. Substance that causes a developing fetus to be deformed, yet does not affect the mother.

3. Routes of Entry. Four methods by which a hazardous substance may enter a body are:

a. Inhalation. Breathing of gas, fumes, vapors, mist, or dusts. This is the most common route of entry.

b. Ingestion. Hazardous substances can be taken internally by swallowing or eating.

c. Absorption through skin, ocular and mucous membranes. Direct skin contact may allow many substances to be absorbed, especially if the skin is broken by cuts, abrasions, or scabs.

d. Injection. Accidental injection of a hazardous substance may occur during a puncture wound or from pressurized fluid (e.g., hydraulic fluid pressure line leak, high pressure paint sprayers).

4. Exposure. Exposure is defined as the combination of factors such as: amount, type, and toxicity of a substance, route of entry, and duration of exposure.

a. Acute exposure. A short-term exposure of seconds, minutes, or hours (one work shift duration or less).

b. Chronic exposure. Long duration or repeated exposures (more than one work shift).

5. Synergistic Effects. Effects of some substances may be magnified by the action of other substances, resulting in an effect on the body that is greater than either of the substance's effect individually or added together.

17007. SAFE HANDLING OF LIQUID OXYGEN (LOX). The use, storage, and handling of liquid oxygen must be done in accordance with all applicable instructions. Particular hazards include the extreme cold temperature of the material, as well as extreme reactivity when exposed to petroleum products. See NAVAIR A6-332-AO-GYD-000, Laboratory and Field Guide for Aviation Breathing Oxygen (ABO) Surveillance Program Manual and Field Guide and NAVAIR 06-30-501, Technical Manual for Oxygen-Nitrogen Cryogenics Systems for further guidance.

17008. LITHIUM BATTERY SAFETY

1. Background

a. The Navy initiated an effort in the early 1970s to assess and control the risks associated with using lithium batteries. This effort developed into the Navy’s Lithium Battery Safety Program. Naval Sea Systems Command (NAVSEA) Instruction 9310.1B (13 June 1991) and NAVSEA Technical Manual S9310-AQ-SAF-010 (20 July 88) govern the program. The Naval Ordnance Safety and Security Activity (NOSSA), under the auspices of the Explosive Safety Office for Navy Systems, oversees the program. NOSSA Code N31 grants safety approval for use of lithium batteries in specified systems/equipment on shore-based activities and surface platforms. NAVSEA Code 92T authorizes transportation and use of lithium battery and lithium-battery-powered equipment on submarines. Lithium battery transportation and use on aircraft is coordinated through NAVAIR Code 4.4.4.1. Naval Surface Warfare Center (NSWC), Carderock Division, Code 644; and NSWC, Crane Division, Code 609A supports NOSSA as technical experts on lithium battery safety. Lithium batteries may not be introduced into the Marine

Corps inventory unless approved per NAVSEA 9310.1B and NAVSEA S9310-AQ-SAF-010.

b. When lithium batteries are approved for use within the Marine Corps, installations must package, handle, store, transport, use and dispose of them in a manner that will minimize the dangers of fire, explosion, and adverse impacts to human health caused by hazardous substance releases to the environment. Tenant commands shall have a central control point for lithium battery storage, issue, and collection. Installations and tenant commands shall comply with all applicable laws, regulations, and this Manual. Figure 17-1 provides lithium battery information and guidance documents.

2. Marine Corps Lithium Batteries

a. Lithium-sulfur dioxide ($LiSO_2$). $LiSO_2$ batteries contain pressurized sulfur dioxide gas and are used extensively for military applications, especially in communications and electronics equipment. The gas is highly toxic, and the battery should not be handled in any way that may cause the battery to rupture. These high performance batteries contain highly reactive materials and require proper treatment during packaging, handling, storage, transportation, operation, and disposal. $LiSO_2$ batteries should be considered hazardous at all times and, when no longer suitable for use, managed and disposed of as hazardous waste unless fully discharged in accordance with this Manual (see paragraph 17006.5); U.S. Army Technical Bulletin TB 43—134, Battery Disposition and Disposal; U.S. Army Supply Bulletin SB 11-6 on CECOM-Managed Battery Supply and Management Data; and U.S. Army CECOM Safety Compact Disk (CD) on Lithium Battery Safety. Only BA-5567/U batteries are considered as non-hazardous solid waste (NHSW) for disposal purposes.

b. Lithium-thionyl chloride ($LiSOCl_2$). $LiSOC1_2$ batteries contain liquid thionyl chloride. Damaged or ruptured batteries may expose their liquid thionyl chloride to humid air to form acidic vapors that are highly toxic. $LiSOCl_2$ batteries must not be abused in any way that may cause them to rupture. These batteries should be considered hazardous at all times and, when no longer suitable for use, managed and disposed of as hazardous waste.

c. Lithium-manganese dioxide ($LiMnO_2$). $LiMnO_2$ batteries contain an electrolyte solution of lithium perchlorate and an organic solvent. They are primary (i.e., non-rechargeable) batteries that should be considered hazardous when used. However, when completely discharged and no longer suitable for use, these batteries may be disposed of as solid waste (i.e., general refuse) unless regulatory authority requires their management and disposal as hazardous waste.

d. Lithium rechargeable batteries. These batteries frequently contain a highly flammable electrolyte. They can vent these flammable materials in response to abuse, including overheating, crushing or overcharging. In the presence of an ignition source, vented lithium batteries are likely to burn with a high intensity fire.

3. Lithium Battery Hazards

a. Explosion. Lithium batteries provide greatly increased shelf life and specific energy over lead acid or Nickel Cadmium (NiCad) batteries. Lithium batteries contain much higher energy content, sometimes in pressurized cells. Because these pressurized cells can rupture, under no circumstances should the battery be deliberately opened, crushed, punctured, disassembled, or mutilated. These batteries should also not be heated or incinerated, as overheating may produce internal pressure exceeding their venting capacity causing them to explode. Primary (non-rechargeable) lithium batteries shall never be recharged. Such action could cause venting, rupturing, and fire.

b. Fire. Lithium is a reactive metal that burns extremely hot when ignited and is difficult to extinguish without proper training and equipment.

(1) Use an approved Class-D fire extinguisher (i.e., National Stock Number (NSN) 4210-01-303-3999 or equivalent, Lith-X extinguishers, Navy 125 (S)) or sand to extinguish a fire in lithium battery storage areas. Copious amounts of water may be used to cool a fire fueled by lithium batteries or cool lithium batteries near a fire. A Class-D extinguisher or sand may be required to completely extinguish exposed lithium. Never

use water if a shock hazard exists from high voltage electrical equipment in the immediate vicinity of the fire.

(2) Do not use MET-L-X (for use on metal fires) fire extinguishers to extinguish a fire in lithium battery storage areas. MET-L-X fire extinguishers (i.e., NSN 4210-00-580-9191) will not extinguish a lithium battery fire due to its extremely high temperature, and they may fuel the fire with a violent reaction.

(3) Do not use halon fire extinguishers to extinguish fire in lithium battery storage areas.

c. Toxic Gases. Lithium batteries will release toxic gases if they vent. These gases are highly corrosive and may injure personnel at concentrations as low as 10 parts per million (ppm) in ambient air (equivalent to a one-second inhalation).

d. Hazardous Waste. In general, lithium batteries should be considered hazardous waste when no longer suitable for use. Some lithium batteries are manufactured with a complete discharge device (CDD). Lithium batteries with this device may, if the CDD is discharged during military training or operations, be managed and disposed of as non-hazardous solid waste after the discharge is complete. To discharge a lithium battery, press the CDD and store the battery in a cool, dry, ventilated facility or area for 5 days until the discharge is complete. If a lithium battery is no longer suitable for use and the CDD has not been discharged during military training or operations, the CDD will not be discharged unless regulatory authority authorizes the activity.

e. Chemical Burn. Lithium batteries will release toxic chemicals if they leak, vent, or rupture from internal overpressure due to short-circuiting, voltage reversal, or heat. These chemicals are highly corrosive and may cause grave injury to personnel. When handling batteries that have leaked, vented, or ruptured, use personal protective equipment (e.g., chemical resistant gloves).

4. Lithium Battery Storage Requirements

a. Lithium batteries suitable for use shall be stored in command-approved storage facilities or areas, and only lithium and other batteries will be stored in these facilities or areas. Installation safety and environmental managers must approve each facility or area selected for lithium battery storage. The criteria for a lithium battery storage facility or area include:

(1) Ease of access for emergency response equipment;

(2) Distance from other structures;

(3) Inaccessibility to unauthorized personnel; and

(4) Distance from bodies of water, canals or ditches that could allow heavy metal released from batteries during a fire to enter the bodies of water.

b. Lithium batteries suitable for use shall not be stored in the same stack as magnesium or lead acid batteries. New lithium batteries will be stored separately from "used" batteries that remain suitable for use. All batteries will be stored at least 2 inches from facility walls and have at least 2 inches between stacks to promote air circulation for cooling. Stacks will be no higher than three boxes high. All batteries will be protected from crushing, puncturing, or short-circuiting by storing them in the original or equivalent packaging. All batteries will be inspected daily for evidence of leakage, excessive heat, or exposure to water.

c. Lithium batteries suitable for use may become unstable at temperatures greater than 130° F. Thermometers will be placed within each battery storage facility or area to monitor the temperature control. Should the temperature exceed 130° F, the ISM or unit safety officer shall be notified.

d. Lithium batteries shall not be exposed to direct sunlight or water during storage or while discharging.

e. If personnel suspect a lithium battery is venting (e.g., noxious or irritating odor, hissing sound, smoke or flames), all personnel shall immediately leave the battery storage facility

or area and contact the fire department and the ISM or the unit safety officer. No one, other than properly trained and equipped emergency response personnel, shall reenter the battery storage facility or area. An MSDS for each lithium battery type in storage shall be available at the battery storage facility or area for emergency response personnel.

f. Appropriate fire suppression equipment shall be readily accessible at the battery storage facility or area. This and any other fire equipment on site will be inspected at least annually as required by the fire department.

g. Signs shall be placed on all four sides of each battery storage facility or area. These signs will prohibit open flames, eating, drinking, and smoking. Eating, drinking, and smoking in or around a battery storage facility or area is prohibited due to the risk of contaminating food or drink. Each battery storage facility or area will also be conspicuously marked to warn emergency service personnel of lithium battery contents.

h. Units shall inspect battery storage facilities and areas at least quarterly to assess their serviceability. Units shall request required battery storage facility and area repairs via a work request to the installation public works or facilities maintenance department. Repairs should be accomplished under the supervision of the fire department and ISM or unit safety officer.

5. Lithium Battery Discharge Procedures

a. Only properly trained personnel shall discharge lithium batteries.

b. Lithium batteries shall only be discharged in a well-ventilated area approved by the ISM, fire chief, environmental manager, and industrial hygienist. The batteries shall be separated to promote air circulation for cooling. Battery discharge shall not be conducted in inhabited areas because of the potential for fire, explosion, or toxic gas venting.

6. Mishaps. All lithium battery mishaps shall be immediately reported to the ISM or unit safety officer. This includes ruptures, venting, fires, short circuits, and smoke.

7. Points of contact for lithium battery issues.

a. U.S. Marine Corps. For expeditionary power systems, including primary non-rechargeable, secondary rechargeable batteries and alternative power sources, contact the Program Manager (PM), Expeditionary Power Systems (PMM-153), MARCORSYSCOM, Quantico, VA:

(1) Project Officer: DSN 378-3584 or COM (703) 432-3584.

(2) Website: http://www.marcorsyscom.usmc.mil/sites/pmeps/default.asp, click on "Feedback" or "Ask the Program Office" link.

b. For lithium battery shelf life, hazardous materials management and disposal policy, contact CMC (LPC-2), 2 Navy Annex, Washington, DC 20380-1775, at: DSN 225-8947 extension 2451 or COM (703) 695-8947, extension 2451.

c. For lithium battery hazardous waste management and disposal policy, contact CMC (LFL), 2 Navy Annex, Washington, DC 20380-1775, at: DSN 225-8302 or COM (703) 695-8302.

d. U.S. Army (USA). For points of contact on lithium battery issues and alternate rechargeable batteries, see the USA Communications-Electronics Command (CECOM), Ft. Monmouth, NJ, website (Click on "Battery Support") at: http://www.monmouth.army.mil/cecom/lrc/.

e. U.S. Navy. For points of contact for the interactive multimedia instruction distributed learning (IMI/DL) CD Course # 022001a on "Handling and Disposition of Batteries," see the Civil Engineer Corps Officers School (CECOS), Port Hueneme, CA, website at: https://www.cecos.navy.mil/. You may also contact CECOS at: DSN 760-7420 or COM (256) 895-7420.

Lithium Battery Information and Guidance Documents

Document	Subject
NAVSEAINST 9310.01B USMC PCN 210 531530 00, 13 Jun 1991	Naval Lithium Battery Safety Program
NAVSEA S9310-AQ-SAF-010 USMC PCN 207 100100 00, 20 Jul 1988	Technical Manual for Batteries, Navy Lithium Safety Program Responsibilities and Procedures
US Army Technical Bulletin TB 43-0134 USMC PCN 312 550306 00, 1 Oct 1996	Battery Disposition and Disposal
US Army Supply Bulletin SB 11-6 USMC PCN 311 003525 00, 1 Jun 2001	U.S. Army, Communications-Electronics Batteries, Supply and Management Data
USA CECOM SAFETY CD	Lithium Battery Safety
USN CECOS IMI/DL CD Course # 022001a	Handling and Disposition of Batteries
SECNAVINST 4355.18A USMC PCN 216 000850 00	Reporting of Supply Discrepancies
SECNAVINST 4855.5A MCO 4855.10B	Product Quality Deficiency Report (PQDR) Program
MCO P4030.19_	Preparing Hazardous Materials for Military Air Shipments (Paragraph 3.8 & Attachment 13.8)
MCO P4030.40A	Packaging of Hazardous Material
MCO 4450.12A	Storage and Handling of Hazardous Material
DOD 4140.27-M USMC PCN 411 000354 00	Shelf-Life Item Management Manual
MCO 4140.5	Marine Corps Shelf-Life Program
MCO 4450.13A	Materiel Quality Storage Standards Policy for Shelf-Life Materiel
DOD 4160.21-M USMC PCN 411 000430 00	Defense Material Disposition Manual, Chapter 10, Appendix 1
DOD Instruction 4715.4	Pollution Prevention
DOD 4715.5-G	Overseas Environmental Baseline Guidance Document (OEBGD)
MCO P5090.2A	Environmental Compliance and Protection Manual
National Fire Protection Association (NFPA) Standard No. 484	Standard for Combustible Metals, Metal Powders, and Metal Dusts 2002 Edition (Chapter 5 - Lithium)

Figure 17-1. --Lithium Battery Information and Guidance Documents.

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CHAPTER 18

FALL PROTECTION PROGRAM

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CHAPTER 18

FALL PROTECTION PROGRAM

18000. DISCUSSION

1. This chapter establishes a fall protection program that implements requirements of 29 CFR 1910, General Industry; and 29 CFR 1926, Construction.

2. Provisions of this chapter apply to all Marine Corps installations and units. Contractors working aboard Marine Corps installations or units will abide by provisions of 29 CFR 1910 and EM-385-1-1, Corps of Engineers Safety Manual. Military unique situations (e.g., obstacle course training, rappelling) shall be governed by the appropriate military standard or SOP as approved by the commander; requirements of references 29 CFR 1910 and 29 CFR 1926 above apply, if feasible.

3. All situations that expose Marine Corps personnel aboard any installation or unit to fall hazards of 6 feet (1.8 m) or greater shall be assessed by a competent person with fall protection training to implement proper controls.

4. Requirements related to fall protection for personnel working on stairways and ladders are contained in 29 CFR 1926.

18001. BACKGROUND. Falls are a leading cause of traumatic occupational death among workers according to statistics from the Department of Labor. Additionally, an OSHA study of 99 fall-related fatalities suggests that virtually all of those deaths could have been prevented by the use of guardrails, body harnesses, safety nets, floor opening covers, or other means that would reduce personnel exposure to fall hazards.

18002. RESPONSIBILITIES

1. Commanders shall:

a. Comply with the requirements and responsibilities of this Manual and 29 CFR 1910 and 29 CFR 1926.

b. Ensure installation safety managers, officers, and supervisors assess work site hazards, review pertinent regulations, and update organization SOPs regarding fall protection requirements.

c. Ensure personnel who are potentially exposed to fall hazards receive appropriate training and fall protection equipment.

2. Installation safety managers shall:

a. Provide fall protection training material and instruction for supervisors and personnel as required.

b. Provide recommendations for appropriate fall protection.

c. Stop any work operations that are not in compliance with this Manual.

d. Review all written fall protection SOPs before they are published.

3. Director, Public Works or Facilities Department shall ensure personnel who are exposed to fall hazards of 6 feet or greater receive fall protection training and personal protective equipment. Evaluate structures and materials for suitable anchor points when fall protection systems are required to safeguard Marine Corps personnel. These evaluations and the resulting recommendations shall be coordinated with the ISM.

4. Resident Officer in Charge of Construction (ROICC) shall:

a. Ensure contractors performing work aboard Marine Corps installations or units are aware of the provisions of this Manual and 29 CFR 1910, 29 CFR 1926, and EM-385-1-1, Corps of Engineers Safety Manual, when applicable, and require inclusion of a written fall protection program within their safety and health plan.

b. Check contractors for compliance with their written fall protection program, and stop work if noncompliance becomes evident.

5. Supervisors shall:

a. Request assistance from the ISM when assessing potential fall hazards.

b. Provide personnel with a written fall protection SOP, approved by the ISM, detailing steps necessary to control fall hazards.

c. Provide personnel with a stable work platform, scaffold, or ladder.

d. Provide personnel with appropriate fall protection equipment.

e. Require personnel to use fall protection equipment properly.

f. Ensure appropriate barriers are in place or debris nets are used below elevated work surfaces that protect personnel from falling objects.

g. Ensure personnel who are exposed to fall hazards receive training.

6. Marine Corps personnel working where fall hazards can reasonably be expected shall:

a. Comply with requirements of a fall protection program.

b. Request supervisory assistance when assessing potential fall hazards.

c. Use fall protection techniques and equipment properly when fall hazards are present.

d. Inspect fall protection equipment before use and properly maintain per manufacturer's recommendations. Remove from service any personal fall protection equipment that has

been shock-loaded until inspected by the manufacturer or other competent persons.

e. Report unsafe work conditions to supervisors.

18003. PRINCIPLES OF FALL PROTECTION

1. Work that exposes Marine Corps personnel to fall hazards is divided into construction and maintenance categories with separate standards covering each type of work.

a. Construction. All new construction, modification or repairs to existing structures, as well as painting or repainting of structures, fall under the provisions of 29 CFR 1926.

b. Maintenance. Maintenance and spot painting of structures fall under the provisions of 29 CFR 1910.

2. Both standards use a potential fall of 6 feet or greater as a trigger point for the requirement to implement a fall protection program. Standards also differentiate between low-slope roofs with a pitch less than or equal to 4 inches in 12 inches (vertical to horizontal); and steep-slope roofs, with a pitch greater than 4 inches in 12 inches. During assessment of a fall hazard and design of a fall protection system, it is important to note low slope-roofs require different types of fall protection measures than steep-slope roofs. Combinations of fall protection systems may be required to control specific hazards. Additionally, design of a fall protection system may require the coordination of supervisors, safety professionals, and civil or mechanical engineers to maximize worker safety. Some widely used fall protection systems with partial listings of requirements are given below. OSHA regulations must be consulted for complete requirements and exceptions.

a. Guardrail Systems. May be temporary or permanent, but shall be capable of withstanding a force of at least 200 pounds applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge. The guardrail shall consist of top rail, mid rail, posts and toe board. The top edge height of top rails, or equivalent guardrail

system members, shall be 42 inches plus or minus 3 inches above the walking/working level. Mid rails, screens, mesh, intermediate vertical members, or equivalent intermediate structural members shall be installed between the top edge of the guardrail system and the walking/working surface so there is no opening greater than 19 inches. Toe boards (4 inches high) or other more effective systems shall be used to protect workers from falling objects such as tools or materials.

b. Safety Net System. A mesh net extending a minimum of 8 feet from the edge of the working surface, installed as close as possible to the working level, and be able to withstand a weight of 400 pounds dropped from the highest exposed working surface. Consult 29 CFR 1910 or 29 CFR 1926 for minimum net extension distance, which can vary according to the potential distance of fall.

c. Personal Fall Arrest System

(1) Composed of a full body harness, lanyard with shock absorbing device, self-locking connectors, and anchorage system. All system components must be rated at 5000 pounds breaking strength and compatible for use together as a system. Other systems may include horizontal and vertical lifelines, or self-retracting lifelines. Anchorages for lifelines must be independent of any anchorages used for suspended platforms, scaffolding, etc.

(2) Personal fall arrest system cannot allow worker free-fall distance to exceed 6 feet.

(3) Marine Corps personnel will not use body belts due to the potential to "fall through" the belt if turned upside down.

d. Covers. Covers for holes in floors, roofs, and other walking or working surfaces must be able to withstand twice the total weight of workers, equipment, and materials that may be imposed on the cover at any time. The cover must be fastened to prevent slippage and marked "cover" or "hole" (except manhole covers or steel grates).

e. Warning Line System. Rope, wire, or chain 34-39 inches high, placed inwards at least 6 feet from the edge, flagged every 6 feet with high visibility materials, supported by stanchions capable of withstanding a horizontal force of 16 pounds without tipping. This system can only be used on a low-slope roof (pitch equal to or less than 4 inches in 12 inches) and flat roof.

f. Safety Monitoring System. A competent person may be designated as a safety monitor, who acts as a warning system if a worker appears to be unaware of a fall hazard. The monitor must be on the same working surface, with no visual obstructions, and close enough to communicate orally with the worker. The monitor may not have any other duties. This system can only be used on a low-slope roof (pitch equal to or less than 4 in 12 inches).

g. Positioning and Restraint Systems. The positioning system will not allow the person to fall more than 2 feet and the anchorage strength shall be a minimum of 3,000 pounds.

h. Rescue Operations. The ISM and supervisors shall ensure personnel exposed to fall hazards can be promptly rescued or do it themselves, should a fall occur. A rescue and evacuation plan shall be prepared and include emergency procedures, methods of rescue, equipment used and training requirements.

18004. TRAINING

1. Fall protection training shall be provided to all personnel who may be exposed to fall hazards. Training shall enable each person to recognize hazards of falling, as well as understand procedures used to minimize these hazards.

a. Training shall be conducted by a competent person designated by the ISM and shall include:

(1) Nature of fall hazards in work area(s).

(2) Correct procedures for erecting, inspecting, and disassembling fall protection systems to be used.

(3) Use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones, and any other protection used.

(4) Role of each individual in safety monitoring system used.

(5) Limitations on the use of mechanical equipment during performance of roof work on low-sloped roofs.

(6) Correct procedures for handling and storage of equipment and materials, and erection of overhead protection.

b. Retraining will be conducted when changes to the work center or fall protection techniques render previous training ineffective, or personnel who have received training cannot demonstrate adequate knowledge of fall protection procedures.

2. Training requirements for personnel using ladders and stairways are provided in 29 CFR 1926. The training program must enable each user to recognize hazards related to ladders and stairways and use proper procedures, including fall protection systems, to minimize these hazards.

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CHAPTER 19

ERGONOMICS PROGRAM

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CHAPTER 19

ERGONOMICS PROGRAM

19000. DISCUSSION

1. This chapter establishes procedures and requirements to implement an ergonomics program per DoD Instruction 6055.1, Department of Defense Safety and Occupational Health Program. Ergonomics is the field of study involving the application of knowledge about physiological, psychological and biomechanical capabilities and limitations of the human body. This knowledge is applied in the planning, design, and evaluation of work environments, jobs, tools, and equipment to enhance worker performance, safety and health.

2. Musculoskeletal disorders (MSDs) affect soft tissues of the body in areas such as the back, neck, shoulder, elbow, hand, wrist, and finger. These include the nerves, tendons, cartilage, ligaments, and muscles. Work-related musculoskeletal disorders (WMSDs) are MSDs that are caused by or made worse by the work environment. WMSDs harm and reduced human performance capabilities often result from a mismatch between workers and tasks required of them. Ergonomics seeks to adapt the job and work center environment to personnel by designing tasks, workstations, and tools that are within the individual’s capabilities and limitations.

3. The goal is to prevent WMSDs in Marine Corps personnel. A competent person with ergonomics training shall assess all situations where Marine Corps personnel are exposed to the risk of musculoskeletal injury or illness.

4. This program seeks to prevent injuries and illnesses by applying ergonomic principles to identify, evaluate and control ergonomic risk factors for WMSDs. WMSDs are defined as a class of disorders involving damage to muscles, tendons, tendon sheaths, and related bones, and nerves. They may also be known more specifically as Repetitive Strain Injuries (RSI), Cumulative Trauma Disorders (CTDs), and Overuse Syndrome. WMSDs

may result from the cumulative effect of repeated traumas associated with specific workplace risk factors.

a. Risk factors include but are not limited to:

(1) Force. The amount of physical effort required to maintain control of equipment or tools, or to perform a task such as heavy lifting, pushing, pulling, grasping, or carrying.

(2) Repetition. Performing the same motion or series of motions continually or frequently for an extended period of time with little variation. Examples include prolonged typing, assembling components, and repetitive hand tool usage.

(3) Awkward or static postures. Awkward posture refers to positions of the body (e.g., limbs, joints, back) that deviate significantly from the neutral position while performing job tasks (e.g., working over-head, extended reaching, twisting, squatting, or kneeling). Static postures refer to holding a fixed position or posture (e.g., gripping tools that cannot be set down, standing in one place for prolonged periods).

(4) Vibration. Localized vibration, such as vibration of the hand and arm, occurs when a specific part of the body comes into contact with vibrating objects such as powered hand tools (e.g., chain saw, electric drill, chipping hammer) or equipment (e.g., wood planer, punch press, packaging machine). Whole-body vibration occurs when standing or sitting in vibrating environments (e.g., operating a pile driver or driving a truck over bumpy roads) or when using heavy vibrating equipment that requires whole-body involvement (e.g., jackhammers).

(5) Contact stress. Results from occasional, repeated, or continuous contact between sensitive body tissues and a hard or sharp object (e.g., resting the wrist on a hard desk edge, tool handles pressing into the palms).

b. When present for sufficient duration, frequency, magnitude, or in combination, these risk factors may cause WMSDs. Personal risk factors such as physical conditioning, existing health problems, work technique, hobbies, and organizational factors (e.g., job autonomy, quotas, deadlines)

may contribute to the development of WMSDs. Additionally, environmental conditions such as working in temperature extremes may contribute to the development of WMSDs.

19001. BACKGROUND

1. WMSDs represent over half of all rated military disabilities and over one-third of all reported civilian injuries and illnesses within the Marine Corps.

2. In recent years, there has been an increase in reporting of WMSDs such as strains/sprains, back injuries, and carpal tunnel syndrome for Marine Corps personnel. Some of this increase can be attributed to changes in work processes, such as automated office equipment, and associated work center risks. Through advanced information technology and training, Marine Corps personnel have an increased awareness of these disorders and more are being reported.

19002. RESPONSIBILITIES

1. The installation commanders shall:

a. Develop and implement an ergonomics program. Ensure work center evaluations are completed IAW the installation ergonomics plan. These evaluations may be included in the periodic industrial hygiene surveys.

b. Designate an ergonomics coordinator and members for an ergonomics team, with advice from local medical personnel, to administer the ergonomics program.

c. Ensure personnel exposed to work center ergonomic risk factors receive appropriate training as developed by the ergonomic team.

d. Allocate resources to ensure the development and implementation of a comprehensive ergonomic program.

e. Ensure coordination of medical aspects of the ergonomics program with responsible medical treatment facility (MTF).

2. The ISM shall:

a. Serve as a member of the ergonomics team or designate a representative from the safety office.

b. Coordinate ergonomics training for the ergonomics team members.

c. Oversee safety aspects of the ergonomics program.

d. Review injury and illness records related to WMSDs, develop trend analyses, and report results to the ergonomics team and safety council or committee. Identify jobs where WMSDs have occurred and direct efforts for reducing factors that may have contributed to or caused the injury.

e. Incorporate fundamental ergonomic principles into new or existing facilities, tasks or operations through engineering design reviews.

3. The Director, Public Works or Facilities Department shall:

a. Integrate ergonomic considerations into all work center improvements.

b. Implement ergonomics team recommendations to eliminate or reduce work center ergonomic risk factors.

c. Appoint an advisory or support representative from engineering or maintenance to the ergonomics team.

4. The Director, Human Resources Office shall:

a. Ensure all supervisors, managers, and employees receive appropriate ergonomics training as developed by the ergonomics team.

b. Appoint at least one representative to serve on the ergonomics team. This may be the Injury Compensation Program Administrator (ICPA).

c. Use MTF recommendations in the assignment of injured workers to light or restricted duty.

d. Provide the ergonomics team with information on compensation claims and costs associated with WMSDs to enable them to perform trend analysis.

5. Director, Logistics Division (contracting and purchasing) shall:

a. Ensure all equipment (e.g., furniture, tools, work stations, material handling devices) has been evaluated to ensure compliance with the ergonomic requirements or ergonomics team recommendations, prior to purchase.

b. Ensure integration of ergonomic considerations into purchase of new equipment.

c. Appoint an advisory representative from contracting or purchasing to serve on the ergonomics team.

d. Implement ergonomics team recommendations to eliminate or reduce work center ergonomic risk factors.

e. Appoint an advisory representative to serve on the ergonomics team.

7. Ergonomics coordinator shall:

a. Receive at least 40 hours of formal training in ergonomics (e.g., CIN: A-493-0085 or equivalent).

b. Chair the ergonomics team and provide interface with the OSH council or committee.

c. Serve as focal point for the installation ergonomics program.

d. Advocate upper management support, recognition of contributions, and availability of resources.

e. Develop the installation ergonomics plan with assistance of the ergonomics team and approval of the safety council or committee.

8. The ergonomics team shall:

a. Assist in developing and implementing an installation ergonomics plan. Set program goals and objectives, and develop strategies to address issues.

b. Ensure the installation ergonomics plan requires that trained personnel conduct evaluations of all work centers to assess the risk of WMSDs.

c. Prioritize existing and potential work center ergonomic risk factors identified in the evaluations and develop corrective action plans.

d. Develop methods to evaluate the effectiveness of corrective actions and document results. Share effective solutions and lessons learned.

e. Evaluate and provide supervisors with information on new ergonomically designed equipment when it becomes available and maintain a library.

f. Maintain documentation on annual surveys, team meetings, trend analyses, investigations, ergonomic improvements, and associated costs.

9. Supervisors shall:

a. Assist the ergonomics coordinator in implementation of the ergonomics plan.

b. Ensure personnel receive ergonomics awareness training as described in paragraph 19003.6.

c. Request assistance from the ergonomics coordinator, ergonomics team, and installation or unit safety office for recognizing, assessing, and monitoring work center ergonomic risk factors.

19003. ERGONOMICS PROGRAM ELEMENTS. The following elements will be used to develop the installation ergonomics plan (additional guidance is available in NIOSH Pub 97-117, Elements

of Ergonomics Programs: A primer Based on Evaluations of Musculoskeletal Disorders).

1. Management Commitment and Employee Involvement. A collaborative partnership between all working levels is essential to prevent WMSDs and reduce risk in the work centers. Command emphasis, management commitment, and demonstrated visible involvement by all personnel provide the organizational resources and motivation necessary to implement a sound ergonomics program. Personnel involvement is essential for preventing WMSDs by risk identification and developing an effective means for hazard abatement.

2. Work Center Analysis. The purpose of a work center analysis is to identify existing hazards that may cause WMSDs and other injuries. Identification of jobs with WMSDs risk factors will assist in determining where detailed job analysis and intervention priorities are needed.

a. One method of work center analysis requires a review of mishap logs, ANYMOUSE forms, personnel complaints and suggestions, safety inspections, industrial hygiene surveys, and compensation claims for WMSDs. Analysis should include the body part involved, nature of injury or illness, lost work time (workdays and light or restricted duty days), and medical and compensation case costs. Where mishap and compensation data analysis reveals a prevalence of WMSDs, jobs may be prioritized for detailed analysis based on the incidence rate, severity of risk, and depth of engineering support needed. Detailed analysis characterizes the risk factors and enables development of appropriate recommendations and priorities for corrective actions.

b. Another method of work center analysis may include questionnaires, personnel interviews, direct observations, and videotaping the work process to provide information for detailed job analysis. Where walk through surveys (safety inspection or industrial hygiene survey) reveal potential for WMSDs and mishap and compensation data analysis is inconclusive, a symptoms or body part discomfort survey should be administered to determine if intervention is warranted. This method provides a proactive approach on collecting information prior to actual injury.

3. Hazard Prevention and Control. The goal of hazard prevention and control is to eliminate, reduce or control the presence of work center ergonomic risk factors. Risk factors commonly associated with WMSDs include: repetitive motion, force or mechanical stress, awkward or static posture, vibration, and work organizational or stress factors. Effective design or redesign of a task or workstation is the preferred method of preventing and controlling exposure. Methods of intervention include engineering controls, administrative controls, and personal protective equipment (PPE) as described in chapter 10 of this Manual. The DoD does not recognize back support belts and wrist splints as PPE, or the use of these devices in the prevention of back or wrist injuries. These devices are considered medical appliances and may be prescribed by credentialed health care providers who are responsible for medical clearance, monitoring, and proper fit. All risks identified shall be assigned a RAC and entered into the hazard abatement log as described in chapter 7.

4. Facility Modification, New Construction or Material Acquisition. Before purchasing any tool or piece of equipment, building a new facility, or modifying an existing one, ergonomic design criteria in MIL-STD-1472F, Department of Defense Design Criteria Standard - Human Engineering, shall be considered. Additional design guidance is available in DHHS (NIOSH) Publication No. 94-110, Applications Manual for the Revised NIOSH Lifting Equation; ANSI/IESNA RP-7-01, American National Standard Practice for Lighting Industrial Facilities; and ANSI/IESNA RP-1-1992, American National Standard Practice for Office Lighting.

a. Where heavy objects must be handled, use DHHS (NIOSH) Publication No. 94-110 to calculate recommended weight and height limits.

b. Glare, contrast, and shadows influence lighting quality and can seriously diminish performance. ANSI/IESNA RP-7-01 and ANSI/IESNA RP-1-1992 provide illumination levels for industrial and office environments, respectively. Consult the local industrial hygienist for assistance.

5. A medical management program for personnel with WMSDs shall be established to meet the requirements of chapter 11.

6. Training

a. Ergonomics awareness training shall be provided to all Marine Corps personnel. Training should enable each person to recognize work center ergonomic risk factors, as well as understand procedures used to minimize these risks.

b. Ergonomics awareness training should include:

(1) Ergonomics definition and concepts.

(2) Work center physical risk factors and personal traits that may contribute to an injury.

(3) How to recognize and report early warning signs and symptoms associated with various WMSDs.

(4) How to prevent WMSDs by recognizing physical risk factors and identifying the basic elements of an effective design. Know how to report physical risk factors to their supervisors and cooperate with intervention measures.

(5) Understand the components of the ergonomics program and their role in it.

(6) Wellness or Semper Fit programs.

c. Ergonomics team members, supervisors, and facilities department engineers are required to attend ergonomics training.

d. Training shall be documented per chapter 5.

e. Refresher training will be provided annually and retraining will be conducted when personnel are assigned to a new job with different risks, or when risks are newly identified in a job.

7. Program Evaluation and Review. The ergonomics coordinator shall assess the implementation progress and effectiveness of the installation or unit ergonomic plan annually. This audit will reveal gaps in the program and may identify helpful ideas for further program development.

MARCOR OSH PROGRAM MANUAL

CHAPTER 20

BLOODBORNE PATHOGENS PROGRAM

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CHAPTER 20

BLOODBORNE PATHOGENS PROGRAM

20000. DISCUSSION

1. The principal bloodborne pathogens of concern in this chapter are human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV). Many others exist but are generally not occupationally transmitted in significant numbers. Due to the rapid spread of Acquired Immune Deficiency Syndrome (AIDS) and its precursor HIV, and to counter HBV and HCV the Marine Corps has developed a proactive standard to protect Marine Corps personnel from occupational exposure to all bloodborne pathogens. The diseases associated with these pathogens are preventable when the appropriate precautions are taken per 29 CFR 1910.1030, Bloodborne Pathogens.

2. Overseas activities should consult the host country's practices with regard to protecting foreign national employees.

3. Personnel at risk include health professionals; first aid providers; fire department and crash, fire, rescue personnel; security personnel, and personnel involved in maintenance or housekeeping work that exposes them to blood or other infectious body fluids. First responders and occupationally exposed personnel, as determined by the responsible industrial hygienist, will be included in a medical surveillance program and provided appropriate training.

20001. EXPOSURE CONTROL PLANS. Some work sites are susceptible to bloodborne pathogens exposure and require a specific written exposure control plan. Commands shall consult the local MTF when developing exposure control plans for personnel. Common elements of an effective exposure control plan are:

1. Identification of tasks, procedures, and job classifications where occupational exposure to blood occurs without regard to personal protective clothing and equipment.

2. Schedule for implementing other provisions of the standard including methods for communication of hazards to employees, hepatitis vaccinations, post-exposure evaluation, follow-up, and record keeping.

3. Procedures for evaluating the circumstances of an exposure incident.

4. Procedures for implementing engineering and work practice controls, PPE requirements, and housekeeping precautions.

5. Accessibility of the plan to personnel; and review and update at least annually, or more often if necessary, by the MTF to accommodate work center changes.

20002. RESPONSIBILITIES

1. Commands shall request IHs, occupational health nurse or personnel from the local MTF to assist them in developing an exposure control plan for personnel that directly support their operations.

2. Industrial hygienists shall identify job classifications and tasks where exposure to blood and other potentially infectious materials may occur. Industrial hygienists will assist in training, establishing procedures for implementing engineering and work practice controls, PPE requirements, and housekeeping precautions.

3. Safety personnel shall evaluate the circumstances of an exposure incident, participate in the development of exposure control plan, ensure personnel are trained in proper precautions for handling bloodborne pathogens, and request technical help from the industrial hygienist serving their organization.

4. MTFs shall maintain schedules for employees, hepatitis vaccinations, post-exposure evaluation, follow-up, and record keeping.

20003. WORK PRACTICE CONTROLS. Ensure work practice controls of 29 CFR 1910.1030 and the following precautions are implemented.

1. No eating, drinking, handling contact lens, or applying cosmetics in areas where a reasonable occupational exposure to blood or potentially infectious materials exists.

2. No keeping of food or drink in refrigerators or freezers, shelves, cabinets, or on countertops where blood or other potentially infectious materials are present.

3. Label and tape containers of body fluids for transport or shipping with a biological hazard label securely prior to being transported or shipped.

4. Inspect equipment that may become contaminated with blood or other infectious materials prior to servicing or shipping, and decontaminate as necessary.

5. Personnel who suspect they were exposed to blood or other infectious materials shall wash the potentially contaminated areas with soap and water as soon as possible after exposure, then wipe the area with a disinfecting bleach solution of one part bleach to 10 (1 to 10) parts water.

6. Individuals who suspect they have received mucous membrane exposure shall irrigate membrane for 15 minutes with water or saline solution.

7. Personnel who clean-up body fluids, including vomit and blood, shall do so by donning PPE to include gloves and eye protection. Cleaning includes wiping the area down, applying disinfecting bleach solution, and disposing of clean-up material in accordance with local medical treatment facility SOP.

8. Work centers shall be maintained in a clean and orderly fashion.

20004. ENGINEERING CONTROLS. Devices (e.g., sharps disposal containers, self sheathing needles) that isolate or remove the bloodborne pathogens hazard from the work center.

20005. PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. In the absence of effective engineering controls, personnel will wear PPE when there is occupational exposure to blood or other potentially infectious materials. PPE must prevent blood and other potentially infectious materials from contact with workers' clothes, skin, eyes, or mouth.

2. PPE must be provided at no cost to employees and made accessible and available in appropriate sizes. PPE also must be kept clean and in good repair.

3. Single use gloves must be replaced as soon as possible after they are contaminated, torn, or punctured, and will not be re-used under any circumstances.

20006. HOUSEKEEPING PRECAUTIONS

1. Housekeeping personnel may be occupationally exposed to potentially infectious material during the course of their duties. Therefore, housekeeping personnel need to follow the written cleaning schedule that outlines proper decontamination and disposal of contaminated materials.

2. Equipment and work areas must be cleaned and decontaminated as soon as feasible after contact with any blood or potentially infectious fluids.

3. Protective coverings must be removed and replaced when overtly contaminated, or at the end of each shift, if there is a possibility of contamination during the shift.

4. Contaminated laundry should be handled as little as possible. Contaminated wet laundry must be placed in leak-proof bags that are colored red or marked with a biohazard label under requirements of 29 CFR 1910.1030. Routine laundry practices

will decontaminate clothes because water heated between 140-160 F^0 will kill most pathogenic organisms. All personnel who handle contaminated laundry must wear gloves.

20007. EXPOSURE INCIDENT. Exposure incident means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious material that results from the performance of an employee's duties, including providing first aid as a first responder. All exposures will be reported, and an immediate and confidential medical evaluation shall be provided. Local MTF is responsible for evaluations, counseling, and post-exposure management.

20008. ASSISTANCE. Concerns on bloodborne pathogens should be directed to the ISO, MTF, or responsible industrial hygienist. The ISM is responsible for providing training with assistance from the MTF.

APPENDIX A

REFERENCES

1. American Conference of Governmental Industrial Hygienists (ACGIH), Industrial Ventilation: A Manual of Recommended Practice, Current Edition

2. ANSI Z41.1-1999, American National Standard for Personal Protection – Protective Footwear

3. ANSI Z87.1-2003, Practice for Occupational and Educational Eye and Face Protection

4. ANSI Z89.1-1997, Protective Headwear for Industrial Workers Requirements

5. ANSI Z244.1-2003, American National Standard for Personal Protection – Lockout/Tagout of Energy Sources

6. ANSI Z358.1-2004, American National Standard for Emergency Eyewash and Shower Equipment

7. ANSI/IESNA RP-1-1992, American National Standard Practice for Office Lighting

8. ANSI/IESNA RP-7-01, American National Standard Practice for Lighting Industrial Facilities

9. 29 CFR 1910, General Industry (OSHA Standards)

10. 29 CFR 1910, Subpart I, Personal Protective Equipment

11. 29 CFR 1910, Subpart Z, Toxic and Hazardous Substances Standard

12. 29 CFR 1910.20, Access to Employee Exposure and Medical Records

13. 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response

14. 29 CFR 1910.132, General Requirements

15. 29 CFR 1910.134, Respiratory Protection

16. 29 CFR 1910.146, Permit-Required Confined Spaces

17. 29 CFR 1910.147, Control of Hazardous Energy (Lockout/Tagout)

18. 29 CFR 1910.333, Selection and Use of Work Practices

19. 29 CFR 1910.1001, Asbestos

20. 29 CFR 1910.1025, Lead

21. 29 CFR 1910.1030, Bloodborne Pathogens

22. 29 CFR 1910.1200, Hazard Communication

23. 29 CFR 1915, Shipyard Employment (OSHA Standards)

24. 29 CFR 1926, Construction (OSHA Standards)

25. 29 CFR 1926.62, Lead

26. 29 CFR 1926.1101, Asbestos

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36. DoDINST 4715.1, “Environmental Security” of February 24, 1996

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39. DoDINST 6055.5, “Industrial Hygiene and Occupational Health” of January 10, 1989

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41. E.O. 12196, Occupational Safety and Health Programs for Federal Employees

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43. MCO P1710.30E, Marine Corps Children, Youth, and Teen Programs

44. MCO 3500.27B, Operational Risk Management

45. MCO 4450.12A, Storage and Handling of Hazardous Materials (joint publication

46. MCO 5090.2A, Environmental Compliance and Protection Manual

47. MCO 5100.19E, Marine Corps Traffic Safety Program (DRIVESAFE)

48. MCO 5100.29A, Marine Corps Safety Program

49. MCO 5100.30A, Marine Corps Off Duty and Recreational Safety Program

50. MCO 6260.1E, Marine Corps Hearing Conservation Program

51. MCO P8020.10A, Marine Corps Ammunition Management and Explosives Safety Policy Program

52. MCO P11000.5F, Real Property Facilities Manual, Volume IV

53. MCO 12430.2, Performance Management Program

54. MIL-STD 882D, “Department of Defense Standard Practice for System Safety” of 10 February 2000

55. MIL-STD-1472F, “Department of Defense Design Criteria Standard - Human Engineering” of 23 August 1999

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57. NAVAIR A6-332-AO-GYD-000, Aviators Breathing Oxygen (ABO) Surveillance Program Manual

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APPENDIX B

GLOSSARY

1. Abate. To eliminate or control permanently an unsafe or unhealthful working condition into compliance with Marine Corps OSH Program standards.

2. Administrative Control. A procedure that controls the work schedule to limit the daily exposure to toxic chemicals or harmful physical agents.

3. Bloodborne Pathogens. Pathogenic microorganisms contained in human blood that can cause disease in humans. These include, but are not limited to, the Hepatitis B Virus (HBV) and Human Immunodeficiency Virus (HIV).

4. Confined Space. Space not designed for routine or continuous occupancy, is large enough and configured to allow worker entry, and is poorly ventilated or has limited or restricted means for entry or exit.

5. Contractor Employee. An employee of a contractor performing work under a Marine Corps contract.

6. Contractor Workplace. Any place on a Marine Corps installation, within the U.S., its territories, or possessions, where work is currently performed, has recently been performed, or is scheduled to be performed by contractor employees, including a reasonable access route to and from the workplace. Contractor workplace does not include any structure, machine, apparatus, device, equipment, or material therein, which a contractor employee is not required or reasonably expected to have contact with nor include any working condition for which OSHA jurisdiction has been preempted under section 4(b)(1) of the OSHA Act.

7. Energized. Connected to an energy source or containing residual or stored energy.

8. Energy Isolating Device. A mechanical device that physically prevents the transmission or release of energy,

including but not limited to a manually-operated electrical circuit breaker, disconnect switch, manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and no pole can be operated independently, a slide gate, a slip blind, line valve, line block, and any similar device used to block or isolate energy. Item does not include a push button, selector switch, and other control circuit type devices.

9. Energy Source. Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy source.

10. Ergonomics. The field of study that seeks to fit the job to the person, rather than fit the person to the job. This is achieved by the evaluation and design of work centers, environment, jobs, tasks, equipment, and processes in relationship to human capabilities and interactions in the work center.

11. Explosive or Flammable Limits. The range of concentration of a material, expressed as percent in air, that will burn or explode if ignited. Lower explosive limit is the minimum percent by volume of a gas or vapor that, when mixed with air at normal temperature and pressure, will form a flammable mixture.

12. Exposure Incident. A specific eye, mouth, other mucous membrane, non-intact skin, or parietal contact with blood or other potentially infectious material that may result from doing one's job.

13. Hazard. A work center condition that may result in injury, health impairment, illness, disease, or death to any worker who is exposed to the condition, or damage or loss to property or equipment.

14. Hazardous Chemicals. Hazardous materials used in the workplace that are regulated under 29 CFR 1910.1200.

15. Hazardous Materials. For preparing a Material Safety Data Sheet (MSDS), a material with one or more of the following characteristics:

a. A flash point below 200^0F (93.3^0C) closed cup, subject to spontaneous heating, or subject to polymerization with release of large amounts of energy when handled, stored, and shipped without adequate control.

b. Has a Threshold Limit Value^R equal to or below 1,000 ppm for gases and vapors, below 500 mg/m^3 for fumes, and equal to or below 30 million particles per cubic foot (mppcf) or 10 mg/m^3 for dusts (equal to or below 2.0 fibers/cc, greater than 5 micrometers long for fibrous materials).

c. A single oral dose which will cause 50 percent fatalities to test animals when administered in doses of less than 500 mg/kg of test animal weight.

d. Is a flammable solid or a strong oxidizing or reducing agent.

e. Causes first degree burns to skin after a short time exposure or is systematically toxic through skin contact.

f. In the course of normal operations, may produce dusts, gases, fumes, vapors, mists, or smokes that have one or more of the above characteristics.

g. Produces sensitizing or irritating effects.

h. Is radioactive.

i. Has special characteristics, which in the opinion of the manufacturer could cause harm to personnel if used or stored improperly.

j. Is regulated under 29 CFR 1910, 49 CFR 171-179, or 40 CFR.

16. Hot Tap. A procedure used in repair, maintenance and servicing activities that involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure in order to install connections of apparatuses. It is commonly used to replace or add sections of pipeline without interruption of service for air, gas, steam, and petrochemical distribution systems.

17. Immediately Dangerous to Life or Health (IDLH). Any atmosphere that poses an immediate hazard to life or produces immediate irreversible debilitating effects on health.

18. Lockout. The placement of a lockout device on an energy-isolating device IAW an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

19. Lockout Device. A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and preventing energizing of a machine or equipment.

20. Lockout/Tagout Log. The control document for administering the lockout/tagout procedures. These logs are the records of authorization for each lockout/tagout action on systems or equipment.

21. Lockout/Tagout Coordinator. One or more individuals trained and designated in writing by the commanding general, commanding officer, or department head to be in control of administering the lockout/tagout program in their area of cognizance.

22. Mission-essential Material. That material authorized and available to combat, combat support, combat service support, and combat readiness training forces in order to accomplish their assigned missions.

23. Occupational Exposure. An act or condition of being subjected (as a result of work) to a chemical, physical, or biological agent, or to a specific process, practice, behavior, or work organization. This includes the reasonably anticipated skin, eye, mucous membrane, or parenteral contact with human blood or other potentially infectious material that may occur on the job. Exposure is distinguished from dose in that dose refers to the amount of the potentially hazardous agent that is absorbed or retained by the body, while exposure refers to the presence of a hazard that contacts the body or is experienced by the worker.

24. Parenteral. Piercing of the mucous membranes or skin barrier by a needle stick, human bite, cut, or abrasion.

25. Potential Energy. A function of a height of an object above some datum plane. This datum plane is usually considered to be where that object would come to rest if the restraint holding the object were released. For example, where the upper die in a punch press is positioned if the restraining device holding the upper die in place was to be removed, the potential energy of the upper die would be converted into kinetic energy resulting in the upper die being propelled downward, coming to rest on the lower die. This motion can cause a crushing, cutting, lacerating, amputating or fracture injury to an employee's arm, hand or some other part of the body, which occupies the space between the dies.

26. Potentially infectious materials include the following:

a. The following human body fluids: blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids.

b. Any unfixed tissue or organ (other than intact skin) from a human (living or dead).

c. HIV-containing cell or tissue cultures, organ cultures and HIV-, HBV-, or HCV-containing culture medium or other solutions, and blood, organs, or other tissues from experimental animals infected with HIV, HBV, or HCV.

27. Residual Energy. The presence of springs; under tension or compression or by the presence of liquids or gases under pressure (either above or below atmospheric pressure).

28. Servicing or Maintenance. Work center activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. Activities include lubrication, cleaning, or clearing machines or equipment and making adjustments or tool

changes, where the employee may be exposed to "unexpected" start-up of the equipment or release of hazardous energy.

29. Setting Up. Any work performed to prepare a machine or equipment to perform its normal production operation.

30. Tagout. The placement of a tagout device on an energy-isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

31. Tagout Device. A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

32. Universal Precautions. An infection control approach whereby all human blood and certain body fluids are treated as if they were known to be infectious for HIV, HBV, HCV or other bloodborne pathogens.

33. Work Center. Military unit or a component of the installation organization identified by trade or type of work performed.

34. Work Center Risk Factors (Ergonomic). Actions in the work center, work center conditions, or a combination thereof, that may cause or aggravate a musculoskeletal disorder (MSD). Work center risk factors include, but are not limited to, repetitive, forceful or prolonged exertions; frequent or heavy lifting; pushing, pulling, or carrying heavy objects; a fixed or awkward work posture, contact stress, localized or whole body vibration, cold temperatures, and poor lighting (leading to awkward postures). Work center factors can be intensified by work organization characteristics such as inadequate work-rest cycles, excessive work pace or duration, unaccustomed work, lack of task variability, machine work, and piece rate.

35. Work-Related Musculoskeletal Disorder (Ergonomic). An injury or illness of the muscles, tendons, ligaments, peripheral

nerves, joints, cartilage (including intervertebral discs), bones and supporting blood vessels in either the upper or lower extremities, back, or neck, that is associated with work center risk factors (ergonomic). These are not limited to cumulative trauma disorders, repetitive strain injuries or illnesses, repetitive motion injuries or illnesses, and repetitive stress injuries or illnesses. Refers collectively to signs, persistent symptoms, or clinically-diagnosed work-related musculoskeletal disorders (WMSDs) when they are caused or aggravated by exposure to work center risk factors (ergonomic).